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ASTRONOMICAL

AND

METEOROLOGICAL OBSERVATIONS

MADE DURING

THE YEAR 1876,

AT THE

UNITED STATES NAVAL OBSERVATORY.

REAR-ADMIRAL C. H. DAVIS, U. S. N.,

SUPERINTENDENT.

IN TWO PARTS.

PART I.

PUBLISHED BY AUTHORITY OF THE

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PART I.

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NOTE.—Important *Errata* in volumes for 1872, 1873, 1874, 1875, and 1876 follow Table of Contents.

ERRATA.

WASHINGTON OBSERVATIONS FOR 1872.

- Page 82, No. 16, miscellaneous corrections, for $-1''.14$ read $-1''.07$.
Page 83, No. 16, apparent north-polar distance, for 126° read 116° .
Page 83, No. 16, miscellaneous corrections, for $-14''.7$ read $-12''.3$.
Page 258, XIII, 16, for $53^s.43$ read $58^s.50$, and for $126^\circ 59' 43''.6$ read $116^\circ 59' 46''.0$.
Page 279, XIII, 16, for $53^s.43$ read $58^s.50$, and for $126^\circ 59' 43''.8$ read $116^\circ 59' 46''.2$.
Page 279, XIII, 16, precession, for $3^s.458$ read $3^s.333$.
Page 283, No. 493, for B. A. A. read B. A. C.
Page 286, No. 618, precession, for $-12^s.806$ read $+1^s.486$.

WASHINGTON OBSERVATIONS FOR 1873.

- Page 30, XIV, 5, apparent right ascension, for 13^m read 12^m .
Pages 220, 243, XIV, 5, for 13^m read 12^m .
Page 74, B. A. C. 7846, apparent right ascension, for $26^s.77$ read $26^s.71$.
Page 75, B. A. C. 7846, circle division, for $343^\circ 16'$ read $345^\circ 16'$.
Page 75, B. A. C. 7846, apparent zenith distance south, for 343° read 345° .
Page 75, B. A. C. 7846, refraction, for $-17''.3$ read $-15''.1$.
Page 75, B. A. C. 7846, apparent north-polar distance, for $34^\circ 23' 56''.4$ read $36^\circ 23' 58''.6$, and, miscellaneous correction, for $+15''.1$ read $+15''.2$.
Pages 229, 253, B. A. C. 7846, for $24^s.20$ read $24^s.14$.
Page 229, B. A. C. 7846, for $34^\circ 24' 11''.5$ read $36^\circ 24' 13''.8$.
Page 253, B. A. C. 7846, for $34^\circ 24' 10''.9$ read $36^\circ 24' 13''.2$.
Page 253, B. A. C. 7846, precession, for $2^s.281$ read $2^s.238$.
Pages 78, 226, 250, B. A. C. 6998, for 14^m read 13^m .
Page 100, B. A. C. 7778, miscellaneous correction, for $-2^s.65$ read $-1^s.39$.
Page 101, B. A. C. 7778, north-polar distance, for 93° read 33° .
Page 101, B. A. C. 7778, miscellaneous correction, for $+12''.2$ read $+26''.0$.
Pages 229, 252, B. A. C. 7778, for $20^s.47$ read $21^s.73$.
Pages 229, 252, B. A. C. 7778, for $93^\circ 34' 41''.2$ read $33^\circ 34' 55''.0$.
Pages 229, 252, B. A. C. 7778, Div., Flex., etc., for $+0''.06$ read $-0''.66$.
Page 252, B. A. C. 7778, precession, for $3^s.111$ read $2^s.143$.
Page 252, B. A. C. 7778, for $93^\circ 34' 41''.3$ read $33^\circ 34' 54''.3$.
Page 117, B. A. C. 7, revolution, for 36 read 31 .
Page 117, B. A. C. 7, apparent zenith distance south, for $25' 15''.7$ read $26' 32''.3$.
Page 117, B. A. C. 7, apparent north-polar distance, for $31' 15''.7$ read $32' 32''.3$.
Page 213, B. A. C. 7, for $31' 48''.0$ read $33' 4''.6$.
Page 235, B. A. C. 7, for $31' 47''.3$ read $33' 3''.9$.
Page 229, B. A. C. 7820, for 45° read 41° , and, Div., Flex., etc., for $-0''.41$ read $-0''.52$.
Page 253, B. A. C. 7820, precession, for $2^s.507$ read $2^s.422$.
Page 253, B. A. C. 7820, for $45^\circ 10' 0''.1$ read $41^\circ 10' 0''.0$.

ERRATA.

WASHINGTON OBSERVATIONS FOR 1874.

Page 88, No. 30, for Anonymous read Eurynome.

Page 88, No. 30, apparent right ascension, for $58^s.66$ read $48^s.66$.

Page 89, No. 30, miscellaneous corrections, insert $-4''.7$. This observation gives a correction to the Eph. of the Berliner Jahrbuch of $-1^s.63$ and $+6''.9$.

Page 118, No. 29, for Anonymous read Lalande 37758.

Page 362, 19^b 44^m 10^s.66, for Anonymous read Lalande 37758.

Page 379, No. 410, for Anonymous read Lalande 37758.

In 1874, the correction for the combined *flexure of circle* and *flexure of telescope* was computed as $+0''.39 \sin(190^\circ.3 + \Delta)$.

This should have been $+0''.39 \sin(349^\circ.7 + \Delta)$, and this error requires the following corrections to be made in the volume for 1874:

On page XXXV, at bottom of page, for $\Delta Z = +0''.02$ read $\Delta Z = +0''.19$, and for $\Delta Z = -0''.87$ read $\Delta Z = -0''.49$.

In Table VI, page XXXVI, omit the *four* right-hand columns and insert in their places for the northern and southern stars, respectively, the *four* columns given below:

| Northern Stars. | | | | Southern Stars. | | | |
|---------------------|-------------|--------|--------------------|---------------------|-------------|--------|--------------------|
| Corr. to D. - R. | $2\Delta Z$ | ρ | $2\rho\Delta Z$ | Corr. to D. - R. | $2\Delta Z$ | ρ | $2\rho\Delta Z$ |
| " | " | " | " | " | " | " | " |
| + 0.35 | + 1.00 | 1.08 | + 1.08 | + 0.40 | - 1.52 | 0.90 | - 1.37 |
| .30 | + 0.53 | 1.56 | + 0.83 | 0.44 | - 0.59 | 0.89 | - 0.53 |
| .35 | - 0.57 | 0.79 | - 0.45 | 0.61 | - 0.44 | 0.88 | - 0.39 |
| .37 | + 2.37 | 0.65 | + 1.54 | 0.84 | - 0.23 | 1.53 | - 0.35 |
| .37 | + 0.32 | 0.92 | + 0.29 | 0.87 | - 0.71 | 2.77 | - 1.97 |
| .50 | - 0.90 | 1.70 | - 1.53 | 0.90 | - 1.49 | 0.88 | - 1.31 |
| .47 | - 1.53 | 0.50 | - 0.76 | 0.98 | - 0.16 | 0.87 | - 0.14 |
| .48 | + 0.38 | 0.65 | + 0.25 | 1.00 | - 1.95 | 2.01 | - 3.92 |
| .49 | + 0.62 | 0.72 | + 0.45 | 1.03 | - 2.63 | 0.79 | - 2.08 |
| .49 | - 0.61 | 0.65 | - 0.40 | 1.02 | - 0.46 | 0.89 | - 0.41 |
| .62 | + 0.39 | 0.72 | + 0.28 | 0.99 | - 1.25 | 0.87 | - 1.09 |
| .63 | + 0.20 | 1.08 | + 0.22 | 0.96 | - 1.02 | 1.92 | - 1.96 |
| .62 | + 0.25 | 1.41 | + 0.35 | 0.95 | + 1.51 | 0.88 | + 1.33 |
| .53 | - 0.52 | 2.90 | - 1.55 | 0.96 | - 1.34 | 0.76 | - 1.02 |
| .54 | - 0.01 | 2.31 | - 0.02 | 0.98 | - 1.42 | 1.53 | - 2.17 |
| .56 | + 0.66 | 0.65 | + 0.43 | 0.97 | - 2.57 | 1.48 | - 3.80 |
| .34 | + 0.62 | 0.81 | + 0.50 | 0.96 | - 1.50 | 0.88 | - 1.32 |
| .25 | + 0.98 | 1.41 | + 1.38 | 0.91 | - 0.47 | 1.43 | - 0.67 |
| .23 | + 0.59 | 1.33 | + 0.78 | 0.90 | + 0.44 | 2.15 | + 0.95 |
| .20 | + 1.77 | 1.60 | + 2.83 | 0.87 | - 1.10 | 1.08 | - 1.19 |
| .18 | + 0.71 | 0.84 | + 0.60 | 0.86 | - 1.43 | 1.86 | - 2.66 |
| .20 | + 0.69 | 0.85 | + 0.59 | 0.91 | - 0.81 | 0.87 | - 0.70 |
| - 0.20 | + 2.27 | 0.87 | + 1.97 | + 0.89 | - 2.07 | 0.89 | - 1.84 |
| | | | $\Delta Z = +0.19$ | | | | $\Delta Z = -0.49$ |

On page XXXVII, line 6, for $\Delta\phi = +0''.51$ read $\Delta\phi = -0''.66$.

ERRATA.

On page XXXVII, Table VII, omit the *four* right-hand columns and insert the four columns given below.

| Corr. to U.+L.-360° | $2\Delta\phi$ | ρ | $2\rho\Delta\phi$ |
|------------------------|---------------|--------|----------------------|
| " | " | | " |
| + 0.24 | - 1.40 | 3.51 | - 4.91 |
| + 0.25 | - 1.52 | 4.96 | - 7.54 |
| + 0.32 | - 1.06 | 3.46 | - 3.68 |
| + 0.34 | - 2.07 | 3.84 | - 7.95 |
| + 0.35 | - 0.37 | 0.76 | - 0.28 |
| + 0.35 | + 0.05 | 0.76 | + 0.04 |
| + 0.12 | - 1.84 | 2.30 | - 4.23 |
| + 0.07 | - 3.63 | 1.82 | - 6.61 |
| - 0.04 | - 1.44 | 1.28 | - 1.84 |
| + 0.01 | - 0.59 | 0.72 | - 0.42 |
| + 0.01 | - 1.51 | 0.79 | - 1.19 |
| + 0.02 | - 2.33 | 0.92 | - 2.13 |
| + 0.02 | - 1.98 | 1.53 | - 3.05 |
| + 0.02 | + 0.57 | 1.17 | + 0.67 |
| - 0.01 | - 2.41 | 1.28 | - 3.08 |
| - 0.01 | - 1.89 | 2.22 | - 4.20 |
| - 0.01 | + 0.14 | 0.65 | + 0.09 |
| - 0.02 | - 0.71 | 2.56 | - 1.82 |
| 0.00 | + 1.53 | 1.24 | + 1.90 |
| + 0.01 | - 0.95 | 2.15 | - 2.04 |
| + 0.01 | - 1.36 | 2.15 | - 2.92 |
| + 0.01 | - 1.69 | 0.76 | - 1.28 |
| + 0.01 | + 1.59 | 1.08 | + 1.72 |
| + 0.02 | - 2.98 | 0.92 | - 2.74 |
| + 0.08 | - 2.32 | 0.65 | - 1.51 |
| + 0.13 | - 2.28 | 1.28 | - 2.92 |
| + 0.13 | - 1.47 | 0.65 | - 0.96 |
| + 0.18 | - 0.42 | 0.79 | - 0.33 |
| + 0.19 | - 1.89 | 0.76 | - 1.44 |
| + 0.23 | + 1.43 | 0.50 | + 0.72 |
| + 0.28 | - 0.75 | 1.73 | - 1.30 |
| + 0.30 | - 2.83 | 0.72 | - 2.04 |
| + 0.30 | + 0.44 | 0.79 | + 0.35 |
| + 0.30 | - 2.85 | 0.81 | - 2.31 |
| + 0.28 | - 1.52 | 0.65 | - 0.99 |
| + 0.27 | + 0.65 | 0.86 | + 0.56 |
| | | | $\Delta\phi = -0.66$ |

Page XXXVIII, formulæ.

For objects north of the zenith :

For division corr. + $0''.39 \sin (190^\circ.3 + \Delta) - 0''.02 + 0''.51$ read division corr. + $0''.39 \sin (349^\circ.7 + \Delta) - 0''.19 + 0''.66$.

For division corr. + $0''.29 \sin (67^\circ.4 + \Delta) + 0''.02 + 0''.51$ read division corr. + $0''.29 \sin (67^\circ.4 + \Delta) + 0''.19 + 0''.66$.

For objects south of the zenith :

For division corr. + $0''.39 \sin (190^\circ.3 + \Delta) + 0''.87 + 0''.51$ read division corr. + $0''.39 \sin (349^\circ.7 + \Delta) + 0''.49 + 0''.66$.

For division corr. + $0''.29 \sin (67^\circ.4 + \Delta) - 0''.87 + 0''.51$ read division corr. + $0''.29 \sin (67^\circ.4 + \Delta) - 0''.49 + 0''.66$.

Page XXXIX, Table VIII, the values of the corrections for *flexure*, *latitude*, and *zenith-point*, etc., and the *total correction* are wrong, and the printed N. P. D. of all objects observed in 1874 having been corrected by the quantities in this erroneous table are wrong.

ERRATA.

The following table shows the quantities that should be applied to such north-polar distances to correct the error :

| N. P. D. | Correction. | | N. P. D. | Correction. | | N. P. D. | Correction. | | N. P. D. | Correction. | | N. P. D. | Correction. | |
|----------|-------------|------------|----------|-------------|------------|----------|-------------|------------|----------|-------------|------------|----------|-------------|------------|
| | Direct. | Reflected. | | Direct. | Reflected. | | Direct. | Reflected. | | Direct. | Reflected. | | Direct. | Reflected. |
| ° | " | " | ° | " | " | ° | " | " | ° | " | " | ° | " | " |
| 0 | - 0.02 | + 0.32 | 33 | + 0.40 | + 0.32 | 66 | + 0.47 | + 0.53 | 99 | + 0.53 | + 0.53 | 330 | - 0.41 | + 0.31 |
| 1 | - 0.01 | . . | 34 | .41 | . . | 67 | .48 | . . | 100 | .53 | . . | 331 | .39 | . . |
| 2 | + 0.01 | . . | 35 | .42 | . . | 68 | .48 | . . | 101 | .53 | . . | 332 | .38 | . . |
| 3 | .02 | . . | 36 | .43 | . . | 69 | .49 | . . | 102 | .52 | . . | 333 | .37 | . . |
| 4 | .03 | . . | 37 | .44 | . . | 70 | .49 | . . | 103 | .52 | . . | 334 | .36 | . . |
| 5 | .05 | . . | 38 | .45 | . . | 71 | .50 | . . | 104 | .52 | . . | 335 | .35 | . . |
| 6 | .06 | . . | 39 | .47 | . . | 72 | .50 | . . | 105 | .51 | . . | 336 | .33 | . . |
| 7 | .07 | . . | 40 | .48 | . . | 73 | .51 | . . | 106 | .51 | . . | 337 | .32 | . . |
| 8 | .09 | . . | 41 | .49 | . . | 74 | .51 | . . | 107 | .51 | . . | 338 | .31 | . . |
| 9 | .10 | . . | 42 | .50 | . . | 75 | .51 | . . | 108 | .50 | . . | 339 | .30 | . . |
| 10 | .11 | . . | 43 | .51 | . . | 76 | .52 | . . | 109 | .50 | . . | 340 | .28 | . . |
| 11 | .13 | . . | 44 | .52 | . . | 77 | .52 | . . | 110 | .49 | . . | 341 | .27 | . . |
| 12 | .14 | . . | 45 | .52 | . . | 78 | .52 | . . | 111 | .49 | . . | 342 | .26 | . . |
| 13 | .15 | . . | 46 | .53 | + 0.32 | 79 | .53 | . . | 112 | .48 | . . | 343 | .25 | . . |
| 14 | .17 | . . | 47 | .52 | .34 | 80 | .53 | . . | 113 | .48 | . . | 344 | .23 | . . |
| 15 | .18 | . . | 48 | .51 | .36 | 81 | .53 | . . | 114 | .47 | . . | 345 | .22 | . . |
| 16 | .19 | . . | 49 | .50 | .38 | 82 | .53 | . . | 115 | .47 | . . | 346 | .21 | . . |
| 17 | .21 | . . | 50 | .49 | .40 | 83 | .53 | . . | 116 | .46 | . . | 347 | .19 | . . |
| 18 | .22 | . . | 51 | .48 | .42 | 84 | .54 | . . | 117 | .46 | . . | 348 | .18 | . . |
| 19 | .23 | . . | 52 | .46 | .45 | 85 | .54 | . . | 118 | .45 | . . | 349 | .17 | . . |
| 20 | .24 | . . | 53 | .45 | .47 | 86 | .54 | . . | 119 | .44 | . . | 350 | .15 | . . |
| 21 | .26 | . . | 54 | .43 | .49 | 87 | .54 | . . | 120 | .44 | . . | 351 | .14 | . . |
| 22 | .27 | . . | 55 | .42 | .51 | 88 | .54 | . . | 121 | .43 | . . | 352 | .13 | . . |
| 23 | .28 | . . | 56 | .41 | + 0.53 | 89 | .54 | . . | 122 | .42 | . . | 353 | .11 | . . |
| 24 | .29 | . . | 57 | .42 | . . | 90 | .54 | . . | 123 | .42 | . . | 344 | .10 | . . |
| 25 | .31 | . . | 58 | .42 | . . | 91 | .54 | . . | 124 | .41 | . . | 355 | .09 | . . |
| 26 | .32 | . . | 59 | .43 | . . | 92 | .54 | . . | 125 | .40 | . . | 356 | .07 | . . |
| 27 | .33 | . . | 60 | .44 | . . | 93 | .54 | . . | 126 | .39 | . . | 357 | .06 | . . |
| 28 | .34 | . . | 61 | .44 | . . | 94 | .54 | . . | 127 | .39 | . . | 358 | .05 | . . |
| 29 | .35 | . . | 62 | .45 | . . | 95 | .54 | . . | 128 | .38 | . . | 359 | .03 | . . |
| 30 | .37 | . . | 63 | .46 | . . | 96 | .54 | . . | 129 | .37 | . . | 360 | - 0.02 | + 0.31 |
| 31 | .38 | . . | 64 | .46 | . . | 97 | .53 | . . | 130 | + 0.36 | + 0.53 | | | |
| 32 | + 0.39 | + 0.32 | 65 | + 0.47 | + 0.53 | 98 | + 0.53 | + 0.53 | | | | | | |

Page XLII, Table IX, 1874, for 38".31 read 38".33.

Page XLII, Table IX, 1874, for 38".27 read 37".94.

Page XLII, Table IX, 1874, for 38".29 read 38".14.

WASHINGTON OBSERVATIONS FOR 1875.

Page XLI, Table VI, last line, for + 1".20 read - 1".20.

Page 21, No. 34, refraction, for + 5' 45".0 read + 5' 22".0.

Page 21, No. 34, apparent N. P. D., for 22' 12".3 read 21' 49".3.

Page 29, No. 6, refraction, for 5' 24".5 read 5' 2".9.

Page 29, No. 6, apparent N. P. D., for 22' 13".8 read 21' 52".2.

Pages 39, 413, 468, for O. Arg. N. 9187 read O. Arg. N. 9201.

Page 39, No. 7, apparent N. P. D., for 54".9 read 4".9.

ERRATA.

Page 413, O. Arg. N. 9187, for $55' 5''.2$ read $54' 15''.2$.
 Page 468, O. Arg. N. 9187, for $55' 5''.4$ read $54' 14''.2$.
 Page 38, No. 4, mean wire and apparent right ascension, for 21^m read 22^m .
 Pages 413, 468, O. Arg. N. 9029, for 21^m read 22^m .
 Page 50, B. A. C. 3494, apparent right ascension, for $44^s.54$ read $54''.54$.
 Pages 414, 469, B. A. C. 3494, R. A., for $43^s.66$ read $53^s.66$.
 Page 83, B. A. C., 5065, refraction, for $3' 56''.8$ read $4' 16''.3$.
 Page 83, B. A. C., 5065, apparent N. P. D., for $15' 49''.9$ read $16' 9''.4$.
 Pages 96, 424, 476, for B. A. C. 6983, read O. Arg. N. 20264.
 Page 202, No. 44, mean wire and apparent right ascension, for 27^m read 26^m .
 Page 203, No. 44, refraction, for $5' 24''.5$ read $5' 2''.8$.
 Page 203, No. 44, apparent N. P. D., for $54''.5$ read $32''.8$.
 Page 410, B. A. C. 2135, N. P. D., for printed N. P. D. read $130^\circ 21' 43''.5$
 $45''.2$
 $43''.6$

 $44''.10$

Page 466, B. A. C. 2135, N. P. D., for $130^\circ 22' 6''.6$ read $130^\circ 21' 44''.5$.
 Page 418, B. A. C. 5065, N. P. D., for $28''.6$ read $48''.1$.
 Page 471, B. A. C. 5065, N. P. D., for $28''.9$ read $48''.4$.

WASHINGTON OBSERVATIONS FOR 1876.

Page 120, O. Arg. S. 15881, apparent right ascension, for 51^m read 41^m .
 Pages 136-137, for Leto read Anonymous.
 Page 280, No. 32, column 7, for $7^s.8$ read $17^s.8$.
 Page 280, No. 32, mean thread, for $23^s.86$ read $24^s.77$.
 Page 280, No. 32, observed right ascension, for $2^s.68$ read $3^s.59$.
 In Appendix II, page 36, in column "Washington sidereal time of Photographs," the quantities require a correction of
 $-25^m 24^s.8$.

REPORT OF THE SUPERINTENDENT OF THE OBSERVATORY TO THE CHIEF OF THE BUREAU OF NAVIGATION.

UNITED STATES NAVAL OBSERVATORY,

Washington, October 20, 1876.

SIR: In compliance with the bureau's instructions of the 28th ultimo, I have the honor to submit a report of the operations of this institution for the past year:

The Great Telescope.—Since my last report, observations with the 26-inch refractor have been made continuously. The satellites of the outer planets, Neptune, Uranus, and Saturn, have been carefully observed, and also a number of the more interesting and difficult of the binary stars. The observations of the satellites and of the companion of Sirius have been communicated to the *Astronomische Nachrichten*. A paper containing an account of the search for the companion of Procyon, discovered by Mr. OTTO STRUVE, director of the Pulkova Observatory, has been communicated to the American Academy of Arts and Sciences at Boston, and also to the *Astronomische Nachrichten*. The result of this search is, that none of the observers at Washington have been able to see the companion found and observed by Mr. STRUVE and his assistant; but they have discovered three other close companions of Procyon, and conjecture the existence of several more. The new companions of Procyon were first seen here by Professor HOLDEN, and afterwards by Professors NEWCOMB, WATSON, and PETERS, and by Mr. DAVID P. TODD. Some of these companions have also been seen in Cambridge, Mass., by Messrs. Clark, with the 26 $\frac{1}{4}$ -inch objective made by them for Mr. McCormick.

The figure of the object-glass not being quite perfect, and the flint lens having become slightly stained, the makers, Messrs. A. Clark & Sons, proposed to repolish this lens. The work was undertaken by them on April 21st and was finished May 4th of the present year. The figure of the glass is now very nearly perfect, and the stains have been removed from the flint lens. The work was done by Messrs. Clark without compensation, further than their transportation to and from Washington, and their subsistence while here.

Mr. A. G. Clark, while testing this objective, found the star ϵ Coronæ Borealis, a close and difficult double star. As this may prove an interesting binary, I give here the results of the observations made by Professor HALL:

1876.4. Angle of position, $= 350^{\circ}.5$; distance, $= 2''.12$; 3 nights.

The magnitudes are 4 and 12.

The dome is in good condition, and is moved with ease, considering its size. In March, the cog-work by means of which the dome is moved, became loose, and it was

necessary to bolt it to the frame-work; but beyond this slight improvement the dome has needed no repairs. The canvas curtain which covers the opening in it, weakening by constant exposure, is easily torn by the wind, and needs renewing every year. Still, this manner of covering so large an opening seems to be the most convenient.

The driving-clock continuing to be troublesome, and frequently stopping, it was taken down on July 2d, and the bearing of the shaft that carries the conical pendulum was changed. This bearing was a conical steel cup, into which was fitted the conical point of the shaft. On examination the point of the shaft was found to be worn and rough, probably through heating. In place of the conical steel cup, Mr. Gardner, the instrument-maker, put a plane agate surface, and gave the lower end of the shaft a spherical surface of large radius. To guide the shaft, an oil-cup is raised around the agate, and the upper surface of this cup forms a ring the size of the shaft. The clock now runs with much less noise and jar than before, and thus far has given but little trouble. The telescope and the entire apparatus are now in good condition, and are in constant use.

The Transit Circle—This instrument, under the direction of Prof. J. R. EASTMAN, assisted by Assistant Observers EDGAR FRISBY, A. N. SKINNER, and H. M. PAUL, has been employed, as in the preceding year 1874-'75, in observations of the sun, moon, and planets, and of a large list of miscellaneous stars whose places were desired, first, as zero-points for the formation of a catalogue from the zone observations made here in the years 1846 to 1849; secondly, for the use of Lieut G. M. WHEELER, Corps of Engineers, United States Army, in the reduction of the zenith-telescope work of his parties engaged in surveying and exploring the western Territories; and, thirdly, for the use of Lieut. Com. F. M. GREEN, in his determinations of latitude in the West Indies.

Considerable progress has been made in the observation of the list of stars from the British Association Catalogue, between $120^{\circ} 0'$ and $131^{\circ} 10'$ north-polar distance.

The observations of stars from the American Ephemeris have been limited generally to those necessary for the determination of time and azimuth, and for reflection observations.

In October, 1875, clock signals were exchanged on five nights with the observatory of Lehigh University, Bethlehem, Pa., to determine the longitude of that observatory. A report of this work will appear in an appendix to the volume of 1875.

The roof of the transit-circle observing-room is still in a very bad condition, and should be rebuilt on an entirely different plan.

The 9.6-inch equatorial.—This instrument is under the charge of Professor EASTMAN, with Messrs. FRISBY, SKINNER, and PAUL as assistants. It has been employed in the observation of occultations, and in identifying asteroids whose places are not well known.

Mural Circle and Transit Instrument—With the Transit Instrument Professor YARNALL has been observing such stars as had not been sufficiently observed in the catalogue which was published for the years 1845 to 1871; and other stars whose places have since been observed in declination with the Mural Circle. He has reduced these stars to their mean places, and they are now ready for a new edition of that cata-

logue. He has also been engaged in preparing for publication that portion of the annual volume for 1874 which is now in press. He was assisted by Professor LOCKWOOD until the latter's retirement in August last.

The Meteorological Department has been in charge of Professor EASIMAN, and the usual observations with the barometer, and the dry, wet, and solar thermometers, have been made at 0^h, 3^h, 6^h, 9^h, noon, 3^h, 6^h, and 9^h on each day. The observations for 1875 were ready for the printer in August, and, though unavoidably delayed, 200 extra copies will soon be ready for distribution to our meteorological correspondents.

Chronometers.—There are at present 82 chronometers under comparison, of which 58 are ready for issue and 24 are undergoing trial. There are 28 in the hands of Messrs. NEGUS undergoing repairs. This firm has continued to do the cleaning and repairing of instruments for the Observatory, and has sent here 25 chronometers during the year in good order. Fifty-three chronometers and 7 watches have been received from all sources, and 34 chronometers and 6 watches have been issued for use.

Lieut. Commander C. H. DAVIS was ordered to duty October 23, 1875; Lieut. T. N. LEE, November 15; Lieut. J. J. BRICE, December 1; Lieut. Commander G. W. PIGMAN, March 1, 1876; Lieut. C. H. ARNOLD was detached November 12, 1875; Lieut. J. J. BRICE, March 7, 1876; Lieut. T. N. LEE, May 31. The last was re-ordered September 19, 1876. Those on duty at present are Lieut. Commanders C. H. DAVIS and G. W. PIGMAN; Lieut. EDWARD W. STURDY (ordered on the 14th instant) and Lieut. T. N. LEE.

Investigation of the Moon's motion.—Three computers are now employed on this work under direction of Professor NEWCOMB, with the appropriation of \$3,000 for the purpose. It is hoped that the discussion of all recorded observations of eclipses and occultations from the earliest historical times till 1750 will be nearly completed during the present fiscal year, and will be ready for publication by the end of 1877. The theoretical investigation of the inequalities due to the action of the planets may require a longer time for their completion. An appropriation of \$1,200 is therefore asked for, which will suffice for the employment of a skilled computer through the next fiscal year.

Reduction of Transit of Venus observations.—This work is going forward as fast as the limited balance of past appropriations in the hands of the commission will admit. The time observations, and errors and rates of chronometers at all the stations, are nearly computed, and the latitudes are all determined. Prof. T. H. SAFFORD has been temporarily employed in the tedious investigations necessary to determine the longitudes of the stations, and in preparing the tables necessary for reducing the photographic negatives. Next to the determination of longitudes, the most laborious part of the work which remains to be done is the measurement of the photographic negatives. The commission assigned this work to Professor HARKNESS, in June, 1875. By him the sine flexures of the eight transit instruments used by the observing parties have been carefully determined by means of horizontal and vertical collimators, erected in the fire-proof for that purpose. The inequalities of the pivots of these transits have also been determined, the instrument employed in the work being Professor HARKNESS's new spherometer-caliper.

Owing to bad weather, more than half the photographs of the Transit of Venus are so faint that it is not possible to see them through an ordinary microscope. A series of experiments undertaken to overcome this difficulty, resulted in the construction of a new form of micrometer microscope, which renders it possible to measure all these pictures with a good degree of accuracy. Besides this new optical arrangement, other additions have been made to the measuring engine, which greatly facilitate its use, and considerable progress has also been made in investigating the errors of its glass scales.

The observations made at the Hobart Town station for the telegraphic determination of the difference of longitude between that place and Melbourne have been reduced, but the final value of the longitude cannot be given because the simultaneous observations made at the Melbourne Observatory have not yet been received.

The observations for telegraphic difference of longitude between the Hobart Town and Campbell Town stations have been completely reduced, and result in placing Campbell Town thirty-nine seconds and fifty-six hundredths of time ($39^s.56$) east of Hobart Town.

Blank forms have been prepared for the reduction of the chronometrical differences of longitude, and much progress has been made in the computation of the longitude of the Kerguelen station, but the final result has not yet been obtained.

International Exhibition, 1876.—In response to inquiries made by the Bureau of Navigation in regard to the amount of space desired by the Observatory for its exhibit at the International Exhibition, request was made of the "Board on behalf of the Executive Departments" for placing the following classes of objects, the plan and estimates for the exhibition of which were approved by the Secretary of the Navy:

1. A copy of each volume of the astronomical and meteorological observations issued by the Observatory from the date of its founding, 1845.
2. The distinct treatises which have issued pertaining to the subjects constituting part of its investigations.
3. A selected number of chronometers of American manufacture, taken from those on hand for issue to United States vessels.
4. A set of the instruments actually employed in observing the Transit of Venus, December 8-9, 1874, the instruments being mounted in a set of buildings similar to those which were constructed for the actual observations and transported to the several stations in each hemisphere. This part of the exhibit was designed to show the modes in which the observations were made and recorded, and to illustrate American aptitude for expeditionary astronomical work.
5. The illustration of American Arctic exploration from the year of the first Grinnell expedition (De Haven and Kane), 1850, to the year of the death of Captain Hall, 1871. With this subject the Observatory had been again brought into official relation.

The full amount of space required in the Government building and within the grounds of the Centennial having been readily accorded by the representative of the Navy Department, Rear-Admiral Jenkins, the exhibit of the objects heretofore named has been satisfactorily made. The care of placing the astronomical portion was

intrusted to Prof. WILLIAM HARKNESS, one of the observers of the Transit of Venus, 1874, assisted by Mr. W. F. GARDNER, instrument-maker of the Observatory; that of the publications and of the Arctic collection was intrusted to Prof. J. E. NOURSE.

While making up this collection, contributions from distinguished friends of the American explorers, and particularly from those who took part in the different expeditions, including officers of the Navy, were cordially offered and their receipt acknowledged; efforts being made to link to the Centennial all who had been directly interested in our explorations.

The catalogue of "Navy Department exhibits," recently published at the International Exhibition, contains accurate descriptive lists of the objects furnished by the Observatory.

The Library.—The increase in the number of volumes (principally by exchanges) has somewhat exceeded that of former years. The distribution of the annual volumes, besides supplying the calls for results of the investigations of the Observatory by its collaborators in the various observatories and other scientific institutions of the world, brings back rich gratuitous exchanges to build up our own resources.

The volume of observations made during the year 1873 has been widely distributed. An appendix to the volume for the year 1874, containing a condensed account of the Observatory, a list of publications, and a brief description of each of the instruments, illustrated by heliographs, has been received from the press in advance of the volume, and is now being distributed to those who are directly interested in astronomical work.

Very respectfully, your obedient servant,

C. H. DAVIS,

Rear-Admiral, Superintendent.

Commodore DANIEL AMMEN, U. S. N.,

Chief of Bureau of Navigation, &c., Navy Department.

GENERAL INTRODUCTION.

The Observatory was originally built as a depot of charts and instruments for the Navy, and was fully described in a "Report on the Plan and Construction of the Depot of Charts and Instruments, with a description of the instruments," etc., made by Lieut. JAMES M. GILLISS, U. S. N., to the Secretary of the Navy in February, 1845, and published as Senate Document No. 114, Twenty-eighth Congress, second session. A more general description, illustrated by plans and drawings, may be found in the volumes of Washington Observations for 1845, 1865, and 1874.

Position of the Observatory.—"The meridian of the Observatory at Washington shall be adopted and used as the American meridian for all astronomical purposes, and the meridian of Greenwich shall be adopted for all nautical purposes."¹ The latitude deduced from observations with the Mural Circle in 1845 and 1846 was $+38^{\circ} 53' 39''.25$;² and that value has been used in the reduction of all observations with the Mural Circle down to the present time. The observations made with the same instrument from 1861 to 1864, inclusive, give a latitude $+38^{\circ} 53' 38''.8$;³ which has been used in the reduction of observations with the Transit Circle. The final north-polar distances of objects observed with the Transit Circle in any year depend upon all the observations of circumpolar stars made during that year.

The longitude and the latitude of the Observatory are reckoned from the center of the old dome, which is built over the center of the main building.

The telegraphic determination of the longitude from Greenwich depends almost entirely upon the work of the United States Coast Survey. The following data are obtained from their official reports:

In August, 1872, the longitude was given as—

$$5^{\text{h}} \ 8^{\text{m}} \ 12^{\text{s}}.06 \pm 0^{\text{s}}.23,$$

and in August, 1873, it was announced by the assistant in charge of the office that the Coast Survey had made three independent determinations, with the following results:

| | | | | | | | | | | | | | | | h. | m. | s. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|-------|
| In 1866 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 5 | 8 | 12.11 |
| 1870 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | 12.10 |
| 1872 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | | 12.07 |
| The value adopted by the Coast Survey ⁴ is | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 5 | 8 | 12.09 |

¹ Revised Statutes of the United States, section 435.

² Washington Observations, 1845, Appendix, p. 116.

³ Washington Observations, 1864, Introduction, p. xlv.

⁴ Report of the Superintendent of the U. S. Coast Survey, 1874, page 182.

In interpolating tabular positions of the moon and planets, the longitude of the Observatory is assumed to be $5^{\text{h}} 8^{\text{m}} 12^{\text{s}}.0$.

Since the Observatory was built, there have been several changes in the positions of its instruments; and, in order to facilitate comparisons of the work done with them at different times, their co-ordinates, measured from the center of the old dome, are given in the following table. The sign + before a co-ordinate indicates that the instrument is north or west of the center of the dome, and the sign — indicates that it is south or east of that point.

| Instruments. | Diff. of Latitude. | | Diff. of Longitude. | |
|--|--------------------|--------|---------------------|--------|
| | Feet. | " | Feet. | s. |
| Transit : | | | | |
| January, 1845, to September 2, 1864 . . | 0.0 | 0.00 | + 41.0 | +0.035 |
| Since October 1, 1864 | 0.0 | 0.00 | — 42.9 | —0.036 |
| Mural Circle : | | | | |
| January, 1845, to September 15, 1845 . . | 0.0 | 0.00 | + 32.0 | +0.027 |
| Since October 1, 1845 | 0.0 | 0.00 | — 33.9 | —0.029 |
| Meridian Circle : | | | | |
| January, 1845, to August, 1864 | 0.0 | 0.00 | — 42.9 | —0.036 |
| Prime Vertical Transit : | | | | |
| Since January, 1845 | — 45.4 | — 0.45 | 0.0 | 0.000 |
| Transit Circle : | | | | |
| January 1, 1866, to June 5, 1869 | 0.0 | 0.00 | + 38.4 | +0.032 |
| Since October 1, 1869 | 0.0 | 0.00 | + 77.8 | +0.066 |
| 26-inch Equatorial (center of dome): | | | | |
| Since November 15, 1873 | —120.1 | — 1.19 | 0.0 | 0.000 |

Arrangement of work.—The system adopted at the time of the revival of the astronomical activity of this establishment in 1861 is still continued. Under this system, the observations with each instrument are directed by the officer having it in charge, who is held responsible for the proper performance of the work, and prepares the descriptions, explanations, and discussions of the observations contained in the annual volumes.

During the year the details for duty were as follows:

The Transit Circle was under the direction of Prof. J. R. EASTMAN, U. S. N., assisted by Assistants E. FRISBY, A. N. SKINNER, and H. M. PAUL.

The Prime Vertical Transit was not used during the year.

The Mural Circle and the Transit Instrument were under the direction of Prof. M. YARNALL, U. S. N., who was assisted in computing by Prof. H. H. LOCKWOOD, U. S. N., until the retirement of the latter in August.

The 9.6-inch Equatorial was under the direction of Prof. J. R. EASTMAN, U. S. N.

The 26-inch Equatorial was under the direction of Prof. A. HALL, U. S. N., who was assisted by Prof. E. S. HOLDEN, U. S. N., during the year.

In the Department of Chronometers the following officers were on duty for the periods specified, namely :

Lieut. Commander C. H. DAVIS, jr., U. S. N., from January 1 to December 31 ; Lieut. Commander G. W. PIGMAN, U. S. N., from March 1 to December 31 ; Lieut. J. J. BRICE, U. S. N., from January 1 to March, 1876 ; Lieut. T. N. LEE, U. S. N., from January 1 to May 31 and from September 19 to December 31 ; Lieut. EDWARD W. STURDY, U. S. N., from October 14 to December 31 ; Lieut. H. G. O. COLBY, U. S. N., from December 5 to December 31 ; and Master PERRIN BUSBEE, U. S. N., from October 28 to December 31.

The meteorological observations were made, under the supervision of Prof. J. R. EASTMAN, U. S. N., by the watchmen of the establishment, Messrs. THOMAS HAYS, DENNIS HORIGAN, and NICHOLAS CAHILL.

Mr. W. F. GARDNER, instrument-maker, executed all necessary repairs and alterations of the instruments and apparatus of the Observatory.

Mr. THOMAS HARRISON, clerk and disbursing officer, had charge of the official correspondence and accounts of the establishment.

The Observatory, being a naval establishment, is under the general supervision of the Bureau of Navigation of the Navy Department.

THE TRANSIT CIRCLE.

During the year 1876 the work with the Transit Circle was carried on under the direction of Prof. J. R. EASTMAN, U. S. N.

The Assistants were Messrs. EDGAR FRISBY, A. N. SKINNER, and H. M. PAUL.

The regular observations with the Transit Circle were confined to the following classes of objects:

(1) Stars of the American Ephemeris, for the determination of clock corrections, azimuth corrections, and the corrections to the zenith point and the assumed latitude

(2) Sun, moon, and planets.

(3) Stars whose occultations were observed at this Observatory and by the various American parties who observed the Transit of Venus in 1874.

(4) Stars selected for standard stars in the formation of a catalogue from the zone observations made here from 1846 to 1849.

(5) Stars used for latitude determinations by parties attached to the expedition of Lieut. G. M. WHEELER, United States Engineers, in charge of explorations and surveys west of the one hundredth meridian.

(6) Stars used by Lieut. Commander F. M. GREEN, U. S. N., in his determinations of latitude in the West Indies.

(7) The Stars of the British Association Catalogue between $120^{\circ} 0'$ and $131^{\circ} 10'$ N. P. D. that have not been observed here three times in right ascension and declination.

THE OBSERVING-ROOM.

The interior of the observing-room, which has been occupied since February 2, 1870, measures 40 feet from north to south and 28 feet 3 inches from east to west. Its height, from the floor to the under side of the shutters which close the opening in the roof, is 23 feet 2 inches at the ridge and 19 feet 6 inches at the eaves. The ridge of the roof extends east and west. The opening in the roof has a width of 3 feet 8 inches, and extends downward, in the north and south walls, to within 7 feet 4 inches of the floor. The portion in the roof is closed by means of four sliding shutters, while that in the north and south walls is closed by double doors.

The inside of the walls of the frame on the east, south, and west sides is covered with tin, and the outside of the frame is protected from the direct rays of the sun by light, wooden louver-work. The northern wall is covered on the outside with tin. The outside is painted white and the inside light blue.

The latitude of the Transit Circle is the same as that of the center of the central dome of the Observatory, but in longitude it is 77.8 feet = $0^{\circ}.066$ west of that point.

DESCRIPTION OF INSTRUMENTS.

THE TRANSIT CIRCLE.

A detailed description of the Transit Circle, together with an account of the investigation of its constants, may be found in the Washington Observations for 1865. The following condensed description will be sufficient to render intelligible the explanation of the observations and their reduction.

This instrument was made by Pistor & Martins, of Berlin, in 1865. It is of the reversible pattern, and is mounted upon two massive marble piers, with its axis 8 feet 2 inches above the floor. The telescope has a clear aperture of 8.52 inches, and a focal length of 12 feet and 0.7 of an inch. The axis is cast in a single piece, into which the steel pivots, 2.09 inches in diameter and 1.7 inch long, are screwed. The Y's are of gun-metal, and the bearing-surfaces are 0.28 inch wide. The distance between the centers of the bearing-surfaces is 3 feet 9.1 inches. The telescope-tube is made in two similar parts, which are bolted to the opposite sides of the cube which forms the central portion of the axis. The cube measures 16.64 inches on the edge.

Two circles, identical in form and size, are attached to the extremities of the axis. Each has ten radial arms, is cast in a single piece weighing about eighty pounds, is 45.3 inches in diameter at the outside edge, and 43.4 inches at the graduation. The circle on the clamp end of the axis, known as circle A, has inlaid upon its face two bands of silver, each 0.13 of an inch wide, the inner one of which is graduated to every 2', and the outer one to every 10'. The other, known as circle B, has inlaid upon its face a single band of silver 0.13 of an inch wide, which is graduated to every 2'. The graduation on each of these circles is numbered, from left to right, from 0° to 360°, and, as they face in opposite directions, when the telescope is moved in zenith distance, the reading of one circle increases while that of the other decreases. The circles are attached to the axis in such a manner that they may be adjusted to bring any desired divisions under the microscopes in a given position of the telescope. Each pier carries four micrometer microscopes placed at the extremities of two diameters, which intersect at right angles, and each of which makes an angle of 45° with the vertical. They are attached by means of metal arms, covered with wood, to the brass disk, on the face of the pier, which supports the Y's. The microscopes on the western pier are marked I, II, III, IV; those on the eastern pier, V, VI, VII, VIII. The readings of the former diminish and those of the latter increase as the telescope moves from the zenith toward the south. These microscopes magnify about forty-five diameters; one revolution of their screws is equal to 30'', and their micrometer-heads are divided to 0''.5. Each microscope micrometer is furnished with two parallel threads about 12'' apart, and the reading is made when the image of the division on the limb of the circle appears to be exactly midway between the threads.

In addition to the microscopes already mentioned, each pier carries another, which is employed as a pointer for setting the telescope by means of the coarse graduation on circle A. These microscopes magnify twenty-three diameters, and are placed at the extremities of horizontal radii to the circles; that on the western pier being north and that on the eastern pier south of the axis. The setting microscope in actual use is always the one at the clamp end of the axis.

In the eye-piece of the telescope is a fixed reticule of fifteen vertical and two horizontal threads. The latter have a space of about 8'' between them, and are inserted principally to mark the center of the field. The notation, and the approximate equatorial intervals between each vertical thread and the mean of sets B and D, and C₂, C₃, and C₄, are as follows:

TABLE I.

| | s. | | s. | | s. |
|-----------------------|------|----------------------|-----|---------------------|------|
| I | 36.8 | C ₁ | 4.1 | D ₁ | 8.2 |
| II | 24.5 | C ₂ | 2.0 | D ₂ | 9.7 |
| III or B ₁ | 12.3 | IV or C ₃ | 0.0 | V or D ₃ | 12.3 |
| B ₂ | 9.7 | C ₄ | 2.0 | VI | 24.5 |
| B ₃ | 8.2 | C ₅ | 4.1 | VII | 36.8 |

The threads B₁ to B₃ are known as set B; C₁ to C₅ as set C; and D₁ to D₃ as set D. The thread on the western side of the field is always known as I; therefore, when the instrument is reversed, the notation of the threads is reversed.

The eye-piece also contains a right-ascension and a zenith-distance micrometer in each of which the readings increase as the threads move from the micrometer-head. The right-ascension micrometer is provided with a single vertical thread, and is employed in determining the collimation constant, and sometimes in observing the transit of close circumpolar stars when clouds prevent observations at the fixed threads. The value of one revolution of the micrometer-screw is 1^s.024. The zenith-distance micrometer is furnished with four horizontal threads, two of which are about 3'' apart, and the center of the space between them is regarded as the standard middle thread. The value of one revolution of this micrometer-screw is 15''.312. The other threads are placed at a distance of about 2' 33'' on either side of the middle threads; that nearest the head of the micrometer being called thread A, and the other thread B. In observing southern stars, the micrometer-head is below the eye-piece if the clamp is west, and above it when the clamp is east. An increase of micrometer reading is subtractive from the reading of circle A, and additive to that of circle B. A self-registering apparatus is attached to the head of the micrometer-screw, in such a manner as to enable the observer to obtain a record of at least four bisections without removing the eye from the eye-piece.¹

The illumination of the field of view is so arranged that the threads can be shown either dark on a bright field or bright on a dark field. In the case of bright-field illumination, the color can be varied from deep red to dark blue.

The instrument is provided with five positive eye-pieces, magnifying respectively 135, 158, 186, 279, and 395 diameters. That magnifying 186 diameters is the one generally used.

Collimators.—The Transit Circle is provided with two collimators, having object-glasses of 35.2 inches focal length, and 2.1 inches clear aperture. The eye-pieces have a power of 67. The collimators are mounted on sandstone piers, the one north and the other south of the Transit Circle, and 14.8 feet from the center of the instrument. The field of view of collimator A contains a vertical thread crossed at its mid-

dle point by a horizontal thread. The field of view of collimator B contains a fixed vertical thread, and two intersecting threads, movable by a micrometer-screw. Each of the intersecting threads makes an angle of 12° with the vertical. Collimator A is usually mounted on the south pier. Two levels are provided by which the collimators may be placed horizontal.

Each side of the central cube of the Transit Circle telescope is pierced with a circular opening, 2.3 inches in diameter, which is closed by a brass cap. By removing the caps, and setting the telescope vertical, the threads of either collimator may be seen from the other.

The Standard Sidereal Clock.—The sidereal clock, used in connection with the Transit Circle, is Kessels No. 1324. In order to provide against the effects of sudden changes of temperature, the clock, which is situated in the room adjoining the observing-room on the eastern side, is inclosed in a vault of heavy masonry lined with tin, and, to prevent the works of the clock from rusting, the dryness of the air is maintained by keeping a fire in the clock-room throughout the year. The clock has a gridiron pendulum, and is connected with the galvanic system of the Observatory by means of a platinum point which projects from about the middle of the pendulum-rod, and at each vibration lightly touches the surface of a small globule of mercury and closes the circuit. The clock is connected with the chronograph in the usual way.

The rate of the clock is controlled by means of small weights, which can be placed in a small cup attached to the pendulum-rod.

The Counting-Clock.—This clock is attached to a brick pier near the eastern wall of the observing-room. It was made by Parkinson and Frodsham, of London, and has a mercurial pendulum. Its rate is controlled by means of small weights placed on the top of the jar of mercury, and it is kept within less than half a second of the Kessels clock.

This clock contains a delicate spring, furnished with a platinum point, resting upon a small plate of the same metal; the whole so arranged that at the beginning of each minute an arm attached to the arbor of the seconds hand raises the spring and separates the point from the plate for nearly one second. Wires are attached to this apparatus so that if desired it may be included in the same circuit with the Kessels clock, when, if the beats of the two clocks are nearly in coincidence, the mark for the sixtieth second of the Kessels clock will be omitted on the chronograph.

The Standard Mean Time Clock.—This clock is attached to a stone pier in the chronometer-room, but the officer in charge of the Transit Circle is responsible for furnishing its errors and rates. It was made by Parkinson and Frodsham, of London, has a mercurial pendulum, and its rate is controlled by means of small weights placed on the jar containing the mercury. It is compared with Kessels No. 1324 by causing their beats to be recorded on the same chronograph, generally until a coincidence is obtained. This clock is considered the best in the Observatory.

The Chronograph.—This instrument is mounted on a wooden stand near the eastern wall of the observing-room. It is a modified form of the Hipp chronograph, in which regularity of motion in the train is secured by a spring making 132 vibrations a second. The barrel of the chronograph is 6.37 inches in diameter, 13.5 inches long, and revolves once in a minute. A sheet of paper fastened on the chronograph barrel by thin, metallic springs is sufficient to contain the record of two hours' continuous

work, and the train requires winding only when the paper is changed. The clock-signals and those of the observer are recorded by a single pen. The armature of the magnet, which controls the pen, is provided with repeating-points for use in sending signals to distant stations when determining differences of longitude by telegraph. The pen-carriage is moved forward by an endless screw, but may be lifted from its bearings and moved backward or forward so that the pen may be placed upon any desired part of the chronograph sheet. The chronograph stops when the sheet is full. The record is made on paper of the quality of ordinary writing-paper with an ink that does not freeze at 0° F. The ink is made in the following proportions:

| | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| Water | - | - | - | - | - | - | - | - | - | - | - | 4 fluid ounces. |
| Alcohol | - | - | - | - | - | - | - | - | - | - | - | 2 fluid ounces. |
| Concentrated Glycerine | - | - | - | - | - | - | - | - | - | - | - | 1 fluid drachm. |
| Crystallized Aniline Blue | - | - | - | - | - | - | - | - | - | - | - | 40 grains. |

This ink requires thorough filtering. The pen is of glass, and the lower part of the bulb is drawn out to a fine capillary tube, so that, when ink is placed in the bulb and the pen allowed to rest its whole weight on the paper, it produces a fine sharp line as the barrel revolves.

The Barometer and Thermometers.—The barometer is of the cistern form, and is suspended on the eastern wall of the observing-room, near its northeastern corner. This instrument has a tube about 0.3 of an inch in diameter, and the graduation may be read by means of a vernier to 0.01 of an inch. The *attached* thermometer has a Fahrenheit scale graduated from $+2^{\circ}$ to $+125^{\circ}$. The *external* thermometer has a Fahrenheit scale, and is graduated from -36° to $+157^{\circ}$. It is suspended 1 foot outside the north front of the observing-room, 13.5 feet above the grass, and is protected from radiation by a shield formed by a double roof of boards, the upper one covered with tin painted white, and three sides of wooden, double louver-work. The *upper* thermometer is suspended above the nadir stage, with the bulb nearly as high as the object-glass when the telescope is pointed towards the zenith. It has a Fahrenheit scale graduated $+4^{\circ}$ to $+144^{\circ}$.

Personal Equation Apparatus.—The apparatus for determining the personal error of an observer in noting the time of the transits of stars is the one described in the Introduction to the Transit Circle work in the volume for 1875, and has been used during the year 1876 to determine the personal equation of all the observers with the Transit Circle.

Reflection Apparatus.—The apparatus described in the Introduction to the Transit Circle work in the volume for 1875 was only available for the observation of stars between the limits of 18° to 52° zenith distance. In order to reach the stars nearer the zenith the following plan was devised in January, 1876:

Two wooden boxes, each 3 feet 7 inches long, 13 inches wide, and 4 inches deep, were let into the floor, one on the north and the other on the south side of the box containing the mercury for observing the nadir.

These boxes were suspended on the floor timbers and were protected by substantial covers, easily removed and replaced, over which, when in position, the observing-chair moved freely. In each of these boxes two light brass rails were attached to the bottom, on which was mounted a light iron frame on small grooved wheels, carrying

a covered *mercury box* of wood 13.5 inches long, 9 inches wide, and 0.75 inch deep. By moving these mercury boxes on the rails they may be so adjusted that all stars of the proper magnitude within the limits of 6° to 24° zenith distance may be observed *directly* and by *reflection* at the same transit. Hence by the use of this apparatus and the one described in 1875 one is able to observe stars within the limits of 6° to 52° zenith distance.

In practice the rule generally followed was to make the bisections for the direct and reflected observations symmetrical with regard to the central thread; in most cases for reflection observations at threads I and II, and for direct observations at VI and VII.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

Position of Axis.—The system of observations with this instrument is based on the plan of reversing the axis at the beginning of each year, and at the same time shifting the position of circle B on the axis so that the north-polar distances of the same object will depend on different circle-divisions in different years. During the year 1876 the clamp end of the axis was west.

Arrangement of Work.—During the year 1876 there were four observers attached to the Transit Circle, who made all the observations and computations except such computations and copying as could be obtained for less than one thousand dollars. As a rule, each observer is held responsible for all the observations to be made during an “observing-day” of twenty-four hours, beginning at 9 a. m.

The usual observing-hours are from 9 a. m. to 3 p. m. and from 8 p. m. to an hour late enough to observe whatever small planets may be near opposition. It is a rule to observe the moon whenever it can be seen at time of transit, and on Sundays the only observations regularly made are those of the moon and of stars necessary for the determination of time and instrumental constants.

Generally, in clear weather, it is designed to observe a group of at least three “time stars” in the forenoon and three in the afternoon, and also a similar number near the beginning and the end of the work at night.

The azimuth constant is considered invariable throughout the “observing-day”; but the collimation and level constants and the zenith-point correction are generally determined at about the middle of the observations for each day and each night. If the observations are prolonged to a very late hour at night these constants are generally determined twice.

The number of observations to be obtained in an “observing-day” has not been fixed, for, with rare exceptions, the zeal of the observers leaves no necessity for fixing a minimum limit.

Method of Observing.—A galvanic current, closed by the Kessels clock, controls the chronograph-pen, and all observations of time are made by the aid of its recorded beats. Therefore, the first duty of the observer is to put the counting-clock in coincidence with the Kessels. Then the counting-clock serves to indicate the second corresponding to each beat of the chronograph-pen, and when included in the clock circuit, it also indicates the beginning of each minute on the chronograph by causing the pen to omit the mark corresponding to the sixtieth second.

The general method adopted in using the Transit Circle is to bring the proper divisions of circle B near the zeros of its micrometer microscopes, and then to measure

with the zenith-distance micrometer of the telescope the distance between its zero-point and the image of the object observed. The subdivision of the intervals between consecutive divisions on circle B is thus thrown entirely on the zenith-distance micrometer, and as the arc measured by the micrometer microscopes rarely exceeds $10''$ their errors of run are neglected. The graduation of circle B is considered better than that of circle A, and is consequently employed in all measures of zenith-distance. Circle A is used only as a setting circle, to indicate the degrees and minutes of zenith distances, and its position on the axis is never changed. If a collimating eye-piece is attached to the telescope, its zenith-distance micrometer set at 35 revolutions, and the instrument turned until the central micrometer-wires coincide with their own images reflected from the surface of mercury, the reading of the horizontal microscope of circle A will be $179^{\circ} 56'$, and some divisions of circle B will be found very nearly under the zeros of its micrometer microscopes.

Let

R denote the reading of the horizontal microscope of circle A when the telescope points to the zenith;

φ , the latitude of the Transit Circle;

δ , the declination of the object;

r , the refraction of the object;

Then, when the clamp is west, the telescope must be set so that the reading of the horizontal microscope of circle A will be,

For a direct observation - - - - - $R - \varphi + \delta \pm r$

For a reflection observation - - - - - $180^{\circ} + R + \varphi - \delta \mp r$

If the clamp is east, the reading will be,

For a direct observation - - - - - $R + \varphi - \delta \mp r$

For a reflection observation - - - - - $180^{\circ} + R - \varphi + \delta \pm r$

If the true value of φ were substituted in these expressions, whenever the computed setting was not exactly an even minute, it would be necessary to set on the *nearest* even minute. In practice, it is found much more convenient to set on the *next less* even minute; and, in order to avoid measuring more than half the distance between two consecutive divisions on the circle with the zenith-distance micrometer, a fictitious value of φ is used. The fictitious latitude is $\varphi + 1'$ for a direct observation with clamp east, and a reflection observation with clamp west; and $\varphi - 1'$ for a direct observation with clamp west, and a reflection observation with clamp east. The formulæ actually employed for computing the settings are, therefore,

For a direct observation, clamp east - - - $38^{\circ} 50'.6 - \delta \mp r$

For a reflection observation, clamp east - - - $141^{\circ} 3'.4 + \delta \pm r$

For a direct observation, clamp west - - - $321^{\circ} 3'.4 + \delta \pm r$

For a reflection observation, clamp west - - - $218^{\circ} 50'.6 - \delta \mp r$

In these formulæ, r is taken with the upper sign for an object south, and with the lower sign for an object north of the zenith. For the moon, r is made equal to the sum of the refraction and parallax. In observing faint objects, it is often desirable to know the approximate reading of the zenith-distance micrometer for the point at which the object will enter the field of view. In both positions of the clamp, the reading is computed from the formula,

$$\text{Micrometer reading} = 39 \text{ revolutions} - \frac{\epsilon}{R}$$

where ϵ is the difference between the computed setting and the next less even minute, and R is the value of one revolution of the micrometer-screw.

The adopted mode of observing is to move the zenith-distance micrometer until the image of the star or of the limb of the sun, moon, or planet bisects the space between the two middle threads of the micrometer, and this operation is called, in this introduction, briefly, *bisecting* the object. It is not easy to observe very faint objects in this way, and such are bisected with the threads A or B. These latter threads are also used, in order to avoid moving any thread more than two minutes, when observing two or more objects on the same setting, differing more than two minutes in declination. All bisections are made by always moving the micrometer-threads *from* the head. The microscope-micrometer threads are always moved *toward* the head. The readings of the zenith-distance micrometer are taken from the self-registering indexes after the completion of each observation.

Three persons are usually employed in making a complete observation of the four limbs of the sun, though it is sometimes accomplished by two. The setting for the north and south limbs is computed, a paste-board cap with a circular aperture three inches in diameter is put over the object-glass, a shadeglass is placed on the eye-piece, and the telescope set for the position of the sun's center. About two minutes before the predicted time of transit of the sun's center, the shutters are opened, and the observer notes the time of transit of the preceding limb over the eleven transit threads in the usual way. The assistant at circle A now sets the telescope for the observation of one of the horizontal limbs, and, while the observer is making the bisections at threads I and II, the assistant at circle B reads the four microscopes. This done, the telescope is set for the other limb, the bisections at threads VI and VII are made, and the assistant at circle B again reads the four microscopes. The telescope is then unclamped and moved until the following limb is in the field, when its transit over all the threads is observed. The shutters are then closed, and the observation completed by making the usual observations of the external thermometer, barometer, and attached thermometer. During the observation, the circles are protected from the direct rays of the sun by the steps and platform used in observing the nadir point.

In observations of the moon, if the preceding limb is the full one, the settings for the center and for the full horizontal limb are computed and the instrument set for the center, but not clamped. The transit of the preceding limb is then observed, and the observer going to circle A sets the instrument on the full horizontal limb. Returning to the eye-piece, he makes the bisections usually at threads II, III, IV, V, and VI. The observation is completed by reading the microscopes of circle B.

If the following limb is full, the telescope is set for the position of the full horizontal limb, and the microscopes are read before the moon enters the field. After the bisections are made, the telescope is unclamped and moved till the following limb is in the field, when the transit is observed in the same way as for the preceding limb.

When the larger planets are observed, the bisections of one limb are made at threads I and VII, and of the other at II and VI. The transit of the preceding limb

is usually observed at sets B and D, and of the following limb at set C, though this order is sometimes reversed.

Planets which do not present a well-defined disk are observed in the same manner as fixed stars.

The general plan for observing fixed stars is as follows :

(1) If the star is within 5° of the pole, the transit is observed by eye and ear at the threads of set C, and it is bisected at C_1 , C_3 , and C_5 , or sometimes at all the threads of the set.

(2) If the star is situated between 5° and 20° of polar distance, the transits over set C are recorded on the chronograph in the usual way, and it is bisected at any two of the threads B_1 , B_3 , D_1 , D_3 ; preference being given to the combinations B_3 , D_1 , or B_1 , D_3 , which make the observation symmetrical.

(3) If the polar distance of the star exceeds 20° , its transit over the eleven threads is recorded on the chronograph, and the bisections are made at any two of the threads I, II, VI, VII; preference being given to the combinations II, VI, or I, VII. Sometimes bisections are made at each of the threads I, II, VI, VII.

(4) In the case of double stars, the transit of one component is usually observed over sets B and D, and of the other over set C. The bisection of one component is made at threads I and VII, and of the other at threads II and VI.

In observing transits by eye and ear, the beat of the chronograph-pen is used and not that of the counting-clock.

Thread Intervals.—In the reduction of the observations of transits in 1876, *three* different values of *thread* intervals were used.

On the night of April 12 the middle thread of set C was broken, and it was replaced on April 13. On July 28 the right-ascension micrometer-thread and C_1 and C_3 were replaced by better threads. New intervals were computed for each period after new threads were inserted, and are shown in the following table :

TABLE II.

| From January 1 to April 12, 1876. | | | | From April 13 to July 28, 1876. | | | |
|-----------------------------------|---------------|----------------|--|---------------------------------|---------------|----------------|--|
| s. | s. | | | s. | s. | | |
| $B_1 + 12.263$ | $C_1 + 4.090$ | | | $B_1 + 12.269$ | $C_1 + 4.124$ | | |
| $B_2 + 9.701$ | $C_2 + 2.025$ | s. | | $B_2 + 9.731$ | $C_2 + 1.997$ | s. | |
| $B_3 + 8.165$ | $C_3 + 0.002$ | $D_1 - 8.157$ | | $B_3 + 8.193$ | $C_3 - 0.044$ | $D_1 - 8.176$ | |
| | $C_4 - 2.046$ | $D_2 - 9.699$ | | | $C_4 - 2.072$ | $D_2 - 9.691$ | |
| | $C_5 - 4.082$ | $D_3 - 12.264$ | | | $C_5 - 4.076$ | $D_3 - 12.208$ | |

| From July 28 to December 31, 1876. | | | |
|------------------------------------|---------------|----------------|--|
| s. | s. | | |
| $B_1 + 12.246$ | $C_1 + 4.143$ | | |
| $B_2 + 9.700$ | $C_2 + 2.030$ | s. | |
| $B_3 + 8.165$ | $C_3 - 0.010$ | $D_1 - 8.161$ | |
| | $C_4 - 2.025$ | $D_2 - 9.689$ | |
| | $C_5 - 4.082$ | $D_3 - 12.255$ | |

In reading all complete observations from the chronograph sheets the records for C_1 and C_5 are omitted, and the remaining nine threads are considered the standard set.

The Zenith-Distance Micrometer-Screw.—From a series of observations made in 1873, the value of one revolution of the zenith-distance micrometer-screw was found to be $15''.312$, and this value has been used in reducing the observations made in 1876.

When the close pair of micrometer-threads occupies the center of the space between the fixed horizontal threads, the reading of the micrometer-screw is 40 revolutions, and the reading increases as the threads move from the micrometer-head.

The Right-Ascension Micrometer-Screw.—The adopted value of one revolution of this screw is $1^s.024$. This value was determined by measuring the intervals between the transit threads, which had been determined by the transits of stars near the pole.

Inclination of Threads.—The corrections for inclination of micrometer-threads used in 1876 are given in the table below.

TABLE III.

| From January 1 to April 12, 1876. | | | | From April 13 to July 28, 1876. | | |
|-----------------------------------|---------------------------------|--------------------------|--------------------------|---------------------------------|--------------------------|--------------------------|
| Vertical Thread. | Inclination of Central Threads. | Correction for Thread A. | Correction for Thread B. | Inclination of Central Threads. | Correction for Thread A. | Correction for Thread B. |
| I | — 1.43 | — 2 35.05 | + 2 30.91 | — 0.95 | — 2 34.57 | + 2 31.39 |
| II | 0.95 | 2 34.53 | 2 31.40 | 0.63 | 2 34.21 | 2 31.72 |
| III | — 0.48 | 2 34.00 | 2 31.89 | — 0.32 | 2 33.84 | 2 32.05 |
| IV | 0.00 | 2 33.48 | 2 32.38 | 0.00 | 2 33.48 | 2 32.38 |
| V | + 0.48 | 2 32.96 | 2 32.88 | + 0.32 | 2 33.12 | 2 32.72 |
| VI | + 0.95 | 2 32.43 | 2 33.37 | 0.63 | 2 32 75 | 2 33.05 |
| VII | + 1.43 | — 2 31.91 | + 2 33.86 | + 0.95 | — 2 32.39 | + 2 33.38 |

| From July 28 to December 31, 1876. | | | |
|------------------------------------|---------------------------------|--------------------------|--------------------------|
| Vertical Thread. | Inclination of Central Threads. | Correction for Thread A. | Correction for Thread B. |
| I | — 1.06 | — 2 34.68 | + 2 31.28 |
| II | 0.71 | 2 34.28 | 2 31.65 |
| III | — 0.35 | 2 33.88 | 2 32.02 |
| IV | 0.00 | 2 33.48 | 2 32.38 |
| V | + 0.35 | 2 33.08 | 2 32.75 |
| VI | 0.71 | 2 32.68 | 2 33.12 |
| VII | + 1.06 | — 2 32.28 | + 2 33.49 |

The corrections for A and B in the above table contain, besides the correction for declination, the reduction to the middle pair of threads

Collimation Constant.—The collimation constant is determined by means of the collimators, without reversing the instrument.

The covers of the opening through the central cube of the telescope are removed, and the instrument turned until the horizontal thread in collimator A appears in the field at about 35 revolutions. Then by means of the screws acting against the Y's of collimator A, its vertical thread is moved until it is seen very near the image of C_3 in the telescope. Three measures of the small distance between C_3 and the image of the vertical thread in the collimator are then made with the right-ascension micrometer by moving its thread until the collimator thread bisects the space between the movable thread and C_3 , and by obtaining a coincidence between C_3 and the movable thread. The deviation will be half the space measured by the movable thread.

The telescope is then pointed to the zenith, and the micrometer of collimator B is moved until the intersection of its cross-threads is exactly on the image of the vertical thread of collimator A. The telescope is then pointed on collimator B, and four measures made of the distance between C_3 and the intersection of the cross-threads. These measures are made in the same manner as those on the vertical thread of collimator A.

The telescope is again pointed to the zenith, and the adjustment of the vertical thread of collimator A on the cross-threads of collimator B is examined. If it is imperfect, it is readjusted, and another set of measures similar to the first is made. The mean of the first and last sets of measures is taken as the true distance of C_3 from the image of the vertical thread of collimator A. Care is taken to determine the value of c_0 when the temperature is changing very slowly.

In the computation of the constant from these data in 1876,

c_τ = the sum of the collimation constant at the temperature τ° Fah., and the constant of diurnal aberration;

c_0 = the sum of the same constants at the temperature 0° Fah.;

M = the distance, in micrometer revolutions, of the image of the vertical thread of collimator A east of c_3 ;

M' = the distance, in micrometer revolutions, of the image of the intersection of the threads in collimator B east of c_3 ;

R = the value, in seconds of time, of one revolution of the micrometer-screw
= $1^s.024$;

φ = the latitude of the Observatory;

i = the reduction of the position of c_3 to the mean of the set of nine threads
= from January 1 to April 12, $+0^s.002$; from April 13 to July 28,
 $-0^s.044$; and from July 28 to December 31, $-0^s.010$.

Then, if M and M' have been observed at the temperature τ° Fah.,

$$c_\tau = \frac{1}{2} (M + M') R - 0^s.021 \cos \varphi - i = 0^s.512 (M + M') - 0^s.016 - i.$$

In the Transit Circle the collimation varies with the temperature, and from a discussion of many observations, made at widely different temperatures, it has been found that

$$c_0 = c_\tau \mp 0^s.004 \tau$$

where the upper sign is used when the clamp is east, and the lower when it is west.

As the value of c_0 has been found to be very steady throughout the year for several years, it is usually determined two or three times a month. For special observations on other days, the value of c_0 is obtained by interpolation, and from it, and the observed temperature at the time, the actual collimation constant is obtained from the formula

$$c_\tau = c_0 \pm 0^{\text{s}}.004 \tau$$

For the final reduction of observations with the Transit Circle, a constant value of c_0 is used during the period that the thread c_3 remains undisturbed. The value used is the mean of all the values determined by observation. These values will be found in Table A of this Introduction.

The Level Constant—The instrument employed is a hanging level. Its tube is three-quarters of an inch in diameter, ten inches long, and has a chamber at one end, so that the length of the bubble is adjustable. It seems to be most sensitive when its length is about 1.25 inch. The scale is numbered continuously from end to end, the numbers running from 0 to 90. The length of one division is about 0.09 inch, and its value is $0^{\text{s}}.058$.

In using the level, it is always reversed twice, giving two readings with it direct and two with it reversed.

In computing the constant from the observations,

b = the level constant;

W and E = the sum of the two readings of the west and east ends of the bubble with the level in its first position;

w and e = the sum of the two readings of the west and east ends of the bubble with the level reversed;

Hence,

$$b = 0^{\text{s}}.00725 [(W + E) - (w + e)]$$

When the $\left\{ \begin{array}{l} \text{west} \\ \text{east} \end{array} \right\}$ end of the bubble gives the greatest reading, the sign of b is $\left\{ \begin{array}{l} + \\ - \end{array} \right\}$

A careful examination of the pivots indicates that they are sensibly round and equal in diameter.

The Azimuth Constant.—The azimuth constant is generally determined from the observed transit of one or more of the “azimuth stars”—Polaris, δ Ursæ Minoris, 51 Cephei, or λ Ursæ Minoris—by means of the formula

$$a = \frac{\alpha - (T + \angle T + Bb + Cc)}{A}$$

where a , b , and c are the azimuth, level, and collimation constants; A , B , and C , the azimuth, level, and collimation factors; α , the adopted right ascension of the star; T , its observed time of transit; and $\angle T$, the approximate clock correction at T . When the same star is observed, both above and below the pole, on the same observing-day, the mean of the constants derived from those observations is adopted for the azimuth constant for that observing-day.

If no star is observed above and below the pole, the adopted constant is the mean of the results obtained from such azimuth stars as have been observed.

If from any cause no azimuth stars are observed, the constant is derived from the observed places of all the known stars by the method of least squares.

The Zenith-Point Correction from Nadir Observations.—This constant is determined from observations of the nadir point with a Bohnenberger eye-piece in the following manner:

(1) The telescope is pointed downward over a box of mercury, set so that the circle reading is $179^{\circ} 56'$, and the four microscopes at circle B are read.

(2) Two readings of the zenith-distance micrometers are then taken by moving the close pair of micrometer-threads until the space between them and their images, reflected from the mercury, appears equal to the distance between the two threads, the threads being nearer the head of the micrometer.

(3) Four readings of the micrometer are next made in the same way as before, except that the threads are placed the other side of the images.

(4) Two more readings of the micrometer are then made in the same manner as the first two, and the microscopes at circle B are again read.

The mean of the eight micrometer readings will give the reading for the coincidence of the two threads and their images. The second circle reading is taken for a check on the first.

The observations are reduced by means of the formula:

$$\text{Zenith-Point Correction} = \left\{ \begin{array}{l} 180^{\circ} + \text{Division Correction for Circle B} \\ + \text{Correction for Flexure of Circle B} \\ + \text{Correction for Flexure of Telescope} \\ - \text{Constant added to reduction to Meridian} \end{array} \right\}$$

$$- \left\{ \begin{array}{l} 179^{\circ} 56' \pm 10 \text{ Revolutions of Micrometer Microscopes} \\ \mp \text{Observed Reading of Micrometer Microscopes} \\ + \text{Micrometer Equivalent corresponding to the sum of the Observed Reading of the Zenith-Distance Micrometer} \\ + 0^{\circ}.250. \end{array} \right\}$$

The values of the division and flexure corrections are found by means of the formulæ for reflection observations in Tables V to VIII. The constant added to the reduction to the meridian is $1''.80$. In the terms relating to the micrometer microscopes, the upper signs are to be taken when the clamp is east and the lower when it is west.

The value of the first term in the expression for the zenith-point correction is a constant, and, in 1876, the different terms were obtained as follows:

In 1876 the clamp was west; circle B was used; the reading of the horizontal microscope, when the telescope was pointed to the zenith, was $48^{\circ}.0 = R^{\circ}$ and the distance of the nadir point from the reflected pole was $51^{\circ}.1 = \angle$. With these data,

Table V gives $48^{\circ}.0$ as the argument with which to enter Table VI to find the division correction, $0''.00$. With the same data, Table VII gives the correction for circle flexure $+0''.05$; and Table VIII gives the correction for flexure of telescope $+0''.29$. Hence, the

| | ° | ' | " |
|--|-------|----|-------|
| Nadir constant is - - - - - | 180 | 0 | 0 |
| Correction for errors of division is - - - - - | | | 0.00 |
| Correction for flexure of circle is - - - - - | | + | 0.05 |
| Correction for flexure of telescope is - - - - - | | + | 0.29 |
| Constant added to reduction to meridian is - - - | | — | 1.80 |
| | <hr/> | | |
| | 179 | 59 | 58.54 |

The second term is simply the concluded circle reading when the clamp is east.

The correction $+0^{\circ}.250$ to the reading of the zenith-distance micrometer is necessary, because the head of that micrometer has four indexes, and the one used in the nadir observation reads $0^{\circ}.250$ less than that employed in other observations.

The observations of the nadir point made in 1876, together with the resulting zenith-point corrections, will be found in Table E of this introduction.

The first column gives the mean day, and the second column gives the sidereal hour to the nearest tenth. The third column contains the observer's initial. The fourth column contains the Circle Reading. The fifth column contains the mean of the two readings of the micrometer microscopes when the telescope was pointed to the nadir.

The divisions of circle B, on which the readings were actually made, are:

| | ° | ' |
|-------------------------------|-----|---|
| For microscope V - - - - - | 183 | 0 |
| For microscope VI - - - - - | 273 | 0 |
| For microscope VII- - - - - | 3 | 0 |
| For microscope VIII - - - - - | 93 | 0 |

The sixth column contains the concluded circle reading. The seventh column contains the reading of the zenith-distance micrometer for the coincidence of the threads with their images. The complete nadir reading is found in the eighth column. The ninth column contains the nadir constant, and in the last column is found the resulting zenith-point correction.

Combination of Nadir and Reflection observations for the determination of the Zenith-Point Correction.—From January 1 to July 27 *seventy-three* observations, *direct* and *reflected*, at the same transit, were made of stars *south* of the zenith, and *seventy-five* of stars *north* of the zenith. The mean of the differences between the zenith point corrections derived from observations of the nadir and of stars was, for southern stars, $N. - S. = 0''.68$; for northern stars, $N. - S. = +0''.62$. In order to ascertain whether this correction was affected by the zenith distance of the object observed, the results were collected into *four* groups and the corrections deduced from each group are given below.

TABLE IV.

| South Stars. | | | | North Stars. | | |
|--------------|--|----------------------------|-------------|--|----------------------------|-------------|
| Group. | Limits of Group in Zenith Distance. | Number of Observations. | Nadir—Star. | Limits of Group in Zenith Distance. | Number of Observations. | Nadir—Star. |
| | ° ° | | " | ° ° | | " |
| I | 6 to 16 | 14 | — 0.67 | 6 to 16 | 23 | + 0.66 |
| II | 16 to 26 | 22 | — 0.55 | 16 to 26 | 12 | + 0.84 |
| III | 26 to 36 | 28 | — 0.80 | 26 to 36 | 21 | + 0.53 |
| IV | 36 to 46 | 9 | — 0.75 | 36 to Polaris. | 19 | + 0.53 |

The data in this table plainly indicates no change depending on zenith distance.

After July 28, when the eye-piece was removed, *eighty-eight* observations were made of *southern* stars and ninety-eight of northern stars.

The difference between the zenith-point corrections derived from observations of the nadir and the stars was, for *southern* stars, N.—S. = — 0''.22, and for northern stars, + 0''.61. An examination of these results by groups as in the above table shows no change depending on zenith distance. The zenith-point corrections employed in reducing the observations of 1876 were obtained by taking the mean of all the corrections derived from both nadir and reflection observations for each observing period, after applying the following corrections to the results from stars—

| | Before July 28. | After July 28. |
|--|-----------------|----------------|
| Correction for stars south of the zenith - - | — 0''.68 | — 0''.22 |
| Correction for stars north of the zenith - - | + 0''.62 | + 0''.61 |

Equal weight was given to each observation.

The *adopted* zenith-point corrections are given in Table F of this Introduction.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

These observations will be found on pages 1 to 227. In printing, the rule has been adopted to give the data as recorded by the observer, without alteration in any case whatever. When, in rare cases, the record seems to be erroneous or deficient, the error or change is explained in a foot-note. Where there is no reasonable doubt of the nature of an error, the necessary correction is introduced at the most convenient point in the progress of the reductions.

The observations of right ascension are printed on the left-hand pages.

The *first* column contains the day of the observation, which begins with the transit of the sun.

The *second* column contains the reference number.

The *third* column contains the name of the object. In the case of the sun, moon, and planets, the part observed is always specified; I and II indicating respectively the preceding and following limbs; N. and S., the north and south limbs; and C., the center. When one component of a double star is observed, it is always the brighter of the two, unless otherwise designated.

The *fourth* column contains the initial of the observer, as follows :

E.—Professor J. R. EASTMAN, U. S. N.

F.—Assistant EDGAR FRISBY.

S.—Assistant A. N. SKINNER.

P.—Assistant H. M. PAUL.

The *nine* columns from the fifth to the thirteenth contain the seconds and tenths of the observed time of transit over each thread. Objects observed over the standard set of nine threads, viz, set B, C₂, C₃, C₄, and set D, are recorded in the columns I to IX; those observed over only set C, in the columns III to VII; those observed over only sets B and D, in the columns I to III and VII to IX; those observed over only sets B and C, in the columns I to VIII; and those observed over only sets C and D, in the columns II to IX.

In the case of irregular observations, the threads can generally be identified by means of the recorded intervals or marginal notes.

Transits below the pole are recorded in the reverse order of that actually observed, so that the record for each thread occupies the same column that it would have done if the transit had been above the pole.

The *fourteenth* column contains the time of transit over the “mean thread”, whose position is the mean of the standard set of nine threads. When stars are observed over other or less threads than the standard set, the recorded transit over each thread is reduced to the “mean thread” by means of the known thread intervals.

In the case of other objects, the reduction for each thread is corrected for the motion of the object during the interval between each thread and the “mean thread”.

The *fifteenth* column contains the sum of the instrumental corrections, or the quantity

$$Aa + Bb + Cc$$

where a , b , c are the constants, and A , B , C are the factors for azimuth, level, and collimation.

The formulæ for computing A , B , and C are :

$$\begin{aligned} A &= \sin (\varphi - \delta) \sec \delta = \sin \varphi - \cos \varphi \tan \delta \\ B &= \cos (\varphi - \delta) \sec \delta = \cos \varphi + \sin \varphi \tan \delta \\ C &= \sec \delta \end{aligned}$$

in which φ is the latitude of the Observatory, and δ is the declination of the object observed.

The reductions of transit observations with the Transit Circle are made by means of tables giving the values of Aa , Bb , and Cc for each degree of zenith distance, and for each 0^s.01 of the constants a , b , c , from 0^s.01 to 0^s.50. These tables may be found in Appendix I to the Washington Observations for 1872.

A general table of the values of the factors A , B , and C may be found on page xlvii of the Introduction to the Transit Circle in 1873.

Table B, following this introduction, contains the adopted values of the instrumental constants for all occasions on which observations were made. The first column

gives the mean date to the nearest tenth of a day. The second column gives the approximate mean temperature for the date which is used in computing the collimation constant from the absolute determinations contained in Table A. In Table B, τ is the mean of the sum of the readings of the attached thermometer at the beginning and end of the observing period indicated by the date, and of the upper thermometer at the time the nadir was observed. The third, fourth, and fifth columns contain respectively the adopted values of the collimation, level, and azimuth constants.

The *sixteenth* column contains the apparent clock corrections given by direct observation of stars of the American Ephemeris situated within 40° of the equator. The adopted apparent right ascensions of these stars are obtained by applying the corrections given in Table C to the apparent right ascensions given in the American Ephemeris.

Table C contains the corrections deduced in Appendix III, Washington Observations for 1867, subsequently corrected by -0.03 ; and these modified corrections have been used in the reduction of observations with the Transit Circle in 1870, 1871, 1872, 1873, 1874, 1875, and 1876, with the exception of the correction for α Canis Minoris, which was changed in 1872 from -0.14 to -0.16 .

The *seventeenth* column contains the adopted clock correction for each object observed, computed from the data in Table D.

The principal work of the Transit Circle in 1876 has been upon the sun, moon, and planets and miscellaneous stars, and it has been deemed inadvisable to attempt the determination of corrections in right ascension to the star-places of the American Ephemeris, as has been done in former years. Trustworthy corrections in right ascension can only be obtained where such results constitute the sole aim of the observations. Accordingly in 1876, only such stars of the American Ephemeris were observed as were required to determine clock corrections and rates and instrumental corrections. Whenever possible, at least three stars were observed for clock corrections near the beginning and also near the end of the observing period on each day and each night. The mean of the corrections in each group was assumed to correspond with the mean of the times, and the hourly rate was determined for the period that the clock was in actual use. These corrections and rates are found in Table D, which requires no explanation.

By this method, the personal equation of the observer is seldom involved, but it was determined as usual with the apparatus described in the volume for 1875, and the correction is given below with the proper sign for application to the observed time.

[illegible]

The *eighteenth* column contains the apparent right ascension of each object, or the sum of the fourteenth, fifteenth, and seventeenth columns, and in all cases has reference to that part of the object which was actually observed.

tion could be obtained, the zenith-point correction was obtained by comparing the observed north-polar distances of the different stars of the group with the mean north-polar distances found for the same stars throughout the year.

The *fourteenth* column contains the *apparent zenith distance south* of each object, measured continuously from the zenith toward or through the south to the object.

This distance is the sum of

- (1) The approximate zenith distance south;
- (2) The micrometer equivalent;
- (3) The reduction to the meridian;
- (4) The correction for inclinations of threads and motion of object;
- (5) The correction for the thread employed in the bisections;
- (6) The zenith-point correction taken from the preceding column.

(1) When the clamp is east the approximate zenith distance south is equal to the reading of the horizontal microscope of circle A, minus the excess of the mean of the readings of the micrometer microscopes of circle B above ten revolutions. When the clamp is west, it is equal to $359^{\circ} 52'$, minus the reading of the horizontal microscope of circle A, plus the excess of the mean of the readings of the micrometer microscopes of circle B above ten revolutions.

(2) The micrometer equivalent of the readings of the zenith-distance micrometer, if the clamp is east, is

$$2' \ 0''.0 + R (40^r.000 - r)$$

if the clamp is west, it is

$$4' \ 0''.0 - R (40^r.000 - r)$$

In these formulæ r is the mean of the readings of the zenith-distance micrometer, expressed in revolutions; R , the mean value of one revolution between r and 40.0 revolutions, and the numerical term is a constant added to make the zenith-point correction always positive.

In practice, the micrometer equivalents are taken from a table where the values are tabulated for each $0^r.01$ from $24^r.3$ to $47^r.8$.

(3) The reduction to the meridian is computed from the formula

$$\begin{aligned} \mu &= 1''.80 - 112.5 \sin 1'' i^2 \tan \delta \\ &= 1''.80 - [6.7367] i^2 \tan \delta \end{aligned}$$

where μ is the reduction to the meridian, in seconds of arc; i , the equatorial interval, in seconds of time, between the mean thread and the thread at which the bisection was made; δ , the declination of the object; and $1''.80$ is a constant introduced to make μ generally positive. The values of μ are tabulated for all the vertical threads and for each degree of declination.

Where bisections are made away from the vertical threads, the time of the bisection is noted, and the correction is computed from the formula

$$\mu = 1''.80 - [6.4357] I^2 \sin 2 \delta$$

where I represents the distance of the object from the meridian at the time of bisection, and the other terms are the same as before.

(4) The corrections for inclination of threads given on pages XXIV and 3 were derived from a large number of observations at threads I and VII; and the correction for motion of object in unsymmetrical observations is computed from the formula

$$\Delta' = \frac{\Delta}{3600} I$$

where Δ' is the correction for motion, and Δ the hourly motion of the object in declination, both expressed in seconds of arc; I is the interval, in seconds of time, between the mean thread and the thread at which the bisection was made.

(5) In observations where threads A or B were employed, the correction for the distance of the thread from the central pair of threads was required, and the value of this correction is found on pages XXIV and 3.

(6) The zenith-point correction is taken directly from the thirteenth column of the observations.

The *fifteenth* column contains the reading of the thermometer used to determine the temperature of the air.

The *sixteenth* column contains the correction for refraction computed from Bessel's formula, employing the tables given in the Appendix to the Washington Observations for 1845.

The *seventeenth* column contains the apparent north-polar distance of each object, or the adopted co-latitude, $51^{\circ} 6' 21''.2 \pm$ the sum of the apparent zenith distance south, and the refraction. The upper sign is employed for a direct, and the lower for a reflected observation.

The *eighteenth* column contains:

(1) For stars whose apparent positions are given in the American Ephemeris, the correction to the north-polar distance of the Ephemeris obtained from each observation.

(2) For other stars, the reduction to their mean position for the fictitious epoch 18760. This reduction is computed with the constants of the American Ephemeris, and no proper motion is applied.

(3) For the asteroids, the correction for parallax, computed from the data accompanying the ephemerides.

The corrections for parallax, semi-diameter, and defective illumination for the sun, moon, and larger planets are given at the foot of the pages containing the observations.

All corrections for parallax, except those for the asteroids, are computed from the data contained in the American Ephemeris. When both limbs of an object were observed, the semi-diameter is derived from the observation; but, when only one limb was observed, the semi-diameter is taken from the American Ephemeris.

The corrections for defective illumination are computed from the data of the American Ephemeris.

CORRECTIONS TO THE STAR-POSITIONS OF THE AMERICAN EPHEMERIS IN NORTH-POLAR DISTANCE, GIVEN BY INDIVIDUAL OBSERVATIONS WITH THE TRANSIT CIRCLE IN 1876.

The tables containing these corrections may be found on pages 411 to 429 and give the date of the observation, the initial of the observer, and the correction for

each observation in north-polar distance, copied without change, except for erroneous micrometer revolutions, from the last column of the right-hand pages of the observations.

An interrogation-mark signifies that the result is doubtful, and an *r*, that it is rejected in the determination of the adopted mean result.

The mean polar distances thus found still require the following corrections:

- (1) For errors of division;
- (2) For flexure;
- (3) For error in zenith-point correction;
- (4) For error in assumed latitude.

Errors of Division.—The corrections for errors of division of circle B were determined in November and December, 1865. These corrections are given in the following table,¹ which contains the corrections to be applied to the mean of the readings of the four microscopes in order to free this mean from the effect of errors of division. The argument with which to enter the table is the reading of the horizontal microscope at circle B.

TABLE V.—*Corrections for Errors of Division to be applied to the Mean of the Readings of the Four Micrometer Microscopes of Circle B.*

| Arg. | Correction. | Arg. | Correction. | Arg. | Correction. | Arg. | Correction. | Arg. | Correction. |
|------|-------------|------|-------------|------|-------------|------|-------------|------|-------------|
| ° | " | ° | " | ° | " | ° | " | ° | " |
| 0 | + 0.30 | 18 | + 0.57 | 36 | + 0.12 | 54 | + 0.14 | 72 | + 0.27 |
| 1 | + 0.23 | 19 | + 0.52 | 37 | + 0.15 | 55 | + 0.15 | 73 | + 0.28 |
| 2 | + 0.18 | 20 | + 0.48 | 38 | + 0.14 | 56 | + 0.16 | 74 | + 0.31 |
| 3 | + 0.18 | 21 | + 0.49 | 39 | + 0.08 | 57 | + 0.17 | 75 | + 0.35 |
| 4 | + 0.22 | 22 | + 0.52 | 40 | + 0.02 | 58 | + 0.19 | 76 | + 0.40 |
| 5 | + 0.27 | 23 | + 0.53 | 41 | — 0.07 | 59 | + 0.20 | 77 | + 0.45 |
| 6 | + 0.27 | 24 | + 0.50 | 42 | — 0.12 | 60 | + 0.22 | 78 | + 0.46 |
| 7 | + 0.26 | 25 | + 0.46 | 43 | — 0.13 | 61 | + 0.26 | 79 | + 0.45 |
| 8 | + 0.26 | 26 | + 0.44 | 44 | — 0.07 | 62 | + 0.28 | 80 | + 0.44 |
| 9 | + 0.27 | 27 | + 0.42 | 45 | — 0.01 | 63 | + 0.27 | 81 | + 0.41 |
| 10 | + 0.29 | 28 | + 0.40 | 46 | 0.00 | 64 | + 0.25 | 82 | + 0.38 |
| 11 | + 0.29 | 29 | + 0.34 | 47 | 0.00 | 65 | + 0.22 | 83 | + 0.36 |
| 12 | + 0.29 | 30 | + 0.27 | 48 | 0.00 | 66 | + 0.22 | 84 | + 0.36 |
| 13 | + 0.36 | 31 | + 0.24 | 49 | + 0.06 | 67 | + 0.22 | 85 | + 0.36 |
| 14 | + 0.44 | 32 | + 0.22 | 50 | + 0.12 | 68 | + 0.22 | 86 | + 0.40 |
| 15 | + 0.52 | 33 | + 0.19 | 51 | + 0.12 | 69 | + 0.23 | 87 | + 0.44 |
| 16 | + 0.56 | 34 | + 0.15 | 52 | + 0.12 | 70 | + 0.24 | 88 | + 0.44 |
| 17 | + 0.57 | 35 | + 0.11 | 53 | + 0.13 | 71 | + 0.25 | 89 | + 0.37 |

The corrections in this table are only applicable when the microscopes are 90° apart, and their supporting arms make an angle of 45° with the vertical.

The following table gives the argument, in all cases, with which to enter Table V to obtain the division correction which must be applied to an observed north polar

¹ Washington Observations for 1865, Description of Transit Circle, § 72.

distance. In this table, R_0 is the reading of the horizontal microscope at circle B when the telescope points to the zenith; Δ is the observed north-polar distance of the object, and the last column indicates the use of the sign of the correction in Table V.

The argument will, of course, be brought into the first quadrant.

TABLE VI.

| Clamp. | Observation. | Argument. | Sign of Correction. |
|--------|--------------|-----------------------|---------------------|
| East | Direct | $R_0 + 51.1 - \Delta$ | Changed |
| | Reflected | $R_0 + 38.9 + \Delta$ | Same |
| West | Direct | $R_0 + 38.9 + \Delta$ | Same |
| | Reflected | $R_0 + 51.1 - \Delta$ | Changed |

Flexure.—The correction to an observed circle reading for flexure of circle is,¹ for circle B, $+0''.84 \sin R - 0''.86 \cos R$, where R is the reading of the horizontal microscope when the telescope is pointed to the object. Changing the expression for the correction for flexure of circle, so that the correction will be a function of the north-polar distance, we have the following table for circle B:

TABLE VII.

| Clamp. | Observation. | Correction. |
|--------|--------------|-------------------------------------|
| East. | Direct | $-1.20 \sin (R_0 + 5.4 - \Delta)$ |
| | Reflected | $+1.20 \sin (R_0 + 83.2 + \Delta)$ |
| West. | Direct | $+1.20 \sin (R_0 + 263.2 + \Delta)$ |
| | Reflected | $-1.20 \sin (R_0 + 185.4 - \Delta)$ |

where the quantities have the same significance as in Table VI.

From observations² made in 1872 and 1873, the following formulae were obtained for determining the correction to be applied to an observed north-polar distance for the effect of flexure of telescope and curvature of level for circle B:

¹ Washington Observations, 1865, Description of Transit Circle, § 61.

² Introduction to Transit Circle, Washington Observations, 1872, page lxiv.

TABLE VIII.

| Clamp. | Observation. | Correction. |
|--------|--------------|--|
| East. | Direct | " ° |
| | Reflected | $- 0.95 \sin (\Delta - 33.3)$ $+ 1.10 \sin (\Delta - 66.4)$ |
| West. | Direct | $- 0.95 \sin (\Delta - 68.9)$ |
| | Reflected | $+ 1.10 \sin (\Delta - 35.8)$ |

The correction for constant error in the zenith-point is obtained from a comparison of the direct and reflected observations in 1876.

The method of obtaining the value of this correction is shown in Table IX, where the results of the observations are collected. In this table, the first column contains the names of all the stars observed by reflection in 1876. The second column contains the right ascension to the nearest tenth of an hour. The third column contains the mean values of the north-polar distances given by direct observations; and the fourth column contains the seconds of the mean values obtained from reflected observations. The small subscript figures indicate the number of observations made on each star. The fifth column contains the difference between the direct and reflected observations. The sixth column contains the corrections which must be applied to the quantities in the fifth column on account of the errors of graduation and flexure of telescope and circle. The seventh column contains the sums of the quantities in the fifth and sixth columns.

The eighth column contains the weights of the values of $2 \Delta Z$ in the seventh column. The weights are computed by the formula

$$p = \frac{12mn}{2mn + 11(m+n)}$$

where p is the weight; m , the number of direct observations, and n the number of reflected observations of each star.

The ninth column contains the products of the quantities in the seventh column by their respective weights, and the final results are:

$$\begin{array}{ll} \text{From observations north of the zenith} & - - - - \Delta Z = + 0.57 \\ \text{From observations south of the zenith} & - - - - \Delta Z = - 0.24 \end{array}$$

TABLE IX.—*Computation of the Value of ΔZ from the Observations in 1876.*

| Name of Star. | a | Observed N. P. Distance. | | D - R | Corr. to D - R | 2 Δ Z | p | 2p Δ Z |
|--|------|---------------------------|---------------------|--------|-------------------|--------|------|--------|
| | | Direct. | Reflected. | | | | | |
| NORTHERN STARS. | | h. | ° ' " | " | " | " | " | " |
| Polaris | 1.2 | 1 21 58.0 ₀₆ | 3.32 ₃ | + 2.48 | + 0.34 | + 2.82 | 2.06 | + 5.81 |
| 51 Cephei | 6.7 | 2 45 58.5 ₀₂₁ | 58.63 ₂ | - 0.13 | 0.27 | + 0.14 | 1.50 | + 0.21 |
| 32 ² Camelopardalis | 12.8 | 5 54 45.9 ₀₃ | 48.83 ₁ | - 2.93 | 0.05 | - 2.88 | 0.72 | - 2.07 |
| ε Ursæ Minoris | 17.0 | 7 45 42.3 ₁₈ | 42.13 ₂ | + 0.18 | 0.16 | + 0.34 | 1.35 | + 0.46 |
| 1 Draconis | 9.3 | 8 7 41.8 ₂₃ | 41.82 ₁ | 0.00 | 0.19 | 0.19 | 0.72 | 0.14 |
| 4 Draconis | 12.1 | 11 41 39.8 ₀₄ | 39.08 | + 0.72 | 0.44 | 1.16 | 0.76 | 0.88 |
| ζ Ursæ Minoris | 15.8 | 11 49 29.6 ₁₄ | 29.71 | - 0.10 | 0.44 | 0.34 | 1.60 | 0.54 |
| κ Cephei | 20.2 | 12 39 46.2 ₇₅ | 45.10 | + 1.17 | 0.44 | 1.61 | 1.25 | 2.01 |
| 48 Cephei | 3.1 | 12 43 26.3 ₁₄ | 25.86 | 0.45 | 0.14 | 0.89 | 0.76 | 0.68 |
| γ Cephei | 23.6 | 13 3 33.6 ₆₅ | 33.08 ₁ | 0.58 | 0.42 | 1.00 | 0.79 | 0.79 |
| 9 Draconis | 10.4 | 13 38 57.9 ₈₀ | 57.36 ₂ | 0.62 | 0.40 | 1.02 | 1.29 | 1.32 |
| 5 Ursæ Minoris | 14.5 | 13 45 9.8 ₄₇ | 8.55 ₅ | + 1.29 | 0.40 | 1.69 | 2.08 | 3.52 |
| β Ursæ Minoris | 14.9 | 15 20 15.8 ₀₇ | 16.06 ₂ | - 0.26 | 0.41 | + 0.15 | 1.33 | + 0.20 |
| τ Draconis | 19.3 | 16 52 30.5 ₅₁ | 34.15 ₁ | - 3.60 | 0.56 | - 3.04 | 0.50 | - 1.52 |
| γ ² Ursæ Minoris | 15.3 | 17 43 28.4 ₉₆ | 27.27 ₁ | + 1.22 | 0.64 | + 1.86 | 0.80 | + 1.49 |
| ψ ¹ Draconis | 17.7 | 17 47 26.5 ₄₁ | 27.54 ₁ | - 1.00 | 0.64 | - 0.36 | 0.50 | - 0.18 |
| 50 Cassiopeæ | 1.9 | 18 10 47.2 ₄₈ | 48.72 ₃ | 1.48 | 0.69 | 0.79 | 1.70 | 1.34 |
| 11 Cephei | 21.7 | 19 15 32.2 ₅₃ | 33.55 ₁ | - 1.30 | 0.76 | - 0.54 | 0.72 | - 0.39 |
| β Cephei | 21.5 | 19 58 59.7 ₆₇ | 58.86 ₂ | + 0.90 | 0.79 | + 1.69 | 1.33 | + 2.25 |
| λ Draconis | 11.4 | 19 59 4 06 ₀ | 4.48 ₂ | - 0.42 | 0.79 | + 0.37 | 1.37 | + 0.50 |
| ε Draconis | 19.8 | 20 2 50.9 ₈₂ | 51.98 ₂ | - 1.00 | 0.79 | - 0.21 | 0.92 | - 0.19 |
| 22 Camelopardalis | 6.1 | 20 38 24.4 ₆₇ | 24.29 ₀ | + 0.17 | 0.80 | + 0.97 | 2.22 | + 2.15 |
| A Draconis | 16.5 | 20 57 47.9 ₃₀ | 48.21 ₁ | - 0.28 | 0.81 | 0.53 | 0.80 | 0.42 |
| 3 Ursæ Majoris | 8.0 | 21 9 50.2 ₃₃ | 48.33 ₂ | + 1.90 | 0.80 | 2.70 | 1.08 | 2.92 |
| ω Draconis | 17.6 | 21 11 5.0 ₄₃ | 4.51 ₂ | 0.53 | 0.80 | 1.33 | 1.08 | 1.44 |
| α ² Ursæ Majoris | 9.0 | 22 21 50.9 ₈₆ | 49.88 ₅ | 1.10 | 0.72 | 1.82 | 1.99 | 3.62 |
| δ Draconis | 19.2 | 22 33 22.7 ₂₁₂ | 22.22 ₇ | 0.50 | 0.72 | 1.22 | 2.67 | 3.26 |
| ι Cassiopeæ | 2.3 | 23 9 23.6 ₆₆ | 22.02 ₀ | + 1.64 | 0.67 | 2.31 | 2.12 | 4.90 |
| 9 Camelopardalis | 4.7 | 23 52 15.2 ₇₅ | 15.34 ₃ | - 0.07 | 0.65 | 0.58 | 1.52 | 0.88 |
| ι Cephei | 22.7 | 24 27 4.6 ₀₉ | 3.55 ₇ | + 1.05 | 0.65 | 1.70 | 2.50 | 4.25 |
| α Draconis | 14.0 | 25 1 50.9 ₀₇ | 50.71 ₂ | 0.19 | 0.64 | 0.83 | 1.33 | 1.10 |
| α Ursæ Majoris | 10.9 | 27 34 47.7 ₃₂₃ | 46.99 ₂₁ | 0.74 | 0.57 | 1.31 | 4.00 | 5.24 |
| α Cephei | 21.3 | 27 56 21.1 ₅₁₀ | 19.97 ₃ | 1.18 | 0.54 | 1.72 | 1.77 | 3.04 |
| α Cassiopeæ | 0.6 | 34 8 34.1 ₂₇ | 33.45 ₄ | 0.67 | 0.33 | 1.00 | 1.90 | 1.90 |
| γ Ursæ Majoris | 11.8 | 35 36 56.9 ₃₁₃ | 55.42 ₃ | 1.51 | 0.34 | 1.85 | 2.84 | 5.25 |
| θ Bootis | 14.4 | 37 34 31.6 ₇₅ | 30.74 ₃ | 0.93 | 0.29 | 1.22 | 1.52 | 1.85 |
| β Draconis | 17.5 | 37 36 22.0 ₇₆ | 20.23 ₃ | 1.84 | 0.29 | 2.13 | 1.60 | 3.41 |
| θ Ursæ Majoris | 9.4 | 37 45 32.3 ₇₂ | 30.67 ₂ | 1.70 | 0.29 | 1.99 | 0.92 | 1.83 |
| γ Draconis | 17.9 | 38 29 44.7 ₆₁₀ | 43.01 ₇ | 1.75 | 0.26 | 2.01 | 2.57 | 5.17 |
| η Ursæ Majoris | 13.7 | 40 4 1.4 ₇₁₅ | 1.15 ₁₂ | 0.32 | 0.27 | 0.54 | 3.29 | 1.94 |
| α Persei | 3.3 | 40 34 54.7 ₁₁₅ | 53.91 ₉ | 0.80 | 0.16 | 0.96 | 3.03 | 2.91 |
| ι Ursæ Majoris | 8.8 | 41 28 23.1 ₃₉ | 21.11 ₇ | 2.02 | 0.22 | 2.24 | 2.50 | 5.60 |
| δ Persei | 3.6 | 42 36 39.2 ₃₉ | 37.88 ₇ | 1.35 | 0.16 | 1.51 | 2.50 | 3.78 |
| α Aurigæ | 5.1 | 44 7 49.9 ₃₁₀ | 49.55 ₉ | 0.38 | + 0.02 | 0.40 | 2.78 | 1.11 |
| α Cygni | 20.6 | 45 9 42.3 ₄₂₁ | 42.03 ₁ | + 0.31 | - 0.03 | + 0.29 | 0.88 | + 0.26 |
| ΔZ = +0.57 | | | | | | | | |

TABLE IX.—*Computation of the Value of ΔZ from the Observations in 1876—Continued.*

| Name of Star. | <i>a</i> | Observed N. P. Distance. | | D — R | Corr. to D — R | 2 Δ <i>Z</i> | <i>p</i> | 2 <i>p</i> Δ <i>Z</i> |
|--|----------|---------------------------|---------------------|--------|-------------------|--------------|----------|-----------------------|
| | | Direct. | Reflected. | | | | | |
| SOUTHERN STARS. | | h. | ° ' " | " | " | " | " | " |
| <i>ε</i> Aurigæ. | 4.8 | 57 1 56.45 ₁₇ | 57.20 ₂ | — 0.75 | + 0.06 | — 0.69 | 1.47 | — 1.01 |
| <i>α</i> ² Geminorum | 7.4 | 57 50 29.41 ₂₁ | 29.21 ₁ | + 0.20 | 0.11 | + 0.31 | 0.88 | + 0.27 |
| <i>ζ</i> Persei | 3.8 | 58 29 10.18 ₂₀ | 10.30 ₃ | — 0.12 | 0.17 | 0.05 | 1.93 | 0.10 |
| <i>ζ</i> Cygni | 21.1 | 60 16 49.84 ₁₉ | 49.92 ₁ | — 0.08 | 0.32 | 0.24 | 0.88 | 0.21 |
| <i>β</i> Tauri | 5.3 | 61 29 57.44 ₂₂ | 57.65 ₄ | — 0.21 | 0.42 | 0.21 | 2.29 | 0.48 |
| <i>α</i> Andromedæ | 0.0 | 61 35 38.37 ₃₃ | 37.61 ₁ | + 0.76 | 0.42 | 1.18 | 0.90 | 1.06 |
| <i>β</i> Geminorum | 7.6 | 61 40 33.61 ₂₀ | 33.83 ₂ | — 0.22 | 0.42 | + 0.20 | 1.49 | + 0.30 |
| <i>ε</i> Bootis | 14.7 | 62 24 6.68 ₂₉ | 7.32 ₁ | 0.64 | 0.43 | — 0.21 | 0.90 | — 0.19 |
| <i>ε</i> Coronæ Borealis . . | 15.9 | 62 45 42.34 ₄ | 4.99 ₂ | 2.65 | 0.43 | 2.22 | 1.17 | 2.61 |
| <i>α</i> Coronæ Borealis . . | 15.5 | 62 52 0.01 ₁₈ | 1.70 ₃ | 1.69 | 0.43 | 1.26 | 1.91 | 2.41 |
| <i>μ</i> Leonis | 9.8 | 63 24 35.24 ₁₀ | 36.80 ₁ | 1.56 | 0.44 | 1.12 | 0.85 | 0.95 |
| <i>ε</i> Leonis | 9.6 | 65 39 19.84 ₉₆ | 21.41 ₄ | — 1.57 | 0.55 | — 1.02 | 2.37 | — 2.42 |
| <i>η</i> Tauri | 3.7 | 66 16 47.16 ₁₇ | 47.11 ₂ | + 0.05 | 0.58 | + 0.63 | 1.47 | + 0.93 |
| <i>α</i> Arietis | 2.0 | 67 7 28.24 ₃₈ | 30.08 ₁ | — 1.84 | 0.59 | — 1.25 | 0.90 | — 1.13 |
| <i>δ</i> Geminorum | 7.2 | 67 47 28.00 ₁₁ | 28.29 ₂ | 0.29 | 0.59 | + 0.30 | 1.41 | + 0.42 |
| <i>δ</i> Leonis | 11.1 | 68 47 49.05 ₂₆ | 50.76 ₂ | 1.71 | 0.62 | — 1.09 | 1.51 | — 1.65 |
| <i>ζ</i> Arietis | 3.1 | 69 24 57.78 ₉ | 58.44 ₆ | 0.66 | 0.65 | 0.01 | 2.37 | 0.02 |
| <i>β</i> Arietis | 1.8 | 69 47 55.22 ₃₁ | 57.10 ₁ | 1.88 | 0.68 | 1.20 | 0.90 | 1.08 |
| <i>α</i> Bootis | 14.2 | 70 10 15.32 ₃₀ | 16.08 ₁₆ | 0.76 | 0.70 | — 0.06 | 3.93 | — 0.24 |
| <i>ι</i> Pegasi | 21.3 | 70 43 29.83 ₃ | 30.23 ₁ | 0.40 | 0.70 | + 0.33 | 0.72 | + 0.24 |
| <i>η</i> Bootis | 13.8 | 70 58 46.69 ₃₂ | 47.10 ₁ | 0.41 | 0.76 | 0.35 | 0.90 | 0.31 |
| <i>γ</i> Geminorum | 6.5 | 73 29 47.97 ₃₂ | 48.52 ₅ | — 0.55 | 0.85 | 0.30 | 2.64 | 0.79 |
| <i>α</i> Tauri | 4.5 | 73 44 29.51 ₂₃ | 29.09 ₂ | + 0.42 | 0.87 | 1.29 | 1.50 | 1.93 |
| <i>γ</i> Tauri | 4.2 | 74 40 23.69 ₁₃ | 23.64 ₁ | + 0.05 | 0.93 | 0.95 | 0.87 | 0.81 |
| <i>β</i> Leonis | 11.7 | 74 44 4.72 ₂₈ | 5.48 ₂ | — 0.76 | 0.93 | + 0.17 | 1.52 | + 0.26 |
| <i>ι</i> Orionis | 5.0 | 74 46 12.76 ₄ | 14.24 ₅ | — 1.48 | 0.93 | — 0.55 | 1.73 | — 0.95 |
| <i>η</i> Piscium | 1.4 | 75 17 38.17 ₂₁ | 37.79 ₁ | + 0.38 | 0.96 | + 1.34 | 0.88 | + 1.18 |
| <i>α</i> ¹ Herculis | 17.1 | 75 27 59.36 ₁₂ | 0.41 ₁ | — 1.05 | 0.96 | — 0.09 | 0.86 | — 0.08 |
| <i>γ</i> Pegasi | 0.1 | 75 30 20.96 ₂₇ | 21.60 ₁ | 0.64 | 0.97 | + 0.33 | 0.90 | + 0.30 |
| <i>α</i> Ophiuchi | 17.5 | 77 20 52.77 ₁₃ | 53.51 ₂ | 0.74 | 1.01 | + 0.27 | 1.44 | + 0.39 |
| <i>α</i> Leonis | 10.0 | 77 25 37.90 ₄₀ | 39.62 ₃ | 1.72 | 1.02 | — 0.70 | 2.02 | — 1.41 |
| <i>ι</i> Leonis | 10.7 | 78 47 55.89 ₁₅ | 58.38 ₉ | 2.49 | 1.07 | 1.42 | 3.03 | 4.30 |
| <i>κ</i> Cancræ | 9.0 | 78 50 0.33 ₁ | 4.03 ₁ | 3.70 | 1.07 | 2.63 | 0.50 | 1.32 |
| <i>ε</i> Delphini | 20.5 | 79 6 59.67 ₉ | 2.50 ₃ | 2.83 | 1.09 | 1.74 | 1.74 | 3.03 |
| <i>γ</i> Aquilæ | 19.7 | 79 41 13.40 ₂₀ | 15.69 ₂ | 2.29 | 1.15 | 1.14 | 1.49 | 1.70 |
| <i>ζ</i> Pegasi | 22.6 | 79 48 53.74 ₁₃ | 55.63 ₂ | 1.89 | 1.15 | 0.74 | 1.44 | 1.07 |
| <i>ρ</i> Leonis | 10.4 | 80 3 21.07 ₁₀ | 22.56 ₃ | 1.49 | 1.18 | 0.31 | 1.77 | 0.55 |
| <i>σ</i> Virginis | 12.0 | 80 34 39.43 ₆ | 42.68 ₂ | 3.25 | 1.21 | 2.04 | 1.29 | 2.63 |
| <i>ε</i> Pegasi | 21.6 | 80 41 31.97 ₁₅ | 33.43 ₁ | 1.46 | 1.21 | 0.25 | 0.87 | 0.22 |
| <i>α</i> Aquilæ | 19.7 | 81 27 26.26 ₂₄ | 28.71 ₂ | 2.45 | 1.24 | 1.21 | 1.51 | 1.83 |
| <i>σ</i> Piscium | 1.6 | 81 28 0.04 ₁₆ | 1.38 ₄ | 1.34 | 1.24 | 0.10 | 2.21 | 0.22 |
| <i>α</i> Orionis | 5.8 | 82 37 3.57 ₂₂ | 5.63 ₅ | 2.06 | 1.23 | 0.83 | 2.55 | 2.12 |
| <i>ε</i> Piscium | 0.9 | 82 46 39.36 ₁₀ | 40.66 ₁ | 1.30 | 1.22 | 0.08 | 0.85 | 0.07 |
| <i>τ</i> Aquilæ | 20.0 | 83 4 12.35 ₂ | 15.80 ₁ | 3.45 | 1.22 | 2.23 | 0.65 | 1.45 |
| <i>ε</i> Hydræ | 8.7 | 83 7 37.52 ₂₀ | 40.09 ₆ | — 2.57 | + 1.22 | — 1.35 | 2.74 | — 3.70 |

TABLE IX.—*Computation of the Value of ΔZ from the Observations in 1876—Continued.*

| Name of Star. | a | Observed N. P. Distance. | | D — R | Corr. to D — R | 2 Δ Z | p | 2p Δ Z |
|----------------------|------|----------------------------|--------------------|--------|-------------------|--------|------|----------|
| | | Direct. | Reflected. | | | | | |
| SOUTHERN STARS. | | h. | ° ' " | " | " | " | | " |
| a Serpentis | 15.6 | 83 10 57.03 ₂₀ | 1.03 ₃ | — 4.00 | + 1.22 | — 2.78 | 1.93 | — 5.37 |
| ω Piscium | 23.9 | 83 49 21.61 ₉ | 23.82 ₂ | — 2.21 | 1.17 | — 1.04 | 1.37 | — 1.42 |
| θ Piscium | 23.4 | 84 18 6.38 ₂ | 6.33 ₂ | + 0.05 | 1.14 | + 1.19 | 0.92 | + 1.09 |
| a Canis Minoris . . | 7.5 | 84 27 30.43 ₂₃ | 32.27 ₂ | — 1.84 | 1.13 | — 0.71 | 1.50 | — 1.06 |
| ι Piscium | 23.6 | 85 2 43.04 ₁ | 43.97 ₃ | 0.93 | 1.07 | + 0.14 | 1.43 | + 0.20 |
| a Ceti. | 2.9 | 86 23 51.69 ₁₆ | 52.57 ₂ | 0.88 | 0.95 | + 0.07 | 1.47 | + 0.10 |
| τ Leonis | 11.4 | 86 27 39.46 ₃ | 40.46 ₁ | 1.00 | 0.94 | — 0.06 | 0.72 | — 0.04 |
| γ Ceti. | 2.6 | 87 17 15.37 ₁₃ | 15.80 ₁ | 0.43 | 0.91 | + 0.48 | 0.87 | + 0.42 |
| π Aquarii | 22.3 | 89 15 2.26 ₁ | 5.46 ₁ | 3.20 | 0.96 | — 2.24 | 0.50 | — 1.12 |
| v Leonis | 11.5 | 90 8 19.71 ₇ | 21.26 ₂ | 1.55 | 0.98 | — 0.57 | 1.33 | — 0.76 |
| δ Orionis. | 5.4 | 90 23 32.83 ₂₃ | 32.96 ₃ | 0.13 | 0.98 | + 0.85 | 1.96 | + 1.67 |
| a Aquarii | 22.0 | 90 55 15.72 ₁₂ | 16.36 ₁ | 0.64 | 0.98 | + 0.34 | 0.86 | + 0.29 |
| ε Orionis. | 5.5 | 91 16 56.92 ₁₇ | 58.15 ₁ | 1.23 | 0.96 | — 0.27 | 0.88 | — 0.24 |
| θ Virginis | 13.1 | 94 52 34.29 ₇ | 35.85 ₁ | 1.56 | 0.71 | 0.85 | 0.82 | 0.70 |
| κ Aquilæ. | 19.5 | 97 18 3.43 ₅ | 5.37 ₅ | 1.94 | 0.73 | 1.21 | 1.88 | 2.27 |
| a Hydræ | 9.4 | 98 7 18.44 ₂₄ | 20.98 ₁ | 2.54 | 0.80 | 1.74 | 0.89 | 1.55 |
| λ Aquarii | 22.8 | 98 14 18.31 ₃ | 20.54 ₂ | 2.23 | 0.81 | 1.42 | 1.08 | 1.53 |
| β Orionis. | 5.1 | 98 20 46.52 ₂₀ | 47.41 ₂ | 0.89 | 0.82 | 0.07 | 1.49 | 0.10 |
| β Libræ | 15.2 | 98 55 25.13 ₁₆ | 26.94 ₂ | 1.81 | 0.87 | 0.94 | 1.47 | 1.38 |
| μ Aquarii | 20.8 | 99 26 48.60 ₈ | 49.92 ₆ | 1.32 | 0.91 | 0.41 | 2.31 | 0.95 |
| a Virginis | 13.3 | 100 30 47.43 ₂₉ | 49.40 ₁ | — 1.97 | + 1.00 | — 0.97 | 0.90 | — 0.87 |
| | | | | | | | | ΔZ=—0.24 |

The correction for error of assumed latitude is derived from a comparison of the observations of the same stars, both above and below the pole. Table X exhibits the method of obtaining the value of the correction, $\Delta\phi$. The sixth column contains the sum of the corrections for the errors of division, flexure, and assumed zenith point. The other columns will require no explanation.

From this table, it is found that $\Delta\phi = -0''.73$.

TABLE X.—*Computation of the Value of $\Delta\phi$ from the Observations made in 1876.*

| Name of Star. | a | Observed North-Polar Distance. | | | | U. + L. — 360° | Corr. to U. + L. — 360° | 2 Δ ϕ | ρ | 2 ρ Δ ϕ |
|------------------------------------|------|--------------------------------|----|---------------------|---------------------|-------------------|-------------------------------|--------|------|---------|
| | | Culmination— | | | | | | | | |
| | | Upper. | | Lower. | | | | | | |
| | h. | ° | ' | " | " | " | " | " | " | " |
| λ Ursæ Minoris . . . | 19.8 | 1 | 3 | 59.08 ₁₀ | 0.73 ₁₁ | — 0.18 | — 0.32 | — 0.50 | 2.93 | — 1.46 |
| Polaris | 1.2 | 1 | 21 | 5.80 ₈₅ | 51.92 ₆₃ | 2.28 | 0.35 | 2.63 | 5.13 | 13.49 |
| 51 Cephei | 6.7 | 2 | 45 | 58.50 ₂₁ | 0.15 ₁₂ | 1.35 | 0.47 | 1.82 | 3.49 | 6.35 |
| δ Ursæ Minoris . . . | 18.2 | 3 | 23 | 29.75 ₁₉ | 28.29 ₃₁ | 1.96 | 0.52 | 2.48 | 4.09 | 10.14 |
| 32 ² Camelopardalis . . | 12.8 | 5 | 54 | 45.90 ₃ | 12.49 ₆ | 1.61 | 0.57 | 2.18 | 1.60 | 3.49 |
| ε Ursæ Minoris . . . | 17.0 | 7 | 45 | 42.31 ₈ | 16.53 ₁₀ | 1.16 | 0.46 | 1.62 | 2.68 | 4.34 |
| Γ Draconis | 9.3 | 8 | 7 | 41.82 ₃ | 16.91 ₃ | 1.27 | 0.45 | 1.72 | 1.28 | 2.20 |
| 4 Draconis | 12.1 | 11 | 41 | 39.80 ₄ | 19.79 ₃ | 0.41 | 0.52 | 0.93 | 1.43 | 1.33 |
| ζ Ursæ Minoris . . . | 15.8 | 11 | 49 | 29.61 ₄ | 29.99 ₃ | 0.40 | 0.53 | 0.93 | 1.43 | 1.33 |
| κ Cephei | 20.2 | 12 | 39 | 46.27 ₅ | 12.40 ₂ | 1.33 | 0.55 | 1.88 | 1.25 | 2.35 |
| 48 Cephei | 3.1 | 12 | 43 | 26.31 ₄ | 32.81 ₃ | 0.88 | 0.55 | 1.43 | 1.43 | 2.04 |
| γ Cephei | 23.6 | 13 | 3 | 33.66 ₅ | 36.02 ₅ | 0.32 | 0.56 | 0.88 | 1.88 | 1.65 |
| 9 Draconis | 10.4 | 13 | 38 | 57.98 ₆ | 1.14 ₃ | 0.88 | 0.58 | 1.46 | 1.60 | 2.34 |
| 5 Ursæ Minoris . . . | 14.5 | 13 | 45 | 9.84 ₇ | 49.92 ₆ | 0.24 | 0.58 | 0.82 | 2.22 | 1.82 |
| 226 Cephei | 22.5 | 14 | 24 | 44.55 ₃ | 15.15 ₃ | 0.30 | 0.59 | 0.89 | 1.28 | 1.14 |
| Groombridge 966 . . . | 5.4 | 15 | 2 | 33.85 ₂ | 24.70 ₁ | 1.45 | 0.60 | 2.05 | 0.65 | 1.33 |
| β Ursæ Minoris . . . | 14.9 | 15 | 20 | 15.80 ₇ | 43.51 ₅ | 0.69 | 0.59 | 1.28 | 2.08 | 2.66 |
| 21 Cassiopeæ | 0.6 | 15 | 41 | 24.31 ₂ | 34.66 ₃ | — 1.03 | 0.57 | — 1.60 | 1.08 | — 1.73 |
| Groombridge 4163 . . | 23.8 | 16 | 16 | 47.62 ₂ | 14.13 ₂ | + 1.75 | 0.54 | + 1.21 | 0.92 | + 1.11 |
| 79 Draconis | 21.9 | 16 | 53 | 2.25 ₆ | 57.08 ₁ | — 0.67 | 0.50 | — 1.17 | 0.80 | — 0.94 |
| τ Draconis | 19.3 | 16 | 52 | 30.55 ₁ | 28.55 ₂ | 0.90 | 0.50 | 1.40 | 0.65 | 0.91 |
| γ ² Ursæ Minoris . . . | 15.3 | 17 | 43 | 28.49 ₆ | 30.83 ₄ | 0.68 | 0.44 | 1.12 | 1.82 | 2.04 |
| ψ ¹ Draconis | 17.7 | 17 | 47 | 26.54 ₁ | 32.50 ₅ | 0.96 | 0.44 | 1.40 | 0.79 | 1.11 |
| 50 Cassiopeæ | 1.9 | 18 | 10 | 47.24 ₈ | 12.30 ₄ | 0.46 | 0.41 | 0.87 | 1.96 | 1.71 |
| κ Draconis | 12.5 | 19 | 31 | 40.04 ₅ | 19.60 ₄ | 0.36 | 0.37 | 0.73 | 1.73 | 1.26 |
| d Ursæ Majoris | 9.4 | 19 | 37 | 33.94 ₂ | 24.81 ₄ | 1.25 | 0.37 | 1.62 | 1.17 | 1.90 |
| λ Draconis | 11.4 | 19 | 59 | 4.06 ₉ | 55.67 ₅ | 0.27 | 0.37 | 0.64 | 2.21 | 1.41 |
| β Cephei | 21.5 | 19 | 58 | 59.76 ₇ | 58.34 ₁ | 1.90 | 0.37 | 2.27 | 0.82 | 1.86 |
| 23 Cassiopeæ | 1.4 | 20 | 22 | 27.71 ₁ | 31.29 ₁ | 1.00 | 0.37 | 1.37 | 0.50 | 0.68 |
| A Draconis | 16.5 | 20 | 57 | 47.93 ₆ | 9.06 ₃ | — 3.01 | 0.37 | — 3.38 | 1.60 | — 5.41 |
| 3 Ursæ Majoris | 8.0 | 21 | 9 | 50.23 ₃ | 11.32 ₄ | + 1.55 | 0.37 | + 1.18 | 1.43 | + 1.69 |
| ω Draconis | 17.6 | 21 | 11 | 5.04 ₃ | 54.19 ₄ | — 0.77 | 0.37 | — 1.14 | 1.43 | — 1.63 |
| σ ² Ursæ Majoris . . . | 9.0 | 22 | 21 | 50.98 ₆ | 8.54 ₃ | 0.48 | 0.42 | 0.90 | 1.60 | 1.44 |
| δ Draconis | 19.2 | 22 | 33 | 22.72 ₁₂ | 35.61 ₃ | 1.67 | 0.42 | 2.09 | 1.82 | 3.80 |
| o Cephei | 23.2 | 22 | 33 | 59.43 ₂ | 57.87 ₁ | 2.70 | 0.42 | 3.12 | 0.65 | 2.03 |
| ι Cassiopeæ | 2.3 | 23 | 9 | 23.66 ₆ | 36.26 ₁ | 0.08 | 0.43 | 0.51 | 0.80 | 0.41 |
| 32 Ursæ Majoris | 10.2 | 24 | 16 | 26.29 ₁ | 32.31 ₁ | 1.40 | 0.39 | 1.79 | 0.50 | 0.90 |
| ι Cephei | 22.7 | 24 | 27 | 4.60 ₉ | 53.33 ₄ | 2.07 | 0.38 | 2.45 | 2.01 | 4.92 |
| a Ursæ Majoris | 10.9 | 27 | 34 | 47.73 ₂₃ | 12.23 ₇ | 0.04 | 0.48 | 0.52 | 2.96 | 1.54 |
| γ Draconis | 16.4 | 28 | 12 | 15.72 ₅ | 41.88 ₁ | — 2.40 | — 0.50 | — 2.90 | 0.79 | — 2.29 |

Δϕ=—0".73

$\Delta\phi = -0''.73$

Collecting the results from all the available data, the total systematic correction to be applied to an observed north-polar distance in 1876, is:

For objects north of the zenith:

$$\begin{array}{ll} \text{Observed directly} & - \quad - \quad - \quad \text{Div. Corr.} + 0''.45 \sin (\angle + 357^\circ.9) - 0''.57 + 0''.73 \\ \text{Observed by reflection} & - \quad \text{Div. Corr.} + 0''.37 \sin (\angle + 61^\circ.1) + 0''.57 + 0''.73 \end{array}$$

For objects south of the zenith:

$$\begin{array}{ll} \text{Observed directly} & - \quad - \quad - \quad \text{Div. Corr.} + 0''.45 \sin (\angle + 357^\circ.9) + 0''.24 + 0''.73 \\ \text{Observed by reflection} & - \quad \text{Div. Corr.} + 0''.37 \sin (\angle + 61^\circ.1) - 0''.24 + 0''.73 \end{array}$$

The numerical values of these expressions are given in Table X with the argument north-polar distance. The *second* column contains the corrections for the errors in the division of circle B. The *third* column contains the sums of the corrections for flexure of circle B, flexure of telescope, effect of gravity on the zenith-distance micrometer, and, in the case of reflection observations, curvature of the surface of the mercury. The *fourth* column contains the sum of the corrections for errors in the assumed latitude and constant error in the zenith point.

As the computed value of $\angle Z$ is not the same for northern as for southern objects, to avoid an abrupt change at the zenith, the value is gradually changed between 46° and 56° north-polar distance. The *fifth* column contains the sum of all the corrections.

TABLE XI.—*Systematic Corrections to be applied to the North-Polar Distances of Objects observed with the Transit Circle in 1876.*

DIRECT OBSERVATIONS.

| N. P. D. | Division Correction. | Flexure. | Latitude, Zenith Point, etc. | Total. | N. P. D. | Division Correction. | Flexure. | Latitude, Zenith Point, etc. | Total. |
|----------|----------------------|----------|------------------------------|--------|----------|----------------------|----------|------------------------------|--------|
| ° | " | " | " | " | ° | " | " | " | " |
| 0 | + 0.44 | — 0.02 | + 0.16 | + 0.58 | 40 | + 0.15 | + 0.28 | + 0.16 | + 0.59 |
| 1 | .44 | — 0.01 | .16 | .59 | 41 | .14 | .28 | .16 | .58 |
| 2 | .38 | .00 | .16 | .54 | 42 | .09 | .29 | .16 | .54 |
| 3 | .31 | + 0.01 | .16 | .48 | 43 | + 0.03 | .29 | .16 | .48 |
| 4 | .24 | .01 | .16 | .41 | 44 | — 0.06 | .30 | .16 | .40 |
| 5 | + 0.18 | + 0.02 | + 0.16 | + 0.36 | 45 | — 0.12 | + 0.31 | + 0.16 | + 0.35 |
| 6 | .18 | .03 | .16 | .37 | 46 | .13 | .31 | .16 | .34 |
| 7 | .22 | .04 | .16 | .42 | 47 | .08 | .32 | .24 | .48 |
| 8 | .26 | .05 | .16 | .47 | 48 | — 0.02 | .32 | .32 | .62 |
| 9 | .27 | .05 | .16 | .48 | 49 | .00 | .33 | .40 | .73 |
| 10 | + 0.26 | + 0.06 | + 0.16 | + 0.48 | 50 | 0.00 | + 0.33 | + 0.48 | + 0.81 |
| 11 | .26 | .07 | .16 | .49 | 51 | .00 | .34 | .56 | 0.90 |
| 12 | .27 | .08 | .16 | .51 | 52 | + 0.05 | .34 | .65 | 1.04 |
| 13 | .29 | .09 | .16 | .54 | 53 | .11 | .35 | .73 | .19 |
| 14 | .29 | .09 | .16 | .54 | 54 | + 0.12 | .35 | .81 | .28 |
| 15 | + 0.29 | + 0.10 | + 0.16 | + 0.55 | 55 | + 0.12 | + 0.36 | + 0.89 | + 1.37 |
| 16 | .35 | .11 | .16 | .62 | 56 | .13 | .36 | .97 | .46 |
| 17 | .43 | .12 | .16 | .71 | 57 | .14 | .37 | .97 | .48 |
| 18 | .51 | .12 | .16 | .79 | 58 | .15 | .37 | .97 | .49 |
| 19 | .56 | .13 | .16 | .85 | 59 | .16 | .38 | .97 | .51 |
| 20 | + 0.57 | + 0.14 | + 0.16 | + 0.87 | 60 | + 0.17 | + 0.38 | + 0.97 | + 1.52 |
| 21 | .57 | .15 | .16 | .88 | 61 | .19 | .39 | .97 | .55 |
| 22 | .52 | .15 | .16 | .83 | 62 | .20 | .39 | .97 | .56 |
| 23 | .48 | .16 | .16 | .80 | 63 | .22 | .39 | .97 | .58 |
| 24 | .49 | .17 | .16 | .82 | 64 | .26 | .40 | .97 | .63 |
| 25 | + 0.52 | + 0.18 | + 0.16 | + 0.86 | 65 | + 0.28 | + 0.40 | + 0.97 | + 1.65 |
| 26 | .53 | .18 | .16 | .87 | 66 | .27 | .40 | .97 | .64 |
| 27 | .50 | .19 | .16 | .85 | 67 | .25 | .41 | .97 | .63 |
| 28 | .46 | .20 | .16 | .82 | 68 | .22 | .41 | .97 | .60 |
| 29 | .44 | .20 | .16 | .80 | 69 | .22 | .41 | .97 | .60 |
| 30 | + 0.42 | + 0.21 | + 0.16 | + 0.79 | 70 | + 0.22 | + 0.42 | + 0.97 | + 1.61 |
| 31 | .40 | .22 | .16 | .78 | 71 | .22 | .42 | .97 | .61 |
| 32 | .35 | .22 | .16 | .73 | 72 | .23 | .42 | .97 | .62 |
| 33 | .28 | .23 | .16 | .67 | 73 | .24 | .42 | .97 | .63 |
| 34 | .24 | .24 | .16 | .64 | 74 | .25 | .43 | .97 | .65 |
| 35 | + 0.22 | + 0.24 | + 0.16 | + 0.62 | 75 | + 0.27 | + 0.43 | + 0.97 | + 1.67 |
| 36 | .19 | .25 | .16 | .60 | 76 | .28 | .43 | .97 | .68 |
| 37 | .15 | .26 | .16 | .57 | 77 | .31 | .43 | .97 | .71 |
| 38 | .11 | .26 | .16 | .53 | 78 | .35 | .44 | .97 | .76 |
| 39 | .12 | .27 | .16 | .55 | 79 | .40 | .44 | .97 | .81 |

TABLE XI.—*Systematic Corrections, etc.*—Continued.

DIRECT OBSERVATIONS.

| N. P. D. | Division Correction. | Flexure. | Latitude, Zenith Point, etc. | Total. | N. P. D. | Division Correction. | Flexure. | Latitude, Zenith Point, etc. | Total. |
|----------|-------------------------|----------|------------------------------------|--------|----------|-------------------------|----------|------------------------------------|--------|
| ° | " | " | " | " | ° | " | " | " | " |
| 80 | + 0.45 | + 0.44 | + 0.97 | + 1.86 | 120 | + 0.42 | + 0.40 | + 0.97 | + 1.79 |
| 81 | .46 | .44 | .97 | .87 | 121 | .40 | .39 | .97 | .76 |
| 82 | .45 | .44 | .97 | .86 | 122 | .35 | .39 | .97 | .71 |
| 83 | .44 | .44 | .97 | .85 | 123 | .28 | .39 | .97 | .64 |
| 84 | .41 | .45 | .97 | .83 | 124 | .24 | .38 | .97 | .59 |
| 85 | + 0.38 | + 0.45 | + 0.97 | + 1.80 | 125 | + 0.22 | + 0.38 | + 0.97 | + 1.57 |
| 86 | .36 | .45 | .97 | .78 | 126 | .19 | .37 | .97 | .53 |
| 87 | .36 | .45 | .97 | .78 | 127 | .15 | .37 | .97 | .49 |
| 88 | .36 | .45 | .97 | .78 | 128 | .11 | .36 | .97 | .44 |
| 89 | .40 | .45 | .97 | .82 | 129 | .12 | .36 | .97 | .45 |
| 90 | + 0.44 | + 0.45 | + 0.97 | + 1.86 | 130 | .15 | .36 | .97 | .48 |
| 91 | .44 | .45 | .97 | .86 | 131 | + 0.14 | + 0.35 | + 0.97 | + 1.46 |
| 92 | .38 | .45 | .97 | .80 | | | | | |
| 93 | .31 | .45 | .97 | .73 | 330 | + 0.17 | — 0.24 | + 0.16 | + 0.09 |
| 94 | .24 | .45 | .97 | .66 | 331 | .19 | .23 | .16 | .12 |
| 95 | + 0.18 | + 0.45 | + 0.97 | + 1.60 | 332 | .20 | .23 | .16 | .13 |
| 96 | .18 | .45 | .97 | .60 | 333 | .22 | .22 | .16 | .16 |
| 97 | .22 | .45 | .97 | .64 | 334 | .26 | .21 | .16 | .21 |
| 98 | .26 | .45 | .97 | .68 | 335 | + 0.28 | — 0.20 | + 0.16 | + 0.24 |
| 99 | .27 | .45 | .97 | .69 | 336 | .27 | .20 | .16 | .23 |
| 100 | + 0.26 | + 0.45 | + 0.97 | + 1.68 | 337 | .25 | .19 | .16 | .22 |
| 101 | .26 | .44 | .97 | .67 | 338 | .22 | .18 | .16 | .20 |
| 102 | .27 | .44 | .97 | .68 | 339 | .22 | .18 | .16 | .20 |
| 103 | .29 | .44 | .97 | .70 | 340 | + 0.22 | — 0.17 | + 0.16 | + 0.21 |
| 104 | .29 | .44 | .97 | .70 | 341 | .22 | .16 | .16 | .22 |
| 105 | + 0.29 | + 0.44 | + 0.97 | + 1.70 | 342 | .23 | .15 | .16 | .24 |
| 106 | .35 | .44 | .97 | .76 | 343 | .24 | .15 | .16 | .25 |
| 107 | .43 | .44 | .97 | .84 | 344 | .25 | .14 | .16 | .27 |
| 108 | .51 | .43 | .97 | .91 | 345 | + 0.27 | — 0.13 | + 0.16 | + 0.30 |
| 109 | .56 | .43 | .97 | .96 | 346 | .28 | .12 | .16 | .32 |
| 110 | + 0.57 | + 0.43 | + 0.97 | + 1.97 | 347 | .31 | .12 | .16 | .35 |
| 111 | .57 | .43 | .97 | .97 | 348 | .35 | .11 | .16 | .40 |
| 112 | .52 | .42 | .97 | .91 | 349 | .40 | .10 | .16 | .46 |
| 113 | .48 | .42 | .97 | .87 | 350 | + 0.45 | — 0.09 | + 0.16 | + 0.52 |
| 114 | .49 | .42 | .97 | .88 | 351 | .46 | .09 | .16 | .53 |
| 115 | + 0.52 | + 0.41 | + 0.97 | + 1.90 | 352 | .45 | .08 | .16 | .53 |
| 116 | .53 | .41 | .97 | .91 | 353 | .44 | .07 | .16 | .53 |
| 117 | .50 | .41 | .97 | .88 | 354 | .41 | .06 | .16 | .51 |
| 118 | .46 | .40 | .97 | .83 | 355 | + 0.38 | — 0.06 | + 0.16 | + 0.48 |
| 119 | .44 | .40 | .97 | .81 | 356 | .36 | .05 | .16 | .47 |
| | | | | | 357 | .36 | .04 | .16 | .48 |
| | | | | | 358 | .36 | .03 | .16 | .49 |
| | | | | | 359 | .40 | .02 | .16 | .54 |
| | | | | | 360 | + 0.44 | — 0.02 | + 0.16 | + 0.58 |

TABLE XI.—*Systematic Corrections, etc.*—Continued.

REFLECTED OBSERVATIONS.

| N. P. D. | Division Correction. | Flexure. | Latitude, Zenith Point, etc. | Total. | N. P. D. | Division Correction. | Flexure. | Latitude, Zenith Point, etc. | Total. |
|----------|-------------------------|----------|------------------------------------|--------|----------|-------------------------|----------|------------------------------------|--------|
| ° | " | " | " | " | ° | " | " | " | " |
| 0 | — 0.27 | + 0.32 | + 1.29 | + 1.34 | 40 | — 0.20 | + 0.36 | + 1.29 | + 1.45 |
| 1 | .26 | .33 | .29 | .36 | 41 | .19 | .36 | .29 | .46 |
| 2 | .26 | .33 | .29 | .36 | 42 | .17 | .36 | .29 | .48 |
| 3 | .27 | .33 | .29 | .35 | 43 | .16 | .36 | .29 | .49 |
| 4 | .27 | .34 | .29 | .36 | 44 | .15 | .36 | .29 | .50 |
| 5 | — 0.22 | + 0.34 | + 1.29 | + 1.41 | 45 | — 0.14 | + 0.36 | + 1.29 | + 1.51 |
| 6 | .18 | .34 | .29 | .45 | 46 | .13 | .35 | .29 | .51 |
| 7 | .18 | .34 | .29 | .45 | 47 | .12 | .35 | .21 | .44 |
| 8 | .22 | .35 | .29 | .42 | 48 | .12 | .35 | .13 | .36 |
| 9 | .29 | .35 | .29 | .35 | 49 | .12 | .35 | 1.05 | .28 |
| 10 | — 0.36 | + 0.35 | + 1.29 | + 1.28 | 50 | — 0.07 | + 0.34 | + 0.97 | + 1.24 |
| 11 | .45 | .35 | .29 | .19 | 51 | — .01 | .34 | .89 | .22 |
| 12 | .44 | .35 | .29 | .20 | 52 | .00 | .34 | .81 | .15 |
| 13 | .40 | .36 | .29 | .25 | 53 | .00 | .34 | .73 | 1.07 |
| 14 | .36 | .36 | .29 | .29 | 54 | .00 | .33 | .64 | 0.97 |
| 15 | — 0.36 | + 0.36 | + 1.29 | + 1.29 | 55 | + 0.06 | + .33 | + 0.56 | + 0.95 |
| 16 | .36 | .36 | .29 | .29 | 56 | .12 | .33 | .48 | .93 |
| 17 | .38 | .36 | .29 | .27 | 57 | .12 | .33 | .48 | .93 |
| 18 | .41 | .37 | .29 | .25 | 58 | + 0.08 | .32 | .48 | .88 |
| 19 | .44 | .37 | .29 | .22 | 59 | — 0.01 | .32 | .48 | .79 |
| 20 | — 0.45 | + 0.37 | + 1.29 | + 1.21 | 60 | — 0.07 | + 0.32 | + 0.48 | + 0.73 |
| 21 | .46 | .37 | .29 | .20 | 61 | .13 | .31 | .48 | .66 |
| 22 | .45 | .37 | .29 | .21 | 62 | .15 | .31 | .48 | .64 |
| 23 | .40 | .37 | .29 | .26 | 63 | .12 | .31 | .48 | .67 |
| 24 | .36 | .37 | .29 | .30 | 64 | .11 | .30 | .48 | .67 |
| 25 | — 0.31 | + 0.37 | + 1.29 | + 1.35 | 65 | — 0.15 | + 0.30 | + 0.48 | + 0.63 |
| 26 | .28 | .37 | .29 | .38 | 66 | .19 | .29 | .48 | .58 |
| 27 | .27 | .37 | .29 | .39 | 67 | .22 | .29 | .48 | .55 |
| 28 | .25 | .37 | .29 | .41 | 68 | .24 | .29 | .48 | .53 |
| 29 | .24 | .37 | .29 | .42 | 69 | .27 | .28 | .48 | .49 |
| 30 | — 0.23 | + 0.37 | + 1.29 | + 1.43 | 70 | — 0.33 | + .28 | + 0.48 | + 0.43 |
| 31 | .22 | .37 | .29 | .44 | 71 | .39 | .27 | .48 | .36 |
| 32 | .22 | .37 | .29 | .44 | 72 | .42 | .27 | .48 | .33 |
| 33 | .22 | .37 | .29 | .44 | 73 | .44 | .27 | .48 | .31 |
| 34 | .22 | .37 | .29 | .44 | 74 | .46 | .26 | .48 | .28 |
| 35 | — 0.25 | + 0.37 | + 1.29 | + 1.41 | 75 | — 0.50 | + 0.26 | + 0.48 | + 0.24 |
| 36 | .27 | .37 | .29 | .39 | 76 | .53 | .25 | .48 | .20 |
| 37 | .28 | .37 | .29 | .38 | 77 | .52 | .25 | .48 | .21 |
| 38 | .26 | .36 | .29 | .39 | 78 | .49 | .24 | .48 | .23 |
| 39 | .22 | .36 | .29 | .43 | 79 | .48 | .24 | .48 | .24 |

TABLE XI.—*Systematic Corrections, etc.*—Continued.

REFLECTED OBSERVATIONS.

| N. P. D. | Division Correction. | Flexure. | Latitude, Zenith Point, etc. | Total. | N. P. D. | Division Correction. | Flexure. | Latitude, Zenith Point, etc. | Total. |
|----------|-------------------------|----------|------------------------------------|--------|----------|-------------------------|----------|------------------------------------|--------|
| ° | " | " | " | " | ° | " | " | " | " |
| 80 | — 0.52 | + 0.23 | + 0.48 | + 0.19 | 120 | — 0.23 | — 0.01 | + 0.48 | + 0.24 |
| 81 | .56 | .23 | .48 | .15 | 121 | .22 | .01 | .48 | .25 |
| 82 | .57 | .22 | .48 | .13 | 122 | .22 | .02 | .48 | .24 |
| 83 | .56 | .22 | .48 | .14 | 123 | .22 | .03 | .48 | .23 |
| 84 | .52 | .21 | .48 | .17 | 124 | .22 | .03 | .48 | .23 |
| 85 | — 0.45 | + 0.21 | + 0.48 | + 0.24 | 125 | — 0.25 | — 0.04 | + 0.48 | + 0.19 |
| 86 | .37 | .20 | .48 | .31 | 126 | .27 | .05 | .48 | .16 |
| 87 | .30 | .20 | .48 | .38 | 127 | .28 | .05 | .48 | .15 |
| 88 | .29 | .19 | .48 | .38 | 128 | .26 | .06 | .48 | .16 |
| 89 | .29 | .18 | .48 | .37 | 129 | .22 | .06 | .48 | .20 |
| 90 | — 0.27 | + 0.18 | + 0.48 | + 0.39 | 130 | — 0.20 | — 0.07 | + 0.48 | + 0.21 |
| 91 | .26 | .17 | .48 | .39 | 330 | — 0.07 | + 0.19 | + 1.29 | + 1.41 |
| 92 | .26 | .17 | .48 | .39 | 331 | .13 | .20 | .29 | .36 |
| 93 | .27 | .16 | .48 | .37 | 332 | .15 | .20 | .29 | .34 |
| 94 | .27 | .16 | .48 | .37 | 333 | .12 | .21 | .29 | .38 |
| 95 | — 0.22 | + 0.15 | + 0.48 | + 0.41 | 334 | .11 | .21 | .29 | .39 |
| 96 | .18 | .14 | .48 | .44 | 335 | — 0.15 | + 0.22 | + 1.29 | + 1.36 |
| 97 | .18 | .14 | .48 | .44 | 336 | .19 | .22 | .29 | .32 |
| 98 | .22 | .13 | .48 | .39 | 337 | .22 | .23 | .29 | .30 |
| 99 | .29 | .13 | .48 | .32 | 338 | .24 | .23 | .29 | .28 |
| 100 | — 0.36 | + 0.12 | + 0.48 | + 0.24 | 339 | .27 | .24 | .29 | .26 |
| 101 | .45 | .11 | .48 | .14 | 340 | — 0.33 | + 0.24 | + 1.29 | + 1.20 |
| 102 | .44 | .11 | .48 | .15 | 341 | .39 | .25 | .29 | .15 |
| 103 | .40 | .10 | .48 | .18 | 342 | .42 | .25 | .29 | .12 |
| 104 | .36 | .10 | .48 | .22 | 343 | .44 | .26 | .29 | .11 |
| 105 | — 0.36 | + 0.09 | + 0.48 | + 0.21 | 344 | .46 | .26 | .29 | .09 |
| 106 | .36 | .08 | .48 | .20 | 345 | — 0.50 | + 0.27 | + 1.29 | + 1.06 |
| 107 | .38 | .08 | .48 | .18 | 346 | .53 | .27 | .29 | .03 |
| 108 | .41 | .07 | .48 | .14 | 347 | .52 | .28 | .29 | .05 |
| 109 | .44 | .06 | .48 | .10 | 348 | .49 | .28 | .29 | .08 |
| 110 | — 0.45 | + 0.06 | + 0.48 | + 0.09 | 349 | .48 | .28 | .29 | .09 |
| 111 | .46 | .05 | .48 | .07 | 350 | — 0.52 | + 0.29 | + 1.29 | + 1.06 |
| 112 | .45 | .04 | .48 | .07 | 351 | .56 | .29 | .29 | .02 |
| 113 | .40 | .04 | .48 | .12 | 352 | .57 | .30 | .29 | .02 |
| 114 | .36 | .03 | .48 | .15 | 353 | .56 | .30 | .29 | .03 |
| 115 | — 0.31 | + 0.03 | + 0.48 | + 0.20 | 354 | .52 | .30 | .29 | .07 |
| 116 | .28 | .02 | .48 | .22 | 355 | — 0.45 | + 0.31 | + 1.29 | + 1.15 |
| 117 | .27 | .01 | .48 | .22 | 356 | .37 | .31 | .29 | .23 |
| 118 | .25 | .01 | .48 | .24 | 357 | .30 | .31 | .29 | .30 |
| 119 | .24 | .00 | .48 | .24 | 358 | .29 | .32 | .29 | .32 |
| | | | | | 359 | .29 | .32 | .29 | .32 |
| | | | | | 360 | — 0.27 | + 0.32 | + 1.29 | + 1.34 |

Since the assumed value of the latitude is $+38^{\circ} 53' 38''.80$, the value given by each year's observations will be $+38^{\circ} 53' 38''.80 + \Delta\phi$.

The observed north-polar distances used in computing $\Delta\phi$ had been corrected for constant error in the zenith point, and, in order to separate the values of the latitude obtained from direct and reflection observations, those corrections should be removed; hence,

$$\text{Latitude from direct observations} - - = +38^{\circ} 53' 38''.80 + \Delta\phi + \Delta Z$$

$$\text{Latitude from reflection observations} - = +38^{\circ} 53' 38''.80 + \Delta\phi - \Delta Z$$

The following table exhibits the results obtained from 1866 to 1876:

TABLE XII.

| Year. | Latitude from Direct Observations. | | | Latitude from Reflection Observations. | | | Mean. |
|-------|---------------------------------------|----|-------|--|----|-------|-------|
| | ° | ' | " | ° | ' | " | " |
| 1866 | + 38 | 53 | 38.73 | + 38 | 53 | 37.67 | 38.20 |
| 1867 | | | 39.16 | | | 37.48 | 38.32 |
| 1868 | | | 38.69 | | | 37.73 | 38.21 |
| 1869 | | | 38.62 | | | 38.90 | 38.76 |
| 1870 | | | 38.71 | | | 39.57 | 39.14 |
| 1871 | } | | 39.11 | | | 36.49 | 37.80 |
| 1872 | | | | | | | |
| 1873 | | | 38.91 | | | 37.89 | 38.40 |
| 1874 | | | 38.31 | | | 38.27 | 38.29 |
| 1875 | | | 39.22 | | | 37.32 | 38.27 |
| 1876 | + 38 | 53 | 38.64 | + 38 | 53 | 37.50 | 38.07 |

POSITIONS AND SEMI-DIAMETERS OF THE SUN, MOON, AND PLANETS, DEDUCED FROM OBSERVATIONS WITH THE TRANSIT CIRCLE IN 1876 AND COMPARED WITH THE TABLES.

The results of the observations are given on pages 493 to 513 and require very little explanation.

When both limbs of an object presenting a fully illuminated disk have been observed, the adopted position of the center is the mean of that of the two limbs given in the eighteenth column on the left-hand page and the seventeenth column on the right-hand page of the observations. When only one full limb has been observed, the right ascension of the center is derived from the observed place of the limb by applying the "Time of the semi-diameter passing the meridian," taken from the Ephemeris. The declination of the center is obtained by applying the semi-diameter of the Ephemeris.

If one of the limbs observed was defective, the observed difference of right ascension or declination of limbs is multiplied by the ratio of half this difference to the true semi-diameter, and the observed semi-diameter thus deduced is applied to the observed

position of the full limb to obtain that of the center. The factors are determined as follows :

Let

- i = the elongation of earth and sun as seen from the planet ;
- $b = \cos i$;
- $\delta \ \delta'$ = declinations of planet and sun ;
- A = difference of right ascensions of planet and sun ;
- θ = the angle which the line of cusps makes with the meridian ;
- f, f' = factors by which the measured diameters in right ascension and declination must be multiplied to obtain true semi-diameters.

To find f , we have

$$\tan \theta = \frac{\cos \delta \tan \delta'}{\sin A} - \frac{\sin \delta}{\tan A}$$

When the planet is gibbous ;

$$\begin{aligned} g &= \cos \theta \sqrt{b^2 + \tan^2 \theta} = \cos \theta'' \quad , \quad \text{when } \sin \theta'' = \cos \theta \sin i \\ g' &= \sin \theta \sqrt{b^2 + \cot^2 \theta} = \cos \theta' \quad , \quad \text{when } \sin \theta' = \sin \theta \sin i \end{aligned}$$

$$f = \frac{1}{1 + g} \quad \text{and} \quad f' = \frac{1}{1 + g'}$$

When the illuminated disk is a crescent,

$$\begin{aligned} g &= \cos \theta \quad f = \frac{1}{1 + g} \\ g' &= \sin \theta \quad f' = \frac{1}{1 + g'} \end{aligned}$$

When the center of light of Mercury has been observed, its reduction to the center of the planet is denoted by ε , and its value is obtained from the empirical formulæ

$$n = \frac{(1 - b)(5 - b)}{12}$$

$$\begin{aligned} \text{In right ascension,} \quad - \quad - \quad - \quad - \quad \varepsilon &= \text{semi-diameter} \times n \cos \theta \\ \text{In north-polar distance,} \quad - \quad - \quad - \quad - \quad \varepsilon &= \text{semi-diameter} \times n \sin \theta \end{aligned}$$

The north-polar distances are also corrected for parallax in altitude, found at the foot of the pages of observations, and for errors of division, flexure, etc., taken from Table XI.

A discussion of all the observations of the sun made in 1876 gives the following results :

TABLE XIII.—*Corrections to the Semi-diameters of the Sun, given in the American Ephemeris, obtained from the mean of all the measures made by each Observer in 1876.*

| Observer. | Sidereal Time of Semi-diameter passing the Meridian. | Vertical Semi-diameter. |
|--------------|--|----------------------------|
| | s. | " |
| Eastman . . | — 0.02 ₂₄ | — 0.45 ₂₆ |
| Frisby . . . | — 0.01 ₂₁ | — 0.80 ₂₂ |
| Skinner . . | — 0.07 ₂₂ | — 0.52 ₂₄ |
| Paul . . . | — 0.10 ₂₇ | — 1.24 ₂₇ |

The subscript figures indicate the number of observations on which each value depends.

When only one limb of the sun was observed, the quantity in the last column of the observations is the semi-diameter of the Ephemeris corrected by means of the above table.

The places of the moon at the time of transit at Washington are not given, either in the American Ephemeris or the English Nautical Almanac, but are computed in the following manner: The observed right ascension of the center is reduced to Washington mean time, or, if only the north-polar distance is observed, the mean time of transit of the center is taken directly from the American Ephemeris. Increasing this quantity by 5^h 8^m 12^s gives Greenwich mean time, with which, as an argument, the tabular place is interpolated from the hourly Ephemeris for Greenwich.

The places in the American Ephemeris and in the English Nautical Almanac are respectively those of PEIRCE'S and HANSEN'S tables.

The observations of the major planets are compared with the data given in the American Ephemeris for the instant of transit at Washington. The places of Venus, according to LE VERRIER'S tables, are obtained by applying to the positions given in the American Ephemeris for the transit at Washington the differences between the positions for Greenwich noon, given respectively in that Ephemeris and in the English Nautical Almanac.

The observations of the minor planets Ceres, Pallas, Juno, Vesta, and Astræa are compared with the ephemerides in the Appendix to the English Nautical Almanac, from which the position is interpolated for the difference in longitude. The other minor planets are compared with the ephemerides in the Berliner Jahrbuch.

The observed time of transit converted into Washington mean time and increased by 6^h 1^m.8 gives the Berlin mean time of transit. Subtracting the "aberration time" of the Ephemeris leaves the Berlin mean time at which the light left the planet, and for this instant the position of the planet is interpolated from the Ephemeris in the Jahrbuch and compared with the observed place.

TABLE A.—*Absolute Determinations of the Collimation Constant of the Transit Circle in 1876.*

| Date. | M | M' | $M + M'$ | $M + M' \times$ 0 ^s .512 | c_τ | τ | $+ 0.004 \tau$ | c_0 |
|-------------|---------|---------|----------|--|----------|--------|----------------|---------|
| 1876. | r. | r. | r. | s. | s. | ° | s. | s. |
| January 12 | + 0.171 | + 0.162 | + 0.333 | + 0.170 | + 0.152 | 34.0 | + 0.136 | + 0.288 |
| February 5 | — 0.275 | + 0.700 | + 0.425 | + 0.218 | + 0.200 | 27.0 | .108 | .308 |
| 14 | + 0.194 | 0.000 | + 0.194 | + 0.099 | + 0.081 | 62.5 | .250 | .331 |
| 28 | — 0.204 | + 0.456 | + 0.252 | + 0.129 | + 0.111 | 42.0 | .168 | .279 |
| March 17 | — 0.174 | + 0.414 | + 0.240 | + 0.123 | + 0.105 | 45.0 | .180 | .285 |
| 28 | 0.000 | + 0.240 | + 0.240 | + 0.123 | + 0.105 | 43.0 | .172 | .277 |
| April 5 | — 0.074 | + 0.318 | + 0.244 | + 0.125 | + 0.107 | 46.0 | .184 | .291 |
| 19 | — 0.195 | — 0.075 | — 0.270 | — 0.138 | — 0.110 | 48.5 | .194 | .084 |
| 26 | — 0.146 | — 0.090 | — 0.236 | — 0.121 | — 0.093 | 48.5 | .194 | .101 |
| May 8 | + 0.418 | — 0.806 | — 0.388 | — 0.199 | — 0.171 | 75.0 | .300 | .129 |
| June 2 | — 0.179 | — 0.314 | — 0.493 | — 0.252 | — 0.224 | 71.2 | .285 | .061 |
| July 3 | — 0.251 | — 0.427 | — 0.678 | — 0.347 | — 0.319 | 88.2 | .353 | .034 |
| 17 | — 0.110 | — 0.330 | — 0.440 | — 0.225 | — 0.197 | 92.2 | .369 | .172 |
| 31 | — 0.201 | — 0.099 | — 0.300 | — 0.154 | — 0.160 | 69.5 | .278 | .118 |
| August 16 | — 0.085 | — 0.350 | — 0.435 | — 0.223 | — 0.229 | 82.2 | .329 | .100 |
| 21 | — 0.285 | 0.000 | — 0.285 | — 0.146 | — 0.152 | 69.5 | .278 | .126 |
| 28 | — 0.280 | 0.000 | — 0.280 | — 0.143 | — 0.149 | 71.5 | .286 | .137 |
| September 6 | — 0.188 | — 0.130 | — 0.318 | — 0.163 | — 0.169 | 67.2 | .269 | .100 |
| 13 | — 0.145 | — 0.198 | — 0.343 | — 0.176 | — 0.182 | 71.0 | .284 | .102 |
| 20 | — 0.112 | — 0.282 | — 0.394 | — 0.202 | — 0.208 | 76.0 | .304 | .096 |
| 27 | — 0.215 | — 0.062 | — 0.277 | — 0.142 | — 0.148 | 59.0 | .236 | .088 |
| October 4 | — 0.256 | + 0.060 | — 0.196 | — 0.100 | — 0.106 | 55.0 | .220 | .114 |
| 11 | — 0.106 | — 0.028 | — 0.134 | — 0.069 | — 0.075 | 55.3 | .221 | .146 |
| 20 | — 0.148 | — 0.043 | — 0.191 | — 0.098 | — 0.104 | 62.0 | .243 | .144 |
| November 3 | 0.000 | — 0.195 | — 0.195 | — 0.100 | — 0.106 | 57.5 | .230 | .124 |
| 13 | — 0.372 | + 0.123 | — 0.249 | — 0.127 | — 0.133 | 48.5 | .194 | .061 |
| December 7 | — 0.298 | + 0.171 | — 0.127 | — 0.065 | — 0.071 | 37.0 | .148 | .077 |
| 26 | — 0.162 | + 0.134 | — 0.028 | — 0.014 | — 0.020 | 30.5 | + 0.122 | + 0.102 |
| 1877. | | | | | | | | |
| January 2 | — 0.115 | + 0.082 | — 0.033 | — 0.017 | — 0.023 | 26.5 | + 0.106 | + 0.083 |

Adopted Values of c_0 .

s.

From January 12 to April 12 $c_0 = + 0.294$
 April 13 to July 28 $= + 0.097$
 July 29 to December 31 $= + 0.109$

TABLE B.—*Adopted Values of the Collimation, Level, and Azimuth Constants of the Transit Circle in 1876.*

| Date. | τ | c | b | a | Date. | τ | c | b | a |
|--------------|------------|---------|---------|---------|---------------|------------|---------|---------|---------|
| | $^{\circ}$ | S. | S. | S. | | $^{\circ}$ | S. | S. | S. |
| January 12.5 | 23.1 | + 0.202 | + 0.137 | + 0.080 | February 16.8 | 27.0 | + 0.186 | + 0.038 | + 0.152 |
| 12.9 | 25.0 | .194 | .140 | + 0.080 | 16.9 | 33.0 | .162 | .096 | .092 |
| 13.9 | 26.9 | .186 | .072 | - 0.435 | 17.1 | 39.0 | .138 | .096 | .092 |
| 14.4 | 20.8 | .211 | .107 | - 0.435 | 17.4 | 31.7 | .167 | .044 | + 0.092 |
| 19.9 | 37.3 | .145 | .047 | + 0.328 | 17.9 | 36.5 | .148 | .078 | + 0.156 |
| 20.5 | 38.4 | + 0.140 | + 0.047 | .328 | 18.1 | 43.0 | + 0.122 | + 0.074 | .156 |
| 20.7 | 36.2 | .149 | .051 | + 0.328 | 18.4 | 34.0 | .158 | .036 | .156 |
| 20.9 | 46.7 | .107 | .160 | .352 | 18.8 | 28.0 | .182 | .061 | + 0.156 |
| 21.1 | 51.4 | .088 | .160 | .352 | 18.9 | 35.5 | .152 | .047 | - 0.298 |
| 21.4 | 37.8 | .143 | .123 | .352 | 19.1 | 52.0 | .086 | .047 | .298 |
| 23.9 | 42.8 | + 0.123 | + 0.090 | + 0.127 | 19.5 | 38.0 | + 0.142 | + 0.045 | .298 |
| 24.1 | 46.0 | .110 | .090 | .127 | 19.8 | 38.6 | .140 | - 0.051 | - 0.298 |
| 24.4 | 36.1 | .150 | .038 | 0.127 | 22.9 | 27.5 | .184 | + 0.044 | .218 |
| 25.5 | 32.5 | .164 | .115 | + 0.065 | 23.1 | 30.0 | .174 | .044 | .218 |
| 25.9 | 34.8 | .155 | .041 | - 0.026 | 23.9 | 25.5 | .192 | .036 | .728 |
| 26.1 | 42.0 | + 0.126 | + 0.044 | .026 | 24.1 | 33.6 | + 0.160 | + 0.036 | - 0.728 |
| 26.4 | 32.9 | .164 | .069 | - 0.026 | 24.9 | 34.0 | .158 | .001 | .872 |
| 30.1 | 33.8 | .159 | .021 | + 0.220 | 25.1 | 41.5 | .128 | + 0.001 | .872 |
| 31.1 | 37.6 | .144 | .096 | .018 | 26.1 | 53.3 | .081 | - 0.027 | .811 |
| 31.5 | 31.1 | .170 | .032 | + 0.018 | 29.0 | 39.0 | .138 | - 0.049 | . |
| February 2.3 | 23.4 | + 0.200 | + 0.034 | - 0.120 | March 2.2 | 31.5 | + 0.168 | - 0.043 | - 0.564 |
| 2.5 | 18.8 | .219 | .071 | .120 | 2.4 | 30.0 | .174 | .020 | .564 |
| 4.5 | 22.5 | .204 | .064 | .434 | 2.9 | 29.0 | .178 | .025 | .678 |
| 4.9 | 17.0 | .226 | .004 | .526 | 3.1 | 38.2 | .141 | - 0.025 | .678 |
| 5.1 | 30.0 | .174 | .004 | .526 | 3.4 | 33.5 | .160 | + 0.006 | .678 |
| 5.3 | 21.0 | + 0.210 | + 0.077 | .526 | 3.9 | 38.2 | + 0.141 | - 0.036 | - 0.747 |
| 5.5 | 18.0 | .222 | + 0.077 | - 0.526 | 4.1 | 43.0 | .122 | .036 | .747 |
| 6.9 | 37.0 | .146 | - 0.022 | . | 4.4 | 36.9 | .146 | .055 | .747 |
| 7.1 | 50.5 | .092 | .022 | . | 5.1 | 56.0 | .070 | .044 | .696 |
| 7.9 | 41.5 | .128 | .102 | .570 | 5.4 | 49.0 | .098 | .089 | .696 |
| 8.1 | 50.0 | + 0.094 | - 0.102 | .570 | 5.6 | 43.5 | + 0.120 | - 0.016 | - 0.696 |
| 8.3 | 50.0 | .094 | .102 | - 0.570 | 5.9 | 52.0 | .086 | .140 | .680 |
| 10.3 | 53.0 | .082 | .103 | .033 | 6.1 | 66.5 | .028 | .140 | .680 |
| 10.5 | 43.5 | .120 | .107 | - 0.033 | 6.4 | 55.8 | .071 | .209 | .680 |
| 11.9 | 49.0 | .098 | .168 | + 0.134 | 8.9 | 42.4 | .124 | .057 | .316 |
| 12.1 | 57.0 | + 0.066 | - 0.168 | .134 | 9.1 | 52.4 | + 0.084 | - 0.057 | .216 |
| 12.5 | 42.0 | .126 | - 0.096 | + 0.134 | 9.4 | 41.1 | .130 | .071 | - 0.316 |
| 15.9 | 32.0 | .166 | + 0.115 | .152 | 13.4 | 33.4 | .160 | .084 | .430 |
| 16.1 | 37.5 | .144 | + 0.115 | .152 | 13.6 | 31.0 | .170 | .010 | .430 |
| 16.5 | 29.0 | .178 | .038 | .152 | 20.9 | 35.5 | .152 | .085 | .996 |

TABLE B.—*Adopted Values of the Collimation, Level, and Azimuth Constants—Continued.*

| Date. | τ | c | b | a | Date. | τ | c | b | a |
|-------|--------|--------------|---------|---------|-------|--------|--------------|--------------|---------|
| 1876. | | s. | s. | s. | 1876. | ° | s. | s. | s. |
| March | 21.1 | 36.7 + 0.147 | - 0.085 | - 0.096 | April | 14.9 | 60.0 - 0.143 | - 0.280 | + 0.133 |
| | 21.5 | 23.9 .178 | .046 | 0.096 | | 15.1 | 64.0 .159 | .280 | .133 |
| | 22.1 | 37.2 .145 | .067 | 1.030 | | 15.4 | 53.0 .115 | .236 + 0.133 | |
| | 22.4 | 37.3 .161 | .094 | 1.030 | | 16.9 | 52.0 .111 | .139 - 0.140 | |
| | 23.4 | 37.4 .144 | .130 | 1.049 | | 17.1 | 57.0 .131 | .139 | .140 |
| | 26.9 | 44.8 + 0.115 | - 0.078 | - 0.688 | | 18.4 | 45.2 - 0.084 | - 0.215 | - 0.410 |
| | 27.1 | 53.9 .078 | .078 | .688 | | 18.8 | 41.6 .069 | .135 | .478 |
| | 27.3 | 46.0 .110 | .201 | .688 | | 18.9 | 48.6 .097 | .245 | .497 |
| | 28.9 | 41.7 .127 | .212 | .554 | | 19.4 | 46.4 .089 | .245 | .598 |
| | 29.1 | 44.0 .118 | .212 | .554 | | 19.9 | 48.0 .095 | .135 | .573 |
| | 29.3 | 41.0 + 0.130 | - 0.124 | - 0.554 | | 20.0 | 54.0 - 0.119 | - 0.135 | - 0.573 |
| | 30.9 | 41.0 .130 | .074 | .655 | | 20.4 | 56.0 .127 | .180 | .573 |
| | 31.1 | 49.0 .098 | .074 | .655 | | 22.3 | 60.0 .143 | .199 | .419 |
| | 31.4 | 40.1 .134 | .099 | .655 | | 22.6 | 49.0 .099 | .199 | .419 |
| | 31.9 | 42.7 .123 | .120 | .637 | | 25.4 | 42.7 .074 | .195 | .521 |
| April | 1.4 | 40.8 + 0.131 | - 0.109 | - 0.620 | | 26.3 | 55.0 - 0.123 | - 0.257 | - 0.816 |
| | 2.3 | 42.1 .126 | .136 | .594 | | 26.5 | 46.0 .087 | .257 | .816 |
| | 4.1 | 49.5 .096 | .116 | .642 | | 26.9 | 55.5 .125 | .244 | .726 |
| | 4.5 | 41.6 .128 | .116 | .642 | | 27.1 | 67.0 .171 | .244 | .726 |
| | 4.9 | 48.2 .101 | .136 | .700 | | 28.9 | 60.0 .143 | .315 | .474 |
| | 5.1 | 56.0 + 0.070 | - 0.136 | - 0.709 | | 29.1 | 67.0 - 0.171 | - 0.315 | - 0.474 |
| | 5.4 | 52.1 .086 | .100 | .709 | | 29.2 | 65.5 .165 | .315 | .474 |
| | 5.9 | 48.2 .097 | .160 | .704 | | 29.4 | 57.0 .131 | .315 | .474 |
| | 6.1 | 56.0 .070 | .160 | .704 | | 30.3 | 47.0 .091 | .301 | .508 |
| | 6.3 | 51.0 .090 | .141 | .704 | | 30.9 | 46.0 .087 | .267 | .716 |
| | 6.5 | 42.4 + 0.124 | - 0.141 | - 0.704 | May | 1.1 | 56.5 - 0.129 | - 0.267 | - 0.716 |
| | 6.7 | 37.5 .144 | .141 | .704 | | 1.4 | 52.0 .111 | .240 | .716 |
| | 8.0 | 53.0 .082 | .236 | .834 | | 3.3 | 54.5 .121 | .232 | .806 |
| | 8.5 | 43.0 .122 | .196 | .834 | | 3.5 | 45.6 .085 | .232 | .806 |
| | 9.4 | 42.7 .123 | .175 | .568 | | 3.9 | 55.0 .123 | .203 | .771 |
| | 9.9 | 48.0 + 0.102 | - 0.190 | - 0.784 | | 4.1 | 65.0 - 0.163 | - 0.203 | - 0.771 |
| | 10.1 | 57.0 .066 | .190 | .784 | | 4.3 | 59.0 .139 | .202 | .771 |
| | 10.5 | 45.2 .113 | .136 | .784 | | 4.5 | 54.0 .119 | .202 | .771 |
| | 10.9 | 55.0 .074 | .165 | .820 | | 4.7 | 53.0 .115 | .248 | .771 |
| | 11.1 | 65.0 .034 | .165 | .820 | | 4.9 | 66.5 .169 | .334 | .801 |
| | 11.9 | 65.0 + 0.034 | - 0.325 | - 0.444 | | 10.4 | 55.0 - 0.123 | - 0.245 | - 0.059 |
| | 12.1 | 72.0 .006 | .325 | .444 | | 12.9 | 64.5 .161 | .174 | .384 |
| | 12.5 | 62.0 + 0.036 | .246 | - 0.444 | | 13.1 | 65.0 .163 | .174 | .384 |
| | 13.7 | 65.0 - 0.163 | .278 | .000 | | 13.4 | 53.5 .117 | .252 | .384 |
| | 14.8 | 50.0 .103 | .233 | + 0.154 | | 14.9 | 64.5 .161 | .176 | .569 |

TABLE B.—*Adopted Values of the Collimation, Level, and Azimuth Constants*—Continued.

| Date. | τ | c | b | a | Date. | τ | c | b | a | | |
|-------|--------|------|---------|---------|---------|--------|------|------|---------|---------|---------|
| 1876. | ° | s. | s. | s. | 1876. | ° | s. | s. | s. | | |
| May | 15.0 | 70.0 | — 0.183 | — 0.178 | — 0.569 | July | 1.1 | 87.0 | — 0.251 | — 0.241 | — 0.285 |
| | 15.1 | 77.0 | .211 | .181 | .569 | | 2.4 | 85.3 | .244 | .188 | .166 |
| | 19.9 | 75.6 | .205 | .310 | .156 | | 2.9 | 86.0 | .247 | .246 | .166 |
| | 20.1 | 82.5 | .233 | .144 | — 0.156 | | 3.1 | 91.2 | .268 | .246 | .166 |
| | 21.9 | 79.0 | .219 | .165 | + 0.428 | | 4.9 | 85.5 | .245 | .212 | .187 |
| | 22.1 | 83.0 | — 0.235 | — 0.194 | + 0.428 | | 5.5 | 79.0 | — 0.219 | — 0.188 | — 0.187 |
| | 22.9 | 62.2 | .152 | .112 | .297 | | 5.9 | 82.5 | .233 | .207 | .323 |
| | 23.1 | 68.0 | .175 | .112 | .297 | | 6.1 | 88.5 | .257 | .207 | .323 |
| | 23.3 | 61.5 | .149 | .112 | .297 | | 7.6 | 78.0 | .215 | .262 | .420 |
| | 23.5 | 54.4 | .121 | .112 | + 0.297 | | 9.9 | 92.6 | .273 | .226 | . . |
| | 27.4 | 69.0 | — 0.179 | — 0.201 | — 0.052 | | 10.9 | 88.0 | — 0.255 | — 0.262 | — 0.480 |
| | 28.9 | 75.0 | .203 | .235 | .036 | | 11.1 | 95.5 | .285 | .262 | .480 |
| | 29.1 | 85.5 | .245 | .235 | .036 | | 11.9 | 89.5 | .261 | .293 | .750 |
| | 29.4 | 75.5 | .205 | .277 | .036 | | 17.4 | 78.0 | .215 | .270 | .653 |
| | 31.3 | 68.0 | .175 | .251 | .288 | | 17.9 | 85.7 | .246 | .218 | .410 |
| | 31.5 | 60.5 | — 0.145 | — 0.251 | — 0.288 | | 18.4 | 86.5 | — 0.249 | — 0.221 | — 0.410 |
| | 31.9 | 65.2 | .164 | .162 | .428 | | 18.9 | 90.0 | .263 | .290 | .410 |
| June | 1.1 | 75.5 | .205 | .219 | .428 | | 19.1 | 95.0 | .283 | .290 | .410 |
| | 1.3 | 73.0 | .195 | .219 | .428 | | 19.9 | 88.0 | .255 | .296 | .420 |
| | 1.7 | 61.5 | .149 | .207 | .428 | | 20.9 | 85.5 | .245 | .315 | .437 |
| | 1.9 | 71.5 | — 0.189 | — 0.320 | — 0.476 | | 21.1 | 88.0 | — 0.255 | — 0.315 | — 0.437 |
| | 2.1 | 85.0 | .243 | .320 | .476 | | 21.5 | 74.5 | .201 | .188 | .437 |
| | 2.4 | 79.5 | .221 | .288 | .046 | | 21.9 | 77.0 | .211 | .276 | .659 |
| | 2.9 | 83.0 | .235 | .200 | .110 | | 22.3 | 84.0 | .239 | .276 | .659 |
| | 3.1 | 89.0 | .259 | .200 | .110 | | 22.5 | 76.0 | .207 | .276 | .659 |
| | 5.5 | 63.0 | — 0.155 | — 0.218 | — 0.174 | | 24.9 | 76.6 | — 0.209 | — 0.181 | — 0.880 |
| | 20.3 | 75.0 | .203 | .225 | .219 | | 25.9 | 73.7 | .198 | .187 | .844 |
| | 26.3 | 83.0 | .235 | .274 | .307 | | 26.3 | 78.8 | .218 | .294 | .844 |
| | 26.5 | 80.0 | .223 | .274 | .307 | | 26.4 | 68.2 | .176 | .294 | .844 |
| | 26.9 | 84.5 | .241 | .249 | .225 | | 26.9 | 78.0 | .215 | .215 | .890 |
| | 27.1 | 94.5 | — 0.281 | — 0.249 | — 0.225 | | 27.1 | 84.5 | — 0.241 | — 0.215 | — 0.890 |
| | 27.9 | 87.0 | .251 | .255 | .140 | | 27.3 | 80.2 | .224 | .206 | .890 |
| | 28.1 | 91.5 | .269 | .255 | .140 | | 27.5 | 73.0 | .195 | .206 | .890 |
| | 28.9 | 82.0 | .231 | .215 | .111 | August | 4.4 | 75.0 | .191 | .286 | .890 |
| | 29.1 | 89.0 | .259 | .215 | .111 | | 6.6 | 76.5 | .197 | .278 | .615 |
| | 29.3 | 81.4 | — 0.229 | — 0.219 | — 0.111 | | 8.9 | 82.0 | — 0.219 | — 0.250 | — 0.633 |
| | 29.9 | 81.4 | .229 | .225 | .160 | | 9.1 | 85.0 | .231 | .250 | .633 |
| | 30.1 | 86.5 | .249 | .225 | .160 | | 9.4 | 76.0 | .195 | .255 | .633 |
| | 30.4 | 80.0 | .223 | .231 | .160 | | 11.4 | 78.0 | .203 | .233 | .763 |
| | 30.9 | 83.2 | .236 | .241 | .285 | | 14.9 | 82.0 | .219 | .280 | .672 |

TABLE B.—*Adopted Values of the Collimation, Level, and Azimuth Constants—Continued.*

| Date. | τ | c | b | a | Date. | τ | c | b | a | | |
|-----------|--------|------|---------|---------|---------|----------------|------|---------|---------|---------|---------|
| 1876. | ° | s. | s. | s. | 1876. | ° | s. | s. | s. | | |
| August | 15.5 | 78.5 | — 0.205 | — 0.202 | — 0.672 | September 29.3 | 65.7 | — 0.154 | — 0.186 | — 1.344 | |
| | 16.3 | 83.0 | .223 | .330 | 0.701 | | 29.6 | .132 | .287 | 1.344 | |
| | 20.9 | 67.4 | .161 | .258 | 1.111 | October | 1.9 | .104 | .161 | 1.342 | |
| | 21.1 | 76.0 | .195 | .258 | 1.111 | | 2.1 | .133 | .161 | 1.342 | |
| | 21.4 | 62.5 | .141 | .234 | .852 | | 2.3 | .117 | .154 | 1.342 | |
| | 26.4 | 82.0 | — 0.219 | — 0.229 | — .801 | | 2.5 | 47.5 | — 0.081 | — 0.154 | — 1.342 |
| | 26.3 | . | .205 | .222 | .801 | | 2.9 | 54.6 | .109 | .172 | 1.407 |
| | 26.4 | 72.5 | .181 | .222 | .801 | | 3.1 | 62.5 | .141 | .172 | 1.407 |
| | 26.6 | 67.5 | .161 | .222 | .801 | | 3.5 | 53.4 | .105 | .144 | 1.407 |
| | 27.9 | 69.0 | .167 | .295 | 1.126 | | 5.9 | 61.4 | .137 | .230 | 1.399 |
| | 28.1 | 80.0 | — 0.211 | — 0.295 | — 1.126 | | 6.1 | 77.3 | — 0.200 | — 0.230 | — 1.399 |
| | 28.3 | 72.0 | .179 | .240 | 1.126 | | 6.9 | 55.9 | .115 | .121 | 1.342 |
| | 28.5 | 65.0 | .151 | .249 | 1.126 | | 7.1 | 57.8 | .122 | .121 | 1.342 |
| | 30.1 | 85.0 | .231 | .216 | 0.994 | | 8.9 | 49.1 | .087 | .069 | 1.288 |
| September | 2.1 | 78.0 | .203 | .201 | 0.929 | | 9.1 | 56.8 | .118 | .069 | 1.288 |
| | 2.5 | 63.5 | — 0.145 | — 0.201 | — 0.929 | | 9.7 | 45.4 | — 0.073 | — 0.085 | — 1.288 |
| | 3.9 | 72.0 | .179 | .234 | 1.135 | | 10.7 | 48.0 | .083 | .236 | 1.319 |
| | 4.1 | 76.0 | .195 | .234 | 1.135 | | 11.1 | 54.6 | .109 | .148 | 1.442 |
| | 4.4 | 72.5 | .181 | .213 | 1.135 | | 11.4 | 43.8 | .066 | .086 | 1.442 |
| | 9.1 | 79.0 | .207 | .264 | 1.180 | | 11.8 | 40.0 | .051 | .086 | 1.442 |
| | 13.4 | 63.0 | — 0.143 | — 0.226 | — 1.180 | | 11.9 | 45.5 | — 0.073 | — 0.062 | — 1.364 |
| | 14.9 | 69.5 | .169 | .293 | 1.340 | | 12.1 | 54.5 | .109 | .131 | 1.364 |
| | 15.1 | 73.4 | .185 | .293 | 1.340 | | 12.3 | 46.8 | .078 | .049 | 1.364 |
| | 15.3 | 66.8 | .158 | .293 | 1.340 | | 12.7 | 38.3 | .044 | .094 | 1.364 |
| | 18.9 | 69.4 | .169 | .290 | 1.168 | | 12.9 | 48.5 | .085 | .096 | 1.460 |
| | 19.0 | 73.6 | — 0.185 | — 0.290 | — 1.168 | | 13.1 | 61.5 | — 0.137 | — 0.096 | — 1.460 |
| | 19.9 | 65.1 | .151 | .242 | 1.101 | | 13.5 | 51.0 | .095 | .078 | 1.460 |
| | 20.1 | 73.0 | .183 | .242 | 1.101 | | 13.9 | 56.5 | .117 | .180 | 1.377 |
| | 20.3 | 73.6 | .185 | .265 | 1.101 | | 16.9 | 59.0 | .127 | .009 | 1.454 |
| | 20.5 | 63.8 | .146 | .265 | 1.101 | | 17.1 | 63.0 | .143 | .009 | 1.454 |
| | 25.3 | 66.2 | — 0.156 | — 0.183 | — 1.125 | | 17.4 | 48.0 | — 0.083 | — 0.094 | — 1.454 |
| | 26.9 | 57.8 | .122 | .218 | 1.314 | | 18.3 | 53.0 | .103 | .122 | 1.427 |
| | 27.1 | 62.0 | .139 | .218 | 1.314 | | 18.5 | 41.3 | .056 | .122 | 1.427 |
| | 27.5 | 52.0 | .099 | .086 | 1.314 | | 18.9 | 50.0 | .091 | .073 | 1.521 |
| | 27.9 | 57.3 | .120 | .178 | 1.401 | | 19.1 | 62.0 | .139 | .120 | 1.521 |
| | 28.1 | 67.0 | — 0.159 | — 0.178 | — 1.401 | | 21.3 | 61.0 | — 0.135 | . | . |
| | 28.3 | 61.0 | .135 | .248 | 1.401 | | 23.9 | 57.0 | .119 | — 0.220 | — 1.185 |
| | 28.5 | 53.2 | .104 | .248 | 1.401 | | 24.1 | 65.0 | .151 | .220 | 1.185 |
| | 28.9 | 62.5 | .141 | .112 | 1.344 | | 24.3 | 57.5 | .121 | .209 | 1.185 |
| | 29.1 | 70.6 | .173 | .112 | 1.344 | | 26.9 | 48.0 | .083 | 0.066 | 1.492 |

TABLE B.—*Adopted Values of the Collimation, Level, and Azimuth Constants—Continued.*

| Date. | τ | c | b | a | Date. | τ | c | b | a |
|----------|--------|---------|---------|---------|----------|--------|---------|---------|---------|
| 1876. | ° | s. | s. | s. | 1876. | ° | s. | s. | s. |
| October | | | | | December | | | | |
| 27.1 | 53.0 | — 0.103 | + 0.007 | — 1.492 | 3.5 | 28.5 | — 0.005 | + 0.078 | — 1.516 |
| 27.3 | 46.8 | .078 | — 0.055 | 1.492 | 4.9 | 32.4 | .021 | .104 | 1.484 |
| 27.7 | 37.7 | .042 | + 0.016 | 1.492 | 5.4 | 31.0 | — 0.015 | .081 | 1.484 |
| 31.4 | 52.6 | .101 | — 0.105 | 1.486 | 5.7 | 24.0 | + 0.013 | .081 | 1.484 |
| 31.9 | 53.5 | .105 | .133 | 1.424 | 5.9 | 32.0 | — 0.019 | .041 | 1.610 |
| November | | | | | 6.1 | 39.0 | — 0.047 | + 0.149 | — 1.610 |
| 1.1 | 74.0 | — 0.187 | — 0.158 | — 1.424 | 6.3 | 35.0 | .031 | .133 | 1.610 |
| 1.3 | 65.0 | .151 | .075 | 1.424 | 6.4 | . | .022 | .133 | 1.610 |
| 1.5 | 60.5 | .133 | .162 | 1.424 | 6.6 | 28.5 | .005 | .030 | 1.610 |
| 1.9 | 68.0 | .163 | .165 | 1.291 | 6.9 | 37.5 | .041 | + 0.056 | 1.700 |
| 2.1 | 72.5 | .181 | .165 | 1.291 | 7.3 | 37.5 | — 0.041 | — 0.001 | — 1.700 |
| 3.9 | 49.0 | — 0.087 | — 0.030 | — 1.407 | 7.5 | 37.5 | .041 | + 0.013 | 1.700 |
| 4.1 | 55.0 | .111 | — 0.064 | 1.407 | 8.4 | 34.5 | .029 | .007 | 1.587 |
| 5.4 | 45.0 | .071 | + 0.004 | 1.357 | 12.5 | 34.4 | .029 | + 0.059 | 1.496 |
| 5.6 | 35.0 | .031 | — 0.004 | 1.357 | 12.9 | 38.5 | .045 | — 0.040 | 1.652 |
| 7.3 | 48.0 | .083 | 0.041 | 1.491 | 13.0 | 44.3 | — 0.068 | — 0.040 | — 1.652 |
| 7.5 | 42.6 | — 0.061 | — 0.041 | — 1.491 | 13.5 | 42.5 | .061 | .053 | 1.652 |
| 7.8 | 38.0 | .043 | — 0.048 | 1.491 | 13.7 | 39.5 | — 0.049 | .080 | 1.652 |
| 7.9 | 45.3 | .072 | + 0.014 | 1.548 | 17.4 | 20.3 | + 0.028 | .096 | 1.497 |
| 8.1 | 52.5 | .101 | — 0.036 | 1.548 | 19.1 | 28.5 | — 0.005 | .075 | 1.552 |
| 8.7 | 40.0 | .051 | + 0.013 | 1.597 | 19.4 | 23.5 | + 0.015 | — 0.120 | — 1.552 |
| 8.8 | 40.0 | — 0.051 | + 0.013 | — 1.597 | 19.9 | 22.0 | .021 | .096 | 1.538 |
| 8.9 | 46.5 | .077 | — 0.020 | 1.637 | 20.1 | 26.8 | .002 | .096 | 1.538 |
| 9.1 | 53.5 | .105 | — 0.011 | 1.637 | 20.6 | 19.0 | + 0.033 | .065 | 1.538 |
| 9.8 | 40.0 | .051 | + 0.038 | 1.637 | 21.2 | 28.7 | — 0.006 | .199 | 1.442 |
| 9.9 | 45.9 | .075 | — 0.026 | 1.690 | 21.3 | . | + 0.006 | — 0.199 | — 1.442 |
| 10.5 | 41.5 | — 0.057 | — 0.043 | — 1.690 | 21.5 | 19.8 | .030 | .199 | 1.442 |
| 12.9 | 47.5 | .081 | .031 | 1.747 | 23.4 | 27.0 | + 0.001 | .142 | 1.513 |
| 21.9 | 53.0 | .103 | .057 | 1.531 | 26.3 | 29.0 | — 0.007 | .029 | 1.558 |
| 22.1 | 55.5 | .113 | — 0.057 | 1.531 | 26.8 | 21.5 | + 0.023 | .181 | 1.558 |
| 22.3 | 51.0 | .095 | + 0.023 | 1.531 | 26.9 | 24.5 | + 0.011 | + 0.088 | — 1.583 |
| 22.5 | 45.6 | — 0.073 | — 0.023 | — 1.531 | 27.1 | 33.5 | — 0.025 | .028 | 1.583 |
| 23.9 | 37.8 | .042 | + 0.044 | 1.598 | 27.4 | 23.5 | + 0.015 | .074 | 1.583 |
| 24.1 | 41.2 | .056 | — 0.004 | 1.598 | 31.5 | 19.2 | + 0.032 | .117 | 1.474 |
| 24.4 | 35.8 | .034 | + 0.004 | 1.598 | | | | | |
| 24.9 | 37.0 | .039 | .017 | 1.878 | | | | | |
| 26.5 | 35.0 | — 0.031 | + 0.109 | — 1.629 | | | | | |
| 27.4 | 36.5 | .037 | — 0.014 | 1.727 | | | | | |
| 28.5 | 35.0 | .031 | — 0.005 | 1.673 | | | | | |
| 29.4 | 33.5 | .025 | + 0.059 | 1.638 | | | | | |
| December | | | | | | | | | |
| 2.5 | 29.4 | .009 | + 0.107 | 1.513 | | | | | |

TABLE C.—*Adopted Corrections to the Positions of the Clock Stars given in the American Ephemeris for the Year 1876.*

| | S. | | S. | | S. |
|------------------------------------|--------|---------------------------------------|--------|-------------------------------------|--------|
| α Andromedæ | + 0.02 | κ Cancrî | — 0.01 | γ^2 Sagittarii | + 0.01 |
| γ Pegasi | .00 | α Hydræ | — .03 | μ^1 Sagittarii | .00 |
| β Ceti | + .05 | ϵ Leonis | — .06 | η Serpentis | + .06 |
| ϵ Piscium | + .02 | μ Leonis | — .01 | ι Aquilæ | + .07 |
| θ^1 Ceti | + .02 | α Leonis | — .04 | α Lyræ | + .02 |
| η Piscium | + 0.07 | γ^1 Leonis | — 0.02 | β Lyræ | + 0.03 |
| σ Piscium | — .03 | ρ Leonis | — .07 | σ Sagittarii | + .01 |
| β Arietis | + .02 | ι Leonis | .00 | ζ Aquilæ | + .08 |
| α Arietis | + .01 | δ Leonis | + .06 | d Sagittarii | + .02 |
| ξ^1 Ceti | + .04 | δ Crateris | — .02 | δ Aquilæ | + .05 |
| γ Ceti | 0.00 | τ Leonis | — 0.02 | κ Aquilæ | + 0.04 |
| α Ceti | + .02 | v Leonis | — .04 | γ Aquilæ | + .03 |
| ζ Arietis | — .04 | β Leonis | — .02 | α Aquilæ | + .04 |
| η Tauri | .00 | σ Virginis | — .02 | β Aquilæ | + .03 |
| ζ Persei | — .01 | η Virginis | — .02 | τ Aquilæ | + .02 |
| γ^1 Eridani | + 0.04 | β Corvi | — 0.04 | α^2 Capricorni | + 0.04 |
| γ Tauri | + .01 | ι^2 Canum Venaticorum | .00 | π Capricorni | + .03 |
| ϵ Tauri | — .01 | θ Virginis | — .04 | ϵ Delphini | + .05 |
| α Tauri | — .02 | α Virginis | — .02 | α Cygni | + .02 |
| ι Aurigæ | — .01 | ζ Virginis | .00 | μ Aquarii | + .07 |
| ι^1 Orionis | — 0.07 | η Bootis | — 0.05 | v Cygni | + 0.06 |
| β Orionis | .00 | α Bootis | .00 | θ^1 Cygni | — .04 |
| β Tauri | — .02 | ϵ Bootis | — .02 | ζ Cygni | + .01 |
| δ Orionis | — .03 | α^2 Libræ | — .01 | ι Pegasi | — .05 |
| α Leporis | — .04 | β Libræ | .00 | β Aquarii | + 0.3 |
| ϵ Orionis | — 0.01 | μ^1 Bootis | — 0.01 | ξ Aquarii | + 0.02 |
| α Columbæ | — .04 | α Coruæ Borealis | .00 | ϵ Pegasi | + .01 |
| α Orionis | — .03 | α Serpentis | + .02 | μ Capricorni | + .03 |
| μ Geminorum | — .04 | ϵ Serpentis | .00 | α Aquarii | + .03 |
| γ Geminorum | — .03 | δ Scorpîi | + .01 | θ Aquarii | + .02 |
| α Canis Majoris | — 0.08 | β^1 Scorpîi | + 0.03 | π Aquarii | + 0.02 |
| ϵ Canis Majoris | — .05 | δ Ophiuchi | + .02 | η Aquarii | + .03 |
| δ Canis Majoris | — .05 | α Scorpîi | — .01 | ζ Pegasi | + .06 |
| δ Geminorum | — .06 | ζ Ophiuchi | .00 | λ Aquarii | + .08 |
| α^2 Geminorum | + .24 | η Herculis | + .01 | α Piscis Australis | + .04 |
| α Canis Minoris | — 0.16 | κ Ophiuchi | + 0.04 | Pegasi | + 0.03 |
| β Geminorum | — .03 | α^1 Herculis | + .02 | θ Piscium | + .06 |
| ϕ Geminorum | — .08 | b Ophiuchi | + .03 | ι Piscium | .00 |
| ι^5 Argus | — .06 | α Ophiuchi | + .03 | ω Piscium | + .01 |
| ϵ Hydræ | — .04 | μ Herculis | .00 | | |

TABLE D.—*Adopted Corrections and Rates of the Kessels Sidereal Clock No. 1324 in 1876.*

| Mean Day. | Observer. | Sidereal Hour. | Clock Correction. | Hourly Rate. | Mean Day. | Observer. | Sidereal Hour. | Clock Correction. | Hourly Rate. |
|--------------------|-----------|----------------|-------------------|---------------|-------------------|-----------|----------------|-------------------|--------------|
| 1876. Jan. 12.4 | S. | s. 5.27 | s. — 8.707 | s. — 0.022 | 1876. Feb. 5.4 | S. | s. 6.40 | s. — 6.580 | s. |
| 12.5 | S. | 8.70 | — 8.783 | | 7.9 | F. | 19.70 | — 7.220 | + 0.001 |
| 12.9 | P. | 17.30 | — 8.685 | 0.000 | 8.1 | F. | 0.05 | — 7.215 | — 0.011 |
| 12.9 | P. | 18.10 | — 8.685 | | 8.3 | F. | 4.48 | — 7.265 | |
| 13.9 | E. | 17.43 | — 8.800 | — 0.026 | 10.3 | P. | 4.48 | — 6.908 | + 0.033 |
| 14.5 | E. | 6.60 | — 9.145 | + 0.026 | 10.5 | P. | 9.93 | — 6.727 | |
| 14.7 | E. | 11.33 | — 9.020 | | 11.9 | F. | 19.70 | — 6.080 | + 0.055 |
| 19.9 | S. | 17.60 | — 8.395 | + 0.009 | 12.1 | F. | 0.10 | — 5.840 | |
| 20.4 | S. | 4.57 | — 8.300 | + 0.008 | 12.4 | F. | 7.07 | — 5.770 | 0.000 |
| 20.6 | S. | 9.93 | — 8.257 | + 0.020 | 12.5 | F. | 9.93 | — 5.770 | |
| 20.8 | S. | 15.40 | — 8.148 | | 15.9 | F. | 21.60 | — 4.710 | — 0.004 |
| 20.9 | P. | 18.13 | — 8.383 | + 0.040 | 16.1 | F. | 1.35 | — 4.725 | |
| 21.1 | P. | 21.67 | — 8.243 | + 0.003 | 16.5 | F. | 10.10 | — 4.705 | + 0.037 |
| 21.5 | P. | 6.50 | — 8.213 | | 16.7 | F. | 15.60 | — 4.500 | |
| 23.9 | S. | 19.47 | — 7.610 | + 0.017 | 16.9 | S. | 19.70 | — 4.495 | + 0.004 |
| 24.1 | S. | 21.23 | — 7.580 | | 17.1 | S. | 0.30 | — 4.475 | |
| 24.3 | S. | 3.80 | — 7.510 | + 0.005 | 17.4 | S. | 7.50 | — 4.443 | + 0.025 |
| 24.5 | S. | 7.50 | — 7.493 | | 17.5 | S. | 9.93 | — 4.383 | |
| 25.4 | P. | 5.33 | — 7.387 | + 0.003 | 17.9 | P. | 20.28 | — 4.480 | + 0.039 |
| 25.6 | P. | 10.12 | — 7.372 | | 18.1 | P. | 0.23 | — 4.327 | |
| 25.9 | E. | 18.77 | — 7.403 | + 0.005 | 18.4 | P. | 6.50 | — 4.300 | + 0.015 |
| 26.4 | E. | 5.20 | — 7.352 | | 18.8 | P. | 16.60 | — 4.153 | |
| 30.2 | E. | 0.35 | — 6.550 | — 0.002 | 18.9 | E. | 19.57 | — 4.083 | + 0.003 |
| 30.2 | E. | 1.62 | — 6.550 | | 19.1 | E. | 0.23 | — 4.067 | |
| 31.2 | F. | 0.35 | — 6.180 | + 0.030 | 19.5 | E. | 9.93 | — 4.023 | + 0.036 |
| 31.4 | F. | 5.25 | — 6.035 | — 0.014 | 19.9 | E. | 18.77 | — 3.703 | |
| 31.6 | F. | 10.10 | — 6.105 | | 22.9 | E. | 19.70 | — 2.910 | + 0.009 |
| Feb. 2.2 | P. | 2.75 | — 6.345 | — 0.020 | 23.0 | E. | 0.05 | — 2.870 | |
| 2.4 | P. | 6.50 | — 6.420 | + 0.008 | 24.9 | S. | 19.70 | — 2.480 | — 0.012 |
| 2.6 | P. | 10.50 | — 6.390 | | 25.1 | S. | 0.00 | — 2.530 | |
| 4.3 | F. | 5.27 | — 6.673 | + 0.007 | Mar. 2.1 | E. | 0.00 | — 2.440 | + 0.016 |
| 4.5 | F. | 10.00 | — 6.640 | | 2.2 | E. | 4.48 | — 2.368 | |
| 4.9 | S. | 19.10 | — 6.545 | 0.000 | 2.9 | F. | 21.50 | — 2.305 | — 0.007 |
| 5.3 | S. | 5.27 | — 6.543 | — 0.088 | 3.3 | F. | 6.50 | — 2.370 | + 0.017 |

TABLE D.—*Adopted Corrections and Rates of the Kessels Sidereal Clock, etc.*—Continued.

| Mean Day. | Observer. | Sidereal Hour. | Clock Correction. | Hourly Rate. | Mean Day. | Observer. | Sidereal Hour. | Clock Correction. | Hourly Rate. |
|-----------|-----------|----------------|-------------------|--------------|-----------|-----------|----------------|-------------------|--------------|
| 1876. | | s. | s. | s. | 1876. | | s. | s. | s. |
| Mar. 3.5 | F. | 10.30 | — 2.305 | | Mar. 31.1 | F. | 7.07 | + 2.887 | + 0.019 |
| 3.9 | S. | 21.10 | — 2.030 | — 0.028 | 31.6 | F. | 13.30 | + 3.003 | |
| 4.1 | S. | 0.00 | — 2.110 | | 31.9 | S. | 0.00 | + 3.030 | + 0.019 |
| 4.3 | S. | 7.07 | — 2.083 | + 0.010 | April 1.2 | S. | 7.00 | + 3.160 | + 0.013 |
| 4.5 | S. | 11.33 | — 2.040 | | 1.5 | S. | 13.53 | + 3.243 | |
| 5.1 | P. | 1.73 | — 2.013 | + 0.001 | 2.3 | P. | 8.70 | + 3.373 | + 0.037 |
| 5.3 | P. | 6.50 | — 2.010 | + 0.016 | 2.4 | P. | 10.10 | + 3.425 | |
| 5.6 | P. | 13.53 | — 1.897 | | 4.5 | F. | 13.55 | + 3.630 | + 0.012 |
| 5.9 | E. | 21.35 | — 1.740 | + 0.014 | 4.6 | F. | 15.25 | + 3.650 | |
| 6.0 | E. | 1.60 | — 1.680 | | 4.9 | S. | 22.90 | + 3.865 | — 0.013 |
| 6.3 | E. | 7.50 | — 1.503 | + 0.016 | 5.4 | S. | 9.93 | + 3.723 | + 0.030 |
| 6.5 | E. | 11.33 | — 1.440 | | 5.6 | S. | 13.53 | + 3.830 | |
| 8.9 | P. | 20.85 | — 0.735 | + 0.030 | 5.9 | P. | 22.80 | + 3.790 | + 0.002 |
| 9.1 | P. | 1.73 | — 0.587 | | 6.1 | P. | 3.75 | + 3.800 | |
| 9.4 | P. | 9.93 | — 0.550 | + 0.042 | 6.3 | P. | 9.05 | + 3.795 | + 0.018 |
| 9.6 | P. | 13.53 | — 0.397 | | 6.6 | P. | 16.50 | + 3.930 | |
| 13.3 | P. | 6.50 | + 0.955 | + 0.005 | 7.9 | F. | 0.23 | + 3.990 | + 0.020 |
| 13.7 | P. | 15.33 | + 0.997 | | 8.1 | F. | 3.80 | + 4.063 | |
| 20.9 | P. | 21.57 | + 1.843 | — 0.015 | 8.4 | F. | 11.33 | + 4.103 | + 0.023 |
| 21.1 | P. | 1.90 | + 1.780 | | 8.5 | F. | 14.00 | + 4.165 | |
| 21.3 | P. | 7.50 | + 1.737 | — 0.001 | 9.4 | S. | 9.60 | + 3.940 | + 0.066 |
| 21.7 | P. | 16.25 | + 1.728 | | 9.5 | S. | 13.53 | + 4.200 | |
| 22.1 | E. | 2.13 | + 1.810 | + 0.002 | 9.9 | P. | 22.80 | + 4.317 | + 0.007 |
| 22.3 | E. | 7.50 | + 1.820 | + 0.031 | 10.1 | P. | 4.15 | + 4.355 | |
| 22.4 | E. | 10.20 | + 1.905 | | 10.3 | P. | 9.42 | + 4.372 | + 0.009 |
| 20.4 | F. | 9.53 | + 2.260 | + 0.010 | 10.6 | P. | 15.87 | + 4.432 | |
| 20.5 | F. | 13.07 | + 2.297 | | 10.9 | E. | 23.48 | + 4.472 | — 0.006 |
| 26.9 | F. | 22.80 | + 2.570 | + 0.037 | 11.1 | E. | 4.00 | + 4.443 | |
| 27.1 | F. | 1.73 | + 2.677 | + 0.015 | 12.1 | F. | 4.00 | + 4.787 | — 0.013 |
| 27.3 | F. | 8.70 | + 2.780 | | 12.6 | F. | 15.70 | + 4.640 | |
| 28.9 | P. | 22.25 | + 2.770 | + 0.010 | 14.7 | P. | 18.75 | + 3.830 | — 0.028 |
| 29.1 | P. | 4.50 | + 2.830 | — 0.031 | 14.8 | P. | 19.57 | + 3.807 | |
| 29.3 | P. | 7.50 | + 2.737 | | 15.1 | E. | 4.57 | + 3.683 | — 0.018 |
| 30.9 | F. | 23.70 | + 2.820 | + 0.009 | 15.5 | E. | 13.53 | + 3.523 | |

TABLE D.—*Adopted Corrections and Rates of the Kessels Sidereal Clock, etc.*—Continued.

| Mean Day. | Observer. | Sidereal Hour. | Clock Correction. | Hourly Rate. | Mean Day. | Observer. | Sidereal Hour. | Clock Correction. | Hourly Rate. |
|---------------------|-----------|----------------|-------------------|---------------|-------------------|-----------|----------------|-------------------|---------------|
| 1876. April 16.9 | S. | s. 0.30 | s. + 3.205 | s. — 0.011 | 1876. May 13.4 | E. | s. 13.53 | s. + 0.090 | s. — 0.010 |
| 17.1 | S. | 4.20 | + 3.162 | | 13.5 | E. | 15.60 | + 0.070 | |
| 18.3 | P. | 9.05 | + 3.020 | — 0.004 | 14.9 | P. | 1.70 | — 0.070 | — 0.002 |
| 18.5 | P. | 14.53 | + 2.997 | 0.000 | 15.1 | P. | 5.07 | — 0.077 | — 0.021 |
| 18.8 | P. | 21.67 | + 3.000 | | 15.1 | P. | 6.50 | — 0.107 | |
| 18.9 | E. | 23.48 | + 3.012 | — 0.004 | 19.9 | P. | 1.90 | — 0.400 | — 0.021 |
| 19.3 | E. | 9.93 | + 2.967 | + 0.013 | 20.1 | P. | 7.17 | — 0.513 | |
| 19.5 | E. | 13.77 | + 3.017 | | 21.9 | P. | 1.73 | — 1.087 | + 0.010 |
| 19.9 | F. | 22.80 | + 2.993 | + 0.007 | 22.1 | P. | 6.50 | — 1.040 | |
| 20.3 | F. | 9.93 | + 3.073 | — 0.020 | 23.1 | S. | 5.40 | — 1.453 | — 0.036 |
| 20.5 | F. | 14.23 | + 2.987 | | 23.3 | S. | 12.35 | — 1.700 | — 0.010 |
| 22.3 | P. | 9.23 | + 2.953 | + 0.013 | 23.5 | S. | 16.00 | — 1.737 | |
| 22.6 | P. | 16.50 | + 3.050 | | 27.4 | S. | 13.53 | — 2.227 | — 0.017 |
| 25.4 | S. | 12.68 | + 2.992 | + 0.020 | 27.5 | S. | 16.00 | — 2.270 | |
| 25.5 | S. | 15.40 | + 3.047 | | 28.9 | E. | 1.73 | — 2.820 | — 0.012 |
| 26.3 | P. | 10.50 | + 2.990 | + 0.005 | 29.1 | E. | 7.50 | — 2.887 | |
| 26.6 | P. | 16.50 | + 3.020 | | 29.3 | E. | 11.33 | — 2.880 | — 0.022 |
| 26.9 | E. | 0.05 | + 2.930 | — 0.004 | 29.5 | E. | 16.00 | — 2.983 | |
| 27.1 | E. | 4.92 | + 2.910 | | 31.3 | S. | 12.65 | — 3.510 | — 0.009 |
| 28.9 | S. | 0.60 | + 2.640 | + 0.019 | 31.5 | S. | 16.00 | — 3.540 | |
| 29.1 | S. | 5.27 | + 2.727 | — 0.009 | 31.9 | P. | 2.32 | — 3.720 | — 0.012 |
| 29.3 | S. | 9.93 | + 2.683 | | June 1.1 | P. | 6.50 | — 3.770 | |
| 30.3 | P. | 8.70 | + 2.245 | + 0.010 | 1.3 | P. | 12.50 | — 3.835 | — 0.014 |
| 30.3 | P. | 9.93 | + 2.257 | | 1.6 | P. | 18.90 | — 3.925 | |
| 30.9 | E. | 0.23 | + 2.313 | + 0.016 | 1.9 | E. | 2.23 | — 3.953 | — 0.010 |
| May 1.1 | E. | 5.27 | + 2.393 | — 0.022 | 2.1 | E. | 7.50 | — 4.007 | — 0.049 |
| 1.5 | E. | 13.53 | + 2.213 | | 2.3 | E. | 12.50 | — 4.250 | |
| 3.3 | S. | 9.93 | + 2.427 | — 0.016 | 3.1 | F. | 5.45 | — 4.440 | + 0.031 |
| 3.5 | S. | 15.25 | + 2.340 | | 3.1 | F. | 6.50 | — 4.407 | |
| 4.9 | P. | 2.85 | + 2.115 | — 0.006 | 5.4 | P. | 14.70 | — 5.480 | — 0.013 |
| 5.1 | P. | 5.57 | + 2.137 | | 5.5 | P. | 16.50 | — 5.503 | |
| 5.3 | P. | 10.62 | + 2.042 | — 0.009 | 26.4 | E. | 14.53 | — 18.183 | — 0.045 |
| 5.6 | P. | 18.30 | + 1.972 | | 26.6 | E. | 18.60 | — 18.367 | |
| 13.1 | E. | 5.87 | + 0.173 | — 0.011 | 27.9 | S. | 4.57 | — 19.257 | — 0.028 |

TABLE D.—*Adopted Corrections and Rates of the Kessels Sidereal Clock, etc.*—Continued.

| Mean Day. | Observer. | Sidereal Hour. | Clock Correction. | Hourly Rate. | Mean Day. | Observer. | Sidereal Hour. | Clock Correction. | Hourly Rate. |
|-----------|-----------|----------------|-------------------|--------------|-----------|-----------|----------------|-------------------|--------------|
| 1876. | | s. | s. | s. | 1876. | | s. | s. | s. |
| June 28.1 | S. | 7.50 | — 19.340 | | July 25.9 | S. | 6.60 | — 43.070 | — 0.003 |
| 28.9 | P. | 3.80 | — 20.323 | — 0.027 | 26.1 | S. | 13.65 | — 43.090 | — 0.019 |
| 29.1 | P. | 9.70 | — 20.485 | — 0.031 | 26.5 | S. | 19.70 | — 43.205 | |
| 29.3 | P. | 13.55 | — 20.605 | | 26.9 | P. | 6.50 | — 43.647 | — 0.017 |
| 29.9 | E. | 5.65 | — 21.220 | — 0.008 | 27.3 | P. | 14.53 | — 43.783 | — 0.010 |
| 30.1 | E. | 9.93 | — 21.253 | — 0.073 | 27.5 | P. | 19.57 | — 43.833 | |
| 30.3 | E. | 14.53 | — 21.587 | | Aug. 6.5 | F. | 21.50 | — 52.255 | — 0.038 |
| 30.9 | F. | 5.32 | — 21.902 | — 0.030 | 6.6 | F. | 0.23 | — 52.360 | |
| July 1.1 | F. | 7.60 | — 21.970 | | 8.9 | E. | 7.50 | — 54.587 | — 0.043 |
| 2.9 | P. | 4.03 | — 23.537 | — 0.034 | 9.1 | E. | 12.40 | — 54.800 | |
| 3.1 | P. | 9.48 | — 23.722 | | 9.4 | E. | 18.77 | — 55.110 | — 0.069 |
| 4.9 | P. | 6.70 | — 25.430 | — 0.035 | 9.5 | E. | 20.47 | — 55.227 | |
| 5.1 | P. | 7.55 | — 25.460 | | 11.4 | F. | 18.65 | — 56.900 | — 0.006 |
| 5.4 | P. | 16.17 | — 25.660 | — 0.044 | 11.5 | F. | 20.40 | — 56.910 | |
| 5.5 | P. | 18.93 | — 25.780 | | 14.9 | F. | 7.50 | — 60.097 | — 0.050 |
| 5.9 | P. | 4.17 | — 26.013 | — 0.037 | 15.4 | F. | 20.40 | — 60.747 | |
| 6.1 | P. | 9.73 | — 26.220 | | 16.3 | E. | 18.07 | — 61.553 | — 0.212 |
| 7.5 | P. | 19.03 | — 27.340 | — 0.015 | 16.4 | E. | 20.06 | — 62.090 | |
| 7.6 | P. | 21.77 | — 27.380 | | 20.9 | E. | 7.50 | — 66.263 | + 0.010 |
| 10.9 | P. | 4.73 | — 30.343 | — 0.044 | 21.1 | E. | 13.53 | — 6.203 | — 0.054 |
| 11.1 | P. | 9.73 | — 30.563 | | 21.5 | E. | 21.33 | — 6.623 | |
| 17.4 | F. | 17.50 | — 36.600 | — 0.010 | 26.1 | F. | 13.37 | — 9.333 | — 0.035 |
| 17.5 | F. | 20.75 | — 36.632 | | 26.5 | F. | 22.47 | — 9.703 | |
| 17.9 | S. | 6.70 | — 37.300 | — 0.022 | 27.9 | E. | 7.55 | — 10.325 | — 0.022 |
| 18.3 | S. | 16.00 | — 37.500 | — 0.024 | 28.4 | E. | 19.57 | — 10.590 | — 0.046 |
| 18.4 | S. | 18.10 | — 37.550 | | 28.5 | E. | 22.80 | — 10.693 | |
| 18.9 | P. | 5.57 | — 37.983 | — 0.043 | Sept. 2.1 | F. | 13.53 | — 13.943 | — 0.026 |
| 19.1 | P. | 10.10 | — 38.180 | | 2.6 | F. | 0.80 | — 14.233 | |
| 20.9 | F. | 7.45 | — 40.045 | — 0.105 | 3.9 | S. | 9.58 | — 14.702 | + 0.016 |
| 21.1 | F. | 9.87 | — 40.300 | — 0.033 | 4.1 | S. | 13.02 | — 14.648 | — 0.018 |
| 21.4 | F. | 18.77 | — 40.593 | | 4.5 | S. | 22.80 | — 14.823 | |
| 21.9 | S. | 5.27 | — 40.710 | — 0.017 | 19.9 | S. | 9.67 | — 25.790 | — 0.020 |
| 22.3 | S. | 15.60 | — 40.883 | — 0.046 | 20.1 | S. | 13.83 | — 25.873 | — 0.036 |
| 22.5 | S. | 19.47 | — 41.060 | | 20.5 | S. | 22.33 | — 26.177 | |

TABLE D.—*Adopted Corrections and Rates of the Kessels Sidereal Clock, etc.*—Continued.

| Mean Day. | Observer. | Sidereal Hour. | Clock Correction. | Hourly Rate. | Mean Day. | Observer. | Sidereal Hour. | Clock Correction. | Hourly Rate. |
|---------------------|-----------|----------------|-------------------|---------------|--------------------|-----------|----------------|-------------------|---------------|
| 1876. Sept. 25.3 | P. | s. 18.73 | s. — 29.917 | s. — 0.044 | 1876. Oct. 12.9 | F. | s. 11.85 | s. — 36.605 | s. — 0.016 |
| 25.4 | P. | 21.05 | — 30.020 | | 13.1 | F. | 16.00 | — 36.673 | |
| 26.9 | F. | 10.20 | — 30.940 | — 0.011 | 13.4 | F. | 22.90 | — 36.745 | — 0.005 |
| 27.1 | F. | 15.60 | — 30.997 | — 0.040 | 13.5 | F. | 2.20 | — 36.760 | |
| 27.5 | F. | 0.65 | — 31.360 | | 17.1 | F. | 15.60 | — 37.147 | — 0.010 |
| 27.9 | S. | 9.93 | — 31.250 | — 0.017 | 17.5 | F. | 1.73 | — 37.250 | |
| 28.1 | S. | 14.53 | — 31.327 | — 0.021 | 18.4 | S. | 21.50 | — 37.057 | — 0.001 |
| 28.5 | S. | 1.47 | — 31.550 | | 18.6 | S. | 3.80 | — 37.063 | |
| 28.9 | P. | 9.93 | — 32.053 | — 0.020 | 18.9 | P. | 12.03 | — 37.040 | + 0.025 |
| 29.1 | P. | 14.53 | — 32.143 | — 0.003 | 19.1 | P. | 16.00 | — 36.940 | |
| 29.5 | P. | 0.23 | — 32.173 | | 23.9 | E. | 11.95 | — 38.398 | — 0.034 |
| Oct. 1.9 | S. | 10.75 | — 33.518 | — 0.013 | 24.3 | E. | 21.03 | — 38.703 | |
| 2.3 | S. | 19.57 | — 33.633 | — 0.009 | 26.9 | P. | 12.60 | — 39.027 | + 0.009 |
| 2.5 | S. | 0.23 | — 33.677 | | 27.1 | P. | 16.50 | — 38.993 | |
| 2.9 | P. | 10.85 | — 33.895 | — 0.001 | 27.3 | P. | 21.67 | — 38.880 | + 0.008 |
| 3.1 | P. | 14.53 | — 33.900 | — 0.016 | 27.7 | P. | 6.50 | — 38.810 | |
| 3.5 | P. | 1.70 | — 34.075 | | 31.3 | S. | 22.80 | — 38.003 | + 0.017 |
| 5.9 | S. | 10.95 | — 34.625 | — 0.017 | 31.5 | S. | 2.50 | — 37.940 | |
| 6.1 | S. | 14.53 | — 34.687 | | 31.9 | E. | 11.95 | — 38.065 | + 0.038 |
| 6.9 | P. | 11.00 | — 35.330 | — 0.010 | Nov. 1.1 | E. | 16.50 | — 37.893 | — 0.009 |
| 7.1 | P. | 14.95 | — 35.370 | | 1.5 | E. | 2.45 | — 37.985 | |
| 8.9 | P. | 11.40 | — 35.935 | + 0.012 | 1.9 | F. | 13.60 | — 37.950 | — 0.007 |
| 9.1 | P. | 15.06 | — 35.890 | | 2.0 | F. | 15.47 | — 37.963 | |
| 9.7 | P. | 6.50 | — 36.053 | — 0.064 | 3.9 | P. | 12.50 | — 38.050 | + 0.022 |
| 9.7 | P. | 7.50 | — 36.117 | | 4.0 | P. | 17.97 | — 37.927 | |
| 10.7 | S. | 7.07 | — 36.090 | — 0.082 | 5.4 | E. | 1.73 | — 37.907 | + 0.027 |
| 10.8 | S. | 8.35 | — 36.195 | | 5.6 | E. | 6.50 | — 37.777 | |
| 11.1 | F. | 15.60 | — 36.337 | — 0.019 | 7.4 | S. | 0.78 | — 37.360 | + 0.004 |
| 11.5 | F. | 0.23 | — 36.497 | — 0.001 | 7.8 | S. | 9.93 | — 37.323 | |
| 11.9 | F. | 9.93 | — 36.510 | | 7.9 | P. | 12.50 | — 37.407 | + 0.009 |
| 11.9 | P. | 11.10 | — 36.500 | + 0.001 | 8.1 | P. | 18.33 | — 37.357 | — 0.003 |
| 12.1 | P. | 15.13 | — 36.497 | | 8.6 | P. | 9.48 | — 37.405 | |
| 12.3 | P. | 21.03 | — 36.640 | — 0.001 | 8.9 | E. | 13.53 | — 37.443 | + 0.014 |
| 12.6 | P. | 4.37 | — 36.650 | | 9.1 | E. | 17.65 | — 37.385 | — 0.002 |

TABLE D.—*Adopted Corrections and Rates of the Kessels Sidereal Clock, etc.*—Continued.

| Mean Day. | Observer. | Sidereal Hour. | Clock Correction. | Hourly Rate. | Mean Day. | Observer. | Sidereal Hour. | Clock Correction. | Hourly Rate. |
|-----------|-----------|----------------|-------------------|--------------|-----------|-----------|----------------|-------------------|--------------|
| 1876. | | s. | s. | s. | 1876. | | s. | s. | s. |
| Nov. 9.8 | E. | 11.33 | — 37.427 | | Dec. 7.4 | E. | 1.62 | — 32.095 | — 0.008 |
| 9.9 | S. | 13.30 | — 37.130 | — 0.008 | 7.5 | E. | 4.80 | — 32.120 | |
| 10.4 | S. | 0.23 | — 37.217 | | 12.5 | F. | 5.03 | — 31.390 | + 0.018 |
| 21.9 | F. | 14.53 | — 36.130 | + 0.004 | 12.7 | F. | 10.33 | — 31.293 | |
| 22.1 | F. | 17.80 | — 36.117 | | 12.9 | S. | 14.95 | — 30.930 | + 0.008 |
| 22.3 | F. | 22.80 | — 36.160 | — 0.015 | 13.4 | S. | 1.90 | — 30.845 | + 0.027 |
| 22.5 | F. | 3.80 | — 36.233 | | 13.7 | S. | 11.30 | — 30.590 | |
| 23.9 | S. | 13.53 | — 35.777 | + 0.028 | 15.1 | E. | 18.77 | — 30.177 | + 0.041 |
| 24.1 | S. | 18.77 | — 35.630 | + 0.008 | 15.5 | E. | 6.17 | — 29.707 | |
| 24.4 | S. | 1.90 | — 35.575 | | 19.1 | E. | 18.77 | — 28.240 | — 0.003 |
| 26.5 | F. | 3.80 | — 33.390 | + 0.025 | 19.3 | E. | 1.62 | — 28.262 | |
| 26.5 | F. | 4.87 | — 33.363 | | 19.4* | E. | 4.45 | — 23.825 | + 0.069 |
| 27.3 | S. | 22.90 | — 33.075 | + 0.001 | 19.5 | E. | 6.47 | — 23.687 | |
| 27.5 | S. | 4.57 | — 33.067 | | 19.9 | F. | 16.50 | — 23.457 | + 0.050 |
| 28.4 | P. | 1.73 | — 33.310 | + 0.004 | 20.1 | F. | 19.17 | — 23.323 | + 0.022 |
| 28.7 | P. | 8.70 | — 33.280 | | 20.6 | F. | 7.50 | — 23.060 | |
| Dec. 2.5 | P. | 5.27 | — 33.503 | + 0.009 | 21.2 | S. | 23.90 | — 22.760 | + 0.011 |
| 2.6 | P. | 7.07 | — 33.487 | | 21.5 | S. | 5.45 | — 22.700 | |
| 3.5 | E. | 3.75 | — 33.570 | + 0.043 | 23.3 | P. | 1.62 | — 21.902 | — 0.025 |
| 3.6 | E. | 7.50 | — 33.410 | | 23.4 | P. | 2.75 | — 21.930 | |
| 5.4 | S. | 1.73 | — 32.787 | + 0.010 | 26.3 | P. | 1.50 | — 20.047 | + 0.011 |
| 5.7 | S. | 9.93 | — 32.707 | | 26.8 | P. | 12.50 | — 19.927 | |
| 5.9 | P. | 14.53 | — 32.600 | + 0.003 | 26.9 | E. | 16.30 | — 19.757 | + 0.031 |
| 6.1 | P. | 18.77 | — 32.587 | | 27.1 | E. | 20.85 | — 19.615 | + 0.019 |
| 6.4 | P. | 1.73 | — 32.467 | + 0.026 | 27.5 | E. | 6.40 | — 19.430 | |
| 6.6 | P. | 6.50 | — 32.343 | | 31.4 | E. | 4.45 | — 17.995 | + 0.038 |
| 6.9 | E. | 16.00 | — 32.230 | + 0.014 | 31.5 | E. | 7.50 | — 17.880 | |

*Clock stopped at 3^h 30^m.

TABLE E.—*Observations of the Nadir Point, together with the resulting Zenith-Point Corrections obtained with the Transit Circle in 1876.*

| Mean Day and Sidereal Hour. | | Observer. | Reading of Circle A. | Mean of two Readings of the four Microscope Micrometers. | Concluded Circle Reading. | Telescope Microm. | Nadir Reading. | Nadir Constant. | Zenith-Point Correction. |
|-----------------------------|------|-----------|----------------------|--|---------------------------|-------------------|----------------|-----------------|--------------------------|
| 1876. d. | h. | | ° ' " | r. " | ° ' " | r. | ° ' " | ° ' " | ' " |
| Jan. 12.5 | 7.6 | S. | 179 56 | 10 5.00 | 179 56 5.00 | 35.130 | 179 58 50.43 | 179 59 58.54 | + 1 8.11 |
| 12.9 | 18.1 | P. | | 8.32 | 8.32 | 34.859 | 49.60 | | 8.94 |
| 13.1 | 21.7 | P. | | 7.89 | 7.89 | 34.844 | 48.94 | | 9.60 |
| 13.9 | 18.6 | E. | | 9.32 | 9.32 | 34.696 | 48.10 | | 10.44 |
| 14.4 | 6.5 | E. | | 9.44 | 9.44 | 34.622 | 47.08 | | 11.46 |
| 14.6 | 10.0 | E. | 179 56 | 10 5.70 | 179 56 5.70 | 34.846 | 179 58 46.78 | 179 59 58.54 | + 1 11.76 |
| 14.9 | 18.9 | F. | | 9 26.25 | 55 56.25 | 35.510 | 47.49 | | 11.05 |
| 15.1 | 23.0 | F. | | 9 25.08 | 55 55.08 | 35.622 | 48.05 | | 10.49 |
| 17.1 | 21.7 | P. | | 10 7.22 | 56 7.22 | 34.952 | 49.92 | | 8.62 |
| 17.2 | 22.7 | P. | | 8.45 | 8.45 | 34.876 | 49.99 | | 8.55 |
| 17.9 | 19.4 | E. | 179 56 | 10 12.06 | 179 56 12.06 | 34.682 | 179 58 50.63 | 179 59 58.54 | + 1 7.91 |
| 18.1 | 22.8 | E. | | 16.89 | 16.89 | 34.472 | 52.25 | | 6.29 |
| 18.9 | 19.8 | F. | | 10.12 | 10.12 | 34.984 | 53.32 | | 5.22 |
| 19.1 | 22.6 | F. | | 11.65 | 11.65 | 34.816 | 52.28 | | 6.26 |
| 19.9 | 18.5 | S. | | 12.02 | 12.02 | 34.846 | 53.10 | | 5.44 |
| 20.1 | 22.3 | S. | 179 56 | 10 14.08 | 179 56 14.08 | 34.829 | 179 58 54.91 | 179 59 58.54 | + 1 3.63 |
| 20.3 | 4.0 | S. | | 11.16 | 11.16 | 34.812 | 51.73 | | 6.81 |
| 20.5 | 9.8 | S. | | 11.28 | 11.28 | 34.800 | 51.66 | | 6.88 |
| 20.8 | 16.4 | S. | | 10.78 | 10.78 | 34.888 | 52.50 | | 6.04 |
| 20.9 | 18.7 | P. | | 8.42 | 8.42 | 35.035 | 52.39 | | 6.15 |
| 21.1 | 21.8 | P. | 179 56 | 10 10.68 | 179 56 10.68 | 34.974 | 179 58 53.73 | 179 59 58.54 | + 1 4.81 |
| 21.4 | 5.7 | P. | | 11.18 | 11.18 | 34.904 | 53.15 | | 5.39 |
| 21.6 | 10.7 | P. | | 8.68 | 8.68 | 34.989 | 51.96 | | 6.58 |
| 23.9 | 17.9 | S. | | 9.00 | 9.00 | 34.903 | 50.95 | | 7.59 |
| 24.1 | 22.2 | S. | | 7.88 | 7.88 | 35.100 | 52.85 | | 5.69 |
| 24.3 | 4.1 | S. | 179 56 | 10 8.75 | 179 56 8.75 | 34.972 | 179 58 51.77 | 179 59 58.54 | + 1 6.77 |
| 24.4 | 7.9 | S. | | 9.82 | 9.82 | 34.854 | 51.02 | | 7.52 |
| 24.9 | 18.5 | P. | | 5.51 | 5.51 | 34.142 | 51.12 | | 7.42 |
| 25.1 | 23.2 | P. | | 7.20 | 7.20 | 35.020 | 50.95 | | 7.59 |
| 25.4 | 4.6 | P. | | 4.88 | 4.88 | 35.106 | 49.94 | | 8.60 |
| 25.6 | 11.8 | P. | 179 56 | 10 7.02 | 179 56 7.02 | 35.024 | 179 58 50.83 | 179 59 58.54 | + 1 7.71 |
| 25.9 | 18.4 | E. | | 8.62 | 8.62 | 34.965 | 51.52 | | 7.02 |
| 26.1 | 23.0 | E. | | 11.60 | 11.60 | 34.816 | 52.23 | | 6.31 |
| 26.4 | 6.3 | E. | | 9.28 | 9.28 | 34.826 | 50.06 | | 8.48 |
| 26.5 | 9.9 | E. | | 9.45 | 9.45 | 34.847 | 50.54 | | 8.00 |
| 27.9 | 19.5 | S. | 179 56 | 10 5.88 | 179 56 5.88 | 35.023 | 179 58 49.68 | 179 59 58.54 | + 1 8.86 |
| 28.9 | 19.5 | P. | | 15.21 | 15.21 | 34.664 | 53.50 | | 5.04 |
| 29.1 | 22.1 | P. | | 11.99 | 11.99 | 34.895 | 53.82 | | 4.72 |
| 29.9 | 19.6 | E. | | 10.26 | 10.26 | 34.938 | 52.75 | | 5.79 |
| 30.2 | 23.8 | E. | | 13.25 | 13.25 | 34.750 | 52.86 | | 5.68 |

TABLE E.—*Observations of the Nadir Point, etc.*—Continued.

| Mean Day and Sidereal Hour. | | Observer. | Reading of Circle A. | Mean of two Readings of the four Microscope Micrometers. | | Concluded Circle Reading. | Telescope Microm. | Nadir Reading. | | | Nadir Constant. | Zenith-Point Correction. | |
|-----------------------------|------|-----------|----------------------|--|----|---------------------------|-------------------|----------------|-----|----------|-----------------|--------------------------|-------|
| d. | h. | | | r. | " | | | ° | ' | " | | ' | " |
| 1876. | | | | | | | | | | | | | |
| Jan. | 30.2 | 1.6 | E. | 179 | 56 | 10 10.81 | 179 56 10.81 | 34.923 | 179 | 58 53.07 | 179 59 58.54 | + 1 | 5.47 |
| | 31.0 | 20.7 | F. | | | 9 29.09 | 55 59.09 | 35.526 | | 50.58 | | | 7.96 |
| | 31.2 | 0.3 | F. | | | 10 6.04 | 56 6.04 | 35.162 | | 51.96 | | | 6.58 |
| | 31.4 | 7.0 | F. | | | 10 1.85 | 56 1.85 | 35.334 | | 50.40 | | | 8.14 |
| | 31.6 | 11.0 | F. | | | 9 28.98 | 55 58.98 | 35.507 | | 50.18 | | | 8.36 |
| Feb. | 1.0 | 20.3 | S. | 179 | 56 | 10 4.80 | 179 56 4.80 | 35.216 | 179 | 58 51.55 | 179 59 58.54 | + 1 | 6.99 |
| | 1.9 | 19.1 | P. | | | 1.08 | 1.08 | 35.406 | | 50.74 | | | 7.80 |
| | 2.1 | 22.8 | P. | | | 3.20 | 3.20 | 35.281 | | 50.93 | | | 7.61 |
| | 2.3 | 4.1 | P. | | | 5.10 | 5.10 | 35.106 | | 50.16 | | | 8.38 |
| | 2.6 | 10.9 | P. | | | 4.48 | 4.48 | 35.008 | | 48.05 | | | 10.49 |
| | 2.9 | 21.0 | E. | 179 | 56 | 9 27.51 | 179 55 57.51 | 35.432 | 179 | 58 47.57 | 179 59 58.54 | + 1 | 10.97 |
| | 3.9 | 20.7 | F. | | | 9 22.65 | 55 52.65 | 35.790 | | 48.19 | | | 10.35 |
| | 4.0 | 8.2 | F. | | | 10 1.08 | 56 1.08 | 35.258 | | 48.46 | | | 10.08 |
| | 5.1 | 23.6 | S. | | | 10 10.35 | 56 10.35 | 34.553 | | 46.95 | | | 11.59 |
| | 5.3 | 4.3 | S. | | | 10 8.22 | 56 8.22 | 34.692 | | 46.94 | | | 11.60 |
| | 5.5 | 8.7 | S. | 179 | 56 | 10 12.42 | 179 56 12.42 | 34.278 | 179 | 58 44.80 | 179 59 58.54 | + 1 | 13.74 |
| | 6.9 | 19.3 | E. | | | 10 0.06 | 56 00.06 | 35.442 | | 50.27 | | | 8.27 |
| | 7.1 | 23.6 | E. | | | 10 0.31 | 56 00.31 | 35.317 | | 48.60 | | | 9.94 |
| | 7.9 | 20.3 | F. | | | 9 26.82 | 55 56.82 | 35.542 | | 48.55 | | | 9.99 |
| | 10.3 | 5.4 | F. | | | 10 9.42 | 56 9.42 | 34.966 | | 52.34 | | | 6.20 |
| | 10.6 | 11.5 | P. | 179 | 56 | 10 8.08 | 179 56 8.98 | 34.952 | 179 | 58 51.68 | 179 59 58.54 | + 1 | 6.86 |
| | 11.9 | 20.4 | F. | | | 9 26.88 | 55 56.88 | 35.728 | | 51.46 | | | 7.08 |
| | 12.1 | 0.0 | F. | | | 9 27.70 | 55 57.70 | 35.768 | | 52.90 | | | 5.64 |
| | 12.4 | 7.5 | F. | | | 9 26.18 | 55 56.18 | 35.733 | | 50.84 | | | 7.70 |
| | 12.5 | 9.8 | F. | | | 10 1.65 | 56 1.65 | 35.424 | | 51.59 | | | 6.95 |
| | 14.9 | 20.9 | E. | 179 | 56 | 10 7.30 | 179 56 0.30 | 35.011 | 179 | 58 50.91 | 179 59 58.54 | + 1 | 7.63 |
| | 15.1 | 0.3 | E. | | | 10 0.92 | 56 0.92 | 35.472 | | 51.59 | | | 6.95 |
| | 16.1 | 0.0 | F. | | | 10 2.78 | 56 2.78 | 35.426 | | 52.75 | | | 5.79 |
| | 16.5 | 11.0 | F. | | | 10 0.98 | 56 0.98 | 35.398 | | 50.52 | | | 8.02 |
| | 16.8 | 16.2 | F. | | | 9 29.78 | 55 59.78 | 35.375 | | 48.96 | | | 9.58 |
| | 17.1 | 0.7 | S. | 179 | 56 | 10 4.66 | 179 56 4.66 | 35.182 | 179 | 58 50.89 | 179 59 58.54 | + 1 | 7.65 |
| | 17.3 | 5.3 | S. | | | 5.70 | 5.70 | 35.022 | | 49.48 | | | 9.06 |
| | 17.5 | 11.1 | S. | | | 5.12 | 5.12 | 35.131 | | 50.56 | | | 7.98 |
| | 17.9 | 20.1 | P. | | | 1.22 | 1.22 | 35.380 | | 50.84 | | | 8.06 |
| | 18.1 | 23.9 | P. | | | 0.95 | 0.95 | 35.356 | | 49.84 | | | 8.70 |
| | 18.4 | 8.1 | P. | 179 | 56 | 10 3.78 | 179 56 3.78 | 35.205 | 179 | 58 50.36 | 179 59 58.54 | + 1 | 8.18 |
| | 18.8 | 17.3 | P. | | | 8.02 | 8.02 | 34.870 | | 49.46 | | | 9.08 |
| | 18.9 | 19.6 | E. | | | 8.49 | 8.49 | 34.952 | | 51.19 | | | 7.35 |
| | 19.1 | 0.9 | E. | | | 5.18 | 5.18 | 35.170 | | 51.23 | | | 7.31 |
| | 19.5 | 9.9 | E. | | | 8.61 | 8.61 | 34.900 | | 50.52 | | | 8.02 |

TABLE E.—*Observations of the Nadir Point, etc.*—Continued.

| Mean Day and Sidereal Hour. | | Observer. | Reading of Circle A. | Mean of two Readings of the four Microscope Micrometers. | Concluded Circle Reading. | Telescope Microm. | Nadir Reading. | Nadir Constant. | Zenith-Point Correction. |
|-----------------------------|------|-----------|----------------------|--|---------------------------|-------------------|----------------|-----------------|--------------------------|
| 1876. d. | h. | | ° ' " | r. " | ° ' " | r. | ° ' " | ° ' " | ' " |
| Feb. 19.8 | 17.8 | E. | 179 56 | 10 2.35 | 179 56 2.35 | 35.314 | 179 58 50.59 | 179 59 58.54 | + 1 7.95 |
| 19.8 | 18.9 | E. | | 10 5.48 | 56 5.48 | 35.114 | 50.66 | | 7.88 |
| 22.9 | 22.3 | E. | | 9 27.14 | 55 57.14 | 35.544 | 48.91 | | 9.63 |
| 24.1 | 0.2 | F. | | 10 1.42 | 56 1.42 | 35.264 | 48.89 | | 9.65 |
| 24.9 | 21.4 | S. | | 11.34 | 56 11.34 | 34.539 | 47.72 | | 10.82 |
| 25.1 | 0.2 | S. | 179 56 | 10 5.22 | 179 56 5.22 | 35.085 | 179 58 49.95 | 179 59 58.54 | + 1 8.59 |
| 25.9 | 21.1 | P. | | 5.88 | 5.88 | 34.928 | 48.22 | | 10.32 |
| 26.1 | 0.8 | P. | | 6.00 | 6.00 | 34.981 | 49.15 | | 9.39 |
| 28.0 | 22.5 | F. | | 8.88 | 8.88 | 34.845 | 49.94 | | 8.60 |
| 28.9 | 21.5 | S. | | 17.02 | 17.02 | 35.303 | 49.79 | | 8.75 |
| 29.9 | 22.4 | P. | 179 56 | 10 5.78 | 179 56 5.78 | 35.044 | 179 58 49.89 | 179 59 58.54 | + 1 8.65 |
| Mar. 1.1 | 1.2 | P. | | 10.48 | 10.48 | 34.992 | 53.80 | | 4.74 |
| 2.3 | 5.1 | E. | | 4.00 | 4.00 | 35.416 | 53.81 | | 4.73 |
| 3.1 | 1.0 | F. | | 2.82 | 2.82 | 35.627 | 55.87 | | 2.67 |
| 3.3 | 8.0 | F. | | 8.25 | 8.25 | 35.178 | 54.42 | | 4.12 |
| 3.6 | 12.0 | F. | 179 56 | 9 29.78 | 179 55 59.78 | 35.738 | 179 58 54.51 | 179 59 58.54 | + 1 4.03 |
| 3.9 | 21.9 | S. | | 10 17.30 | 56 17.30 | 34.596 | 54.54 | | 4.00 |
| 4.1 | 0.3 | S. | | 14.70 | 14.70 | 34.774 | 54.68 | | 3.86 |
| 4.4 | 7.8 | S. | | 4.75 | 4.75 | 35.434 | 54.84 | | 3.70 |
| 4.5 | 11.9 | S. | | 7.42 | 7.42 | 35.220 | 54.23 | | 4.31 |
| 5.1 | 2.4 | P. | 179 56 | 10 14.84 | 179 56 14.84 | 34.926 | 179 58 57.15 | 179 59 58.54 | + 1 1.39 |
| 5.3 | 7.1 | P. | | 9.18 | 9.18 | 35.192 | 55.56 | | 2.98 |
| 5.6 | 12.7 | P. | | 9.84 | 9.84 | 35.088 | 54.62 | | 3.92 |
| 5.7 | 15.2 | P. | | 11.68 | 11.68 | 34.962 | 54.54 | | 4.00 |
| 5.9 | 20.8 | E. | | 9.60 | 9.60 | 35.190 | 55.95 | | 2.59 |
| 6.1 | 2.2 | E. | 179 56 | 10 9.42 | 179 56 9.42 | 35.102 | 179 58 54.42 | 179 59 58.54 | + 1 4.12 |
| 6.3 | 7.7 | E. | | 11.98 | 11.98 | 35.192 | 58.36 | | 1 0.18 |
| 6.5 | 11.6 | E. | | 14.34 | 14.34 | 35.089 | 59.14 | | 0 59.40 |
| 6.9 | 22.8 | F. | | 10.91 | 10.91 | 35.288 | 58.76 | | 0 59.78 |
| 8.9 | 22.8 | P. | | 10.58 | 10.58 | 35.166 | 56.56 | | 1 1.98 |
| 9.1 | 1.6 | P. | 179 56 | 10 11.95 | 179 56 11.95 | 35.090 | 179 58 56.76 | 179 59 58.54 | + 1 1.78 |
| 9.3 | 7.6 | P. | | 11.66 | 11.66 | 35.100 | 56.63 | | 1.91 |
| 9.7 | 14.6 | P. | | 11.64 | 11.64 | 35.080 | 56.30 | | 2.24 |
| 13.3 | 8.3 | P. | | 8.11 | 8.11 | 35.296 | 56.08 | | 2.46 |
| 13.7 | 16.4 | P. | | 7.98 | 7.98 | 35.223 | 54.83 | | 3.71 |
| 15.0 | 0.9 | F. | 179 56 | 9 26.40 | 179 55 56.40 | 36.003 | 179 58 55.20 | 179 59 58.54 | + 1 3.34 |
| 16.9 | 23.0 | P. | | 10 3.12 | 56 3.12 | 35.561 | 55.15 | | 3.39 |
| 17.1 | 0.7 | P. | | 7.60 | 7.60 | 35.235 | 54.63 | | 3.91 |
| 17.9 | 21.6 | E. | | 8.52 | 8.52 | 35.136 | 54.04 | | 4.50 |
| 20.9 | 22.3 | P. | | 1.52 | 1.52 | 35.582 | 53.87 | | 4.67 |

TABLE E.—*Observations of the Nadir Point, etc.*—Continued.

| Mean Day and Sidereal Hour. | | | Observer. | Reading of Circle A. | Mean of two Readings of the four Microscope Micrometers. | | Concluded Circle Reading. | Telescope Microm. | Nadir Reading. | Nadir Constant. | Zenith-Point Correction. |
|-----------------------------|------|------|-----------|----------------------|--|-------|---------------------------|-------------------|----------------|-----------------|--------------------------|
| 1876. | d. | h. | | | r. | " | | | | | |
| Mar. | 21.1 | 4.0 | P. | 179 56 | 10 | 8.39 | 179 56 | 8.39 | 35.152 | 179 58 54.16 | 179 59 58.54 + 1 4.38 |
| | 21.4 | 10.7 | P. | | | 8.70 | | 8.70 | 35.087 | 53.47 | 5.07 |
| | 21.7 | 16.9 | P. | | | 7.85 | | 7.85 | 35.084 | 52.57 | 5.97 |
| | 21.9 | 22.9 | E. | | | 11.32 | | 11.32 | 34.886 | 53.01 | 5.53 |
| | 22.1 | 3.0 | E. | | | 13.70 | | 13.70 | 34.759 | 53.45 | 5.09 |
| | 22.3 | 8.0 | E. | 179 56 | 10 | 10.42 | 179 56 | 10.42 | 34.956 | 179 58 53.19 | 179 59 58.54 + 1 5.35 |
| | 22.4 | 11.0 | E. | | | 9.85 | | 9.85 | 35.019 | 53.57 | 4.97 |
| | 23.4 | 9.5 | F. | | | 13.92 | | 13.92 | 34.738 | 53.35 | 5.19 |
| | 23.5 | 12.4 | F. | | | 10.90 | | 10.90 | 34.900 | 52.81 | 5.73 |
| | 25.1 | 2.1 | P. | | | 7.15 | | 7.15 | 35.188 | 53.47 | 5.07 |
| | 26.9 | 23.4 | F. | 179 56 | 10 | 10.79 | 179 56 | 10.79 | 35.110 | 179 58 55.91 | 179 59 58.54 + 1 2.63 |
| | 27.1 | 3.7 | F. | | | 9.25 | | 9.25 | 35.223 | 56.10 | 2.44 |
| | 27.3 | 9.2 | F. | | | 10.85 | | 10.85 | 35.078 | 55.48 | 3.06 |
| | 28.9 | 22.3 | P. | | | 9.69 | | 9.69 | 35.136 | 55.21 | 3.33 |
| | 29.1 | 5.1 | P. | | | 8.28 | | 8.28 | 35.252 | 55.57 | 2.97 |
| | 29.9 | 23.7 | E. | 179 56 | 10 | 7.79 | 179 56 | 7.79 | 35.190 | 179 58 54.14 | 179 59 58.54 + 1 4.40 |
| | 30.1 | 3.3 | E. | | | 10.02 | | 10.02 | 35.094 | 54.90 | 3.64 |
| | 31.1 | 2.1 | F. | | | 7.88 | | 7.88 | 35.254 | 55.20 | 3.34 |
| | 31.4 | 9.0 | F. | | | 8.42 | | 8.42 | 35.151 | 54.18 | 4.36 |
| | 31.6 | 13.7 | F. | | | 5.98 | | 5.98 | 35.319 | 54.30 | 4.24 |
| | 31.9 | 23.7 | S. | 179 56 | 10 | 7.62 | 179 56 | 7.62 | 35.265 | 179 58 55.11 | 179 59 58.54 + 1 3.43 |
| April | 1.1 | 2.9 | S. | | | 8.42 | | 8.42 | 35.322 | 56.79 | 1.75 |
| | 1.3 | 7.5 | S. | | | 12.70 | | 12.70 | 34.972 | 55.72 | 2.82 |
| | 1.5 | 13.6 | S. | | | 9.42 | | 9.42 | 35.070 | 53.93 | 4.61 |
| | 2.3 | 8.1 | P. | | | 7.55 | | 7.55 | 35.217 | 54.32 | 4.22 |
| | 2.4 | 11.3 | P. | 179 56 | 10 | 8.09 | 179 56 | 8.09 | 35.192 | 179 58 54.47 | 179 59 58.54 + 1 4.07 |
| | 2.9 | 0.7 | E. | | | 14.25 | | 14.25 | 34.800 | 54.63 | 3.91 |
| | 4.1 | 3.3 | F. | | | 5.48 | | 5.48 | 35.578 | 57.77 | 0.77 |
| | 4.5 | 13.0 | F. | | | 12.20 | | 12.20 | 35.068 | 56.67 | 1.87 |
| | 4.6 | 15.2 | F. | | | 10.52 | | 10.52 | 35.236 | 57.57 | 0.97 |
| | 4.9 | 23.4 | S. | 179 56 | 10 | 8.42 | 179 56 | 8.42 | 35.308 | 179 58 56.57 | 179 59 58.54 + 1 1.97 |
| | 5.1 | 2.5 | S. | | | 6.90 | | 6.90 | 35.435 | 57.01 | 1.53 |
| | 5.3 | 7.6 | S. | | | 10.28 | | 10.28 | 35.224 | 57.14 | 1.40 |
| | 5.5 | 14.1 | S. | | | 11.10 | | 11.10 | 35.141 | 56.70 | 1.84 |
| | 5.9 | 23.3 | P. | | | 7.29 | | 7.29 | 35.451 | 57.64 | 0.90 |
| | 6.1 | 4.1 | P. | 179 56 | 10 | 8.86 | 179 56 | 8.86 | 35.354 | 179 58 57.72 | 179 59 58.54 + 1 0.82 |
| | 6.4 | 11.5 | P. | | | 9.32 | | 9.32 | 35.295 | 57.27 | 1.27 |
| | 6.7 | 18.1 | P. | | | 9.61 | | 9.61 | 35.336 | 58.19 | 1 0.35 |
| | 6.9 | 0.6 | E. | | | 13.89 | | 13.89 | 35.096 | 58.80 | 0 59.74 |
| | 7.1 | 3.7 | E. | | | 12.81 | | 12.81 | 35.224 | 59.67 | 58.87 |

TABLE E.—*Observations of the Nadir Point, etc*—Continued.

| Mean Day and Sidereal Hour. | | Observer | Reading of Circle A. | Mean of two Readings of the four Microscope Micrometers. | Concluded Circle Reading. | Telescope Microm. | Nadir Reading. | Nadir Constant. | Zenith-Point Correction. |
|-----------------------------|------|----------|----------------------|--|---------------------------|-------------------|----------------|-----------------|--------------------------|
| 1876. d. | h. | | ° ' " | r. " | ° ' " | r. | ° ' " | ° ' " | ' " |
| April 8.0 | 1.6 | F. | 179 56 | 10 2.55 | 179 56 2.55 | 35.775 | 179 58 57.86 | 179 59 58.54 | + 1 0.65 |
| 8.5 | 13.0 | F. | | 11.95 | 11.95 | 35.122 | 57.26 | | 1.28 |
| 8.6 | 14.0 | F. | | 8.95 | 8.95 | 33.300 | 56.98 | | 1.56 |
| 9.4 | 11.8 | S. | | 10.39 | 10.39 | 35.220 | 57.19 | | 1.35 |
| 9.5 | 14.5 | S. | | 9.20 | 9.20 | 35.286 | 57.02 | | 1.52 |
| 9.9 | 0.3 | P. | 179 56 | 10 8.08 | 179 56 8.08 | 35.454 | 179 58 58.48 | 179 59 58.54 | + 1 0.06 |
| 10.1 | 4.7 | P. | | 7.62 | 7.62 | 35.514 | 58.93 | | 0 59.61 |
| 10.4 | 10.9 | P. | | 10.19 | 10.19 | 35.278 | 57.88 | | 1 0.66 |
| 10.7 | 16.4 | P. | | 7.92 | 7.92 | 35.330 | 56.41 | | 2.13 |
| 10.9 | 0.3 | E. | | 8.70 | 8.70 | 35.407 | 58.37 | | 0.17 |
| 11.1 | 4.3 | E. | 179 56 | 10 8.08 | 179 56 8.08 | 35.590 | 179 59 0.55 | 179 59 58.54 | + 0 57.99 |
| 12.0 | 2.3 | F. | | 9.55 | 9.55 | 35.415 | 58 59.35 | | 59.19 |
| 12.1 | 4.0 | F. | | 12.55 | 12.55 | 35.404 | 59 2.18 | | 56.36 |
| 12.4 | 11.6 | F. | | 9.48 | 9.48 | 35.508 | 0.69 | | 57.85 |
| 12.6 | 15.2 | F. | | 13.05 | 13.05 | 35.252 | 0.34 | | 58.20 |
| 13.7 | 19.1 | S. | 179 56 | 10 13.48 | 179 56 13.48 | 35.115 | 179 58 58.68 | 179 59 58.54 | + 0 59.86 |
| 14.8 | 20.0 | P. | | 11.96 | 11.96 | 35.114 | 57.14 | | 1 1.40 |
| 14.9 | 0.2 | E. | | 18.32 | 18.32 | 34.768 | 58.21 | | 0.33 |
| 15.1 | 5.2 | E. | | 9.89 | 9.89 | 35.326 | 58.32 | | 0.22 |
| 15.4 | 11.4 | E. | | 14.12 | 14.12 | 34.968 | 57.07 | | 1.47 |
| 15.5 | 14.3 | E. | 179 56 | 10 14.40 | 179 56 14.40 | 34.883 | 179 58 56.04 | 179 59 58.54 | + 1 2.50 |
| 16.9 | 0.3 | S. | | 6.96 | 6.96 | 35.456 | 57.39 | | 1.15 |
| 17.1 | 3.5 | S. | | 9.04 | 9.04 | 35.304 | 57.13 | | 1.41 |
| 17.4 | 0.1 | S. | | 8.95 | 8.95 | 35.326 | 57.38 | | 1.16 |
| 17.9 | 0.2 | P. | | 8.30 | 8.30 | 35.262 | 55.74 | | 2.80 |
| 18.1 | 3.4 | P. | 179 56 | 10 8.61 | 179 56 8.61 | 35.292 | 179 58 56.52 | 179 59 58.54 | + 1 2.02 |
| 18.4 | 10.9 | P. | | 9.49 | 9.49 | 35.198 | 55.96 | | 2.58 |
| 18.5 | 13.7 | P. | | 7.99 | 7.99 | 35.297 | 55.97 | | 2 57 |
| 18.8 | 21.8 | P. | | 5.92 | 5.92 | 35.404 | 55.55 | | 2.99 |
| 18.9 | 23.8 | E. | | 7.55 | 7.55 | 35.329 | 56.02 | | 2.52 |
| 19.1 | 5.0 | E. | 179 56 | 10 7.21 | 179 56 7.21 | 35.302 | 179 58 55.27 | 179 59 58.54 | + 1 3.27 |
| 19.3 | 10.5 | E. | | 10.39 | 10.39 | 35.101 | 55.37 | | 3.17 |
| 20.0 | 1.0 | F. | | 5.75 | 5.75 | 35.386 | 55.10 | | 3.44 |
| 20.4 | 12.3 | F. | | 7.82 | 7.82 | 35.259 | 55.22 | | 3.32 |
| 20.5 | 15.0 | F. | | 9.48 | 9.48 | 35.170 | 55.53 | | 3.0 |
| 21.9 | 1.6 | P. | 179 56 | 10 8.28 | 179 56 8.28 | 35.380 | 179 58 57.54 | 179 59 58.54 | + 1 1.00 |
| 22.1 | 5.6 | P. | | 8.80 | 8.80 | 35.361 | 57.77 | | 0.77 |
| 22.3 | 8.6 | P. | | 10.04 | 10.04 | 35.314 | 58.28 | | 0.26 |
| 22.7 | 18.7 | P. | | 10.48 | 10.48 | 35.123 | 55.80 | | 2.74 |
| 24.0 | 2.6 | F. | | 17.60 | 17.60 | 34.728 | 56.88 | | 1.66 |

TABLE E.—*Observations of the Nadir Point, etc.*—Continued.

| Mean Day and Sidereal Hour. | | Observer. | Reading of Circle A. | Mean of two Readings of the four Microscope Micrometers. | | Concluded Circle Reading. | Telescope Microm. | Nadir Reading. | Nadir Constant. | Zenith-Point Correction. | |
|-----------------------------|------|-----------|----------------------|--|----------|---------------------------|-------------------|----------------|-----------------|--------------------------|-------|
| d. | h. | | | r. | " | | | | | ' | " |
| 1876. | | | | | | | | | | | |
| Apr. | 25.4 | 11.1 | S. | 179 56 | 10 5.20 | 179 56 5.20 | 35.345 | 179 58 53.92 | 179 59 58.54 | + 1 | 4.62 |
| | 25.5 | 15.0 | S. | | 5.14 | 5.14 | 35.410 | 55.13 | | | 3.41 |
| | 25.9 | 23.9 | P. | | 6.59 | 6.59 | 35.366 | 55.64 | | | 2.90 |
| | 26.1 | 5.7 | P. | | 7.06 | 7.06 | 35.486 | 57.94 | | | 0.60 |
| | 26.4 | 12.6 | P. | | 9.81 | 9.81 | 35.193 | 56.21 | | | 2.33 |
| | 26.6 | 17.1 | P. | 179 56 | 10 9.08 | 179 56 9.08 | 35.178 | 179 58 55.25 | 179 59 58.54 | + 1 | 3.29 |
| | 26.9 | 0.4 | E. | | 9.79 | 9.79 | 35.325 | 58.20 | | | 0.34 |
| | 27.1 | 5.7 | E. | | 8.65 | 8.65 | 35.420 | 58.53 | | | 0.01 |
| | 28.1 | 3.8 | F. | | 11.98 | 11.98 | 35.180 | 58.18 | | | 0.36 |
| | 28.9 | 0.9 | S. | | 9.49 | 9.49 | 35.362 | 58.47 | | | 0.07 |
| | 29.2 | 8.3 | S. | 179 56 | 10 7.98 | 179 56 7.98 | 35.534 | 179 58 59.59 | 179 59 58.54 | + 0 | 58.95 |
| | 29.5 | 14.0 | S. | | 10.42 | 10.42 | 35.297 | 58.40 | | 1 | 0 14 |
| | 30.9 | 0.5 | E. | | 13.20 | 13.20 | 35.025 | 57.02 | | | 1.52 |
| May | 1.1 | 5.6 | E. | | 11.98 | 11.98 | 35.154 | 57.18 | | | 0.76 |
| | 1.3 | 10.5 | E. | | 12.48 | 12.48 | 35.048 | 56.65 | | | 1.89 |
| | 1.5 | 13.7 | E. | 179 56 | 10 11.02 | 179 56 11.02 | 35.140 | 179 58 56.60 | 179 59 58.54 | + 1 | 1.94 |
| | 3.3 | 9.9 | S. | | 6.71 | 6.71 | 35.503 | 57.85 | | | 0.69 |
| | 3.5 | 16.0 | S. | | 4.52 | 4.52 | 35.617 | 57.41 | | | 1.13 |
| | 3.9 | 1.6 | P. | | 7.99 | 7.99 | 35.449 | 58.31 | | | 0.23 |
| | 4.1 | 5.7 | P. | | 10.11 | 10.11 | 35.442 | 59 0.32 | | 0 | 58.22 |
| | 4.5 | 14.0 | P. | 179 56 | 10 11.46 | 179 56 11.46 | 35.278 | 179 58 59.15 | 179 59 58.54 | + 0 | 59.39 |
| | 4.7 | 20.8 | P. | | 10.82 | 10.82 | 35.293 | 58 58.82 | | | 59.72 |
| | 4.9 | 1.5 | E. | | 14.94 | 14.94 | 35.152 | 59 0.71 | | | 57.83 |
| | 5.1 | 5.6 | E. | | 13.45 | 13.45 | 35.168 | 58 59.47 | | | 59.07 |
| | 7.9 | 2.3 | P. | | 17.40 | 17.40 | 35.184 | 59 3.66 | | | 54.88 |
| | 8.1 | 6.6 | P. | 179 56 | 10 17.35 | 179 56 17.35 | 35.234 | 179 59 4.37 | 179 59 58.54 | + 0 | 54.17 |
| | 8.9 | 2.7 | E. | | 22.98 | 22.98 | 34.649 | 59 1.04 | | | 57.50 |
| | 9.1 | 6.1 | E. | | 17.96 | 17.96 | 35.054 | 59 2.22 | | | 56.32 |
| | 10.4 | 12.5 | D. | | 10.44 | 10.44 | 35.342 | 58 59.11 | | | 59.43 |
| | 11.9 | 3.0 | P. | | 11.12 | 11.12 | 35.384 | 59 0.44 | | | 58.10 |
| | 12.9 | 2.2 | E. | 179 56 | 10 14.22 | 179 56 14.22 | 35.165 | 179 59 0.19 | 179 59 58.54 | + 0 | 58.35 |
| | 13.1 | 6.3 | P. | | 14.91 | 14.91 | 35.108 | 59 0.00 | | | 58.54 |
| | 13.4 | 12.8 | E. | | 19.28 | 19.28 | 34.835 | 59 0.19 | | | 58.35 |
| | 13.5 | 14.9 | E. | | 18.66 | 18.66 | 34.862 | 58 59.98 | | | 58.56 |
| | 14.9 | 1.9 | P. | | 10.82 | 10.82 | 35.324 | 58 59.22 | | | 59.32 |
| | 15.0 | 4.5 | P. | 179 56 | 10 12.74 | 179 56 12.74 | 35.270 | 179 59 0.31 | 179 59 58.54 | + 0 | 58.23 |
| | 15.1 | 6.4 | P. | | 11.32 | 11.32 | 35.444 | 59 1.56 | | | 56.98 |
| | 16.9 | 2.3 | E. | | 14.29 | 14.29 | 35.062 | 58 58.67 | | | 59.87 |
| | 17.1 | 6.9 | E. | | 14.04 | 14.04 | 35.091 | 58 58.87 | | | 59.67 |
| | 17.9 | 1.2 | E. | | 13.64 | 13.64 | 35.098 | 58 58.88 | | | 59.96 |

TABLE E.—*Observations of the Nadir Point, etc.*—Continued.

| Mean Day and Sidereal Hour. | | Observer. | Reading of Circle A. | Mean of two Readings of the four Mi- croscope Mi- crometers. | Concluded Circle Reading | Telescope Microm. | Nadir Read- ing. | Nadir Con- stant. | Zenith-Point Correction. | |
|--------------------------------|------|-----------|-------------------------|--|-----------------------------|----------------------|---------------------|----------------------|-----------------------------|-----------|
| 1876. d. | h. | | ° ' " | r. " | ° ' " | r. | ° ' " | ° ' " | ' " | |
| May | 18.1 | 7.2 | E. | 179 56 | 10 12.15 | 179 56 12.15 | 35.229 | 179 58 59.09 | 179 59 58.54 | + 0 59.45 |
| | 18.9 | 3.0 | S. | | 13.89 | 13.89 | 35.198 | 59 0.36 | | 58.18 |
| | 19.1 | 6.0 | S. | | 13.90 | 13.90 | 35.269 | 1.45 | | 57.09 |
| | 19.9 | 1.0 | P. | | 15.10 | 15.10 | 35.206 | 1.70 | | 56.84 |
| | 19.9 | 2.2 | P. | | 21.54 | 21.54 | 34.797 | 1.88 | | 56.66 |
| | 20.1 | 7.7 | P. | 179 56 | 10 18.62 | 179 56 18.62 | 35.087 | 179 59 3.39 | 179 59 58.54 | + 0 55.15 |
| | 21.9 | 2.8 | P. | | 19.34 | 19.34 | 35.006 | 2.88 | | 55.66 |
| | 22.1 | 6.8 | P. | | 17.94 | 17.94 | 35.162 | 3.86 | | 54.68 |
| | 22.9 | 2.5 | S. | | 14.06 | 14.06 | 35.190 | 0.41 | | 58.13 |
| | 23.1 | 6.0 | S. | | 12.44 | 12.44 | 35.363 | 1.44 | | 57.10 |
| | 23.3 | 11.6 | S. | 179 56 | 10 9.08 | 179 56 9.08 | 35.523 | 179 59 0.52 | 179 59 58.54 | + 0 58.02 |
| | 23.5 | 16.3 | S. | | 10.36 | 10.36 | 35.487 | 1.25 | | 57.29 |
| | 24.9 | 3.5 | E. | | 8.25 | 8.25 | 35.562 | 0.30 | | 58.24 |
| | 25.1 | 7.2 | E. | | 4.38 | 4.38 | 35.919 | 1.89 | | 56.65 |
| | 27.3 | 12.6 | S. | | 2.95 | 2.95 | 35.927 | 0.58 | | 57.96 |
| | 27.5 | 16.5 | S. | 179 56 | 10 9.78 | 179 56 9.78 | 35.491 | 179 59 0.73 | 179 59 58.54 | + 0 57.81 |
| | 28.9 | 2.3 | E. | | 11.98 | 11.98 | 35.311 | 0.18 | | 58.36 |
| | 29.1 | 7.1 | E. | | 11.14 | 11.14 | 35.416 | 0.96 | | 57.58 |
| | 29.3 | 12.5 | E. | | 12.32 | 12.32 | 35.427 | 2.30 | | 56.24 |
| | 29.5 | 16.3 | E. | | 13.64 | 13.64 | 35.362 | 2.62 | | 55.92 |
| | 31.3 | 11.9 | S. | 179 56 | 10 5.89 | 179 56 5.89 | 35.736 | 179 59 0.59 | 179 59 58.54 | + 0 57.95 |
| | 31.5 | 16.4 | S. | | 4.21 | 4.21 | 35.837 | 0.45 | | 58.09 |
| | 31.9 | 2.4 | P. | | 6.42 | 6.42 | 35.583 | 58 58.79 | | 59.75 |
| June | 1.0 | 4.4 | P. | | 9.72 | 9.72 | 35.378 | 58.95 | | 59.59 |
| | 1.1 | 6.8 | P. | | 8.49 | 8.49 | 35.531 | 59 0.06 | | 58.48 |
| | 1.3 | 12.7 | P. | 179 56 | 10 8.35 | 179 56 8.35 | 35.539 | 179 59 0.04 | 179 59 58.54 | + 0 58.50 |
| | 1.5 | 17.9 | P. | | 11.02 | 11.02 | 35.355 | 58 59.90 | | 58.64 |
| | 1.7 | 20.7 | P. | | 10.52 | 10.52 | 35.326 | 58.95 | | 59.59 |
| | 1.9 | 2.4 | E. | | 16.70 | 16.70 | 35.031 | 59 0.61 | | 57.93 |
| | 2.1 | 8.0 | E. | | 12.65 | 12.65 | 35.446 | 2.93 | | 55.61 |
| | 2.3 | 12.6 | E. | 179 56 | 10 11.48 | 179 56 11.48 | 35.488 | 179 59 2.39 | 179 59 58.54 | + 0 56.15 |
| | 2.9 | 4.4 | F. | | 12.60 | 12.60 | 35.585 | 5.00 | | 53.54 |
| | 3.1 | 8.0 | F. | | 13.60 | 13.60 | 35.512 | 4.88 | | 53.66 |
| | 5.5 | 17.3 | P. | | 7.89 | 7.89 | 35.564 | 58 59.97 | | 58.57 |
| | 26.3 | 14.3 | E. | | 10.82 | 10.82 | 34.811 | 51.13 | | + 1 7.17 |
| | 26.5 | 18.3 | E. | 179 56 | 10 13.24 | 179 56 13.24 | 34.678 | 179 58 51.75 | 179 59 58.54 | + 1 6.79 |
| | 27.1 | 8.0 | F. | | 7.55 | 7.55 | 35.072 | 52.09 | | 6.45 |
| | 27.9 | 5.0 | S. | | 5.96 | 5.96 | 35.208 | 52.59 | | 5.95 |
| | 28.1 | 8.3 | S. | | 7.18 | 7.18 | 35.140 | 52.76 | | 5.78 |
| | 28.9 | 4.6 | P. | | 7.35 | 7.35 | 35.082 | 52.04 | | 6.50 |

TABLE E.—*Observations of the Nadir Point, etc.*—Continued.

| Mean Day and Sidereal Hour. | | Observer. | Reading of Circle A. | Mean of two Readings of the four Mi- croscope Mi- crometers. | Concluded Circle Reading. | Telescope Microm. | Nadir Read- ing. | Nadir Con- stant. | Zenith-Point Correction. |
|--------------------------------|------|-----------|-------------------------|--|------------------------------|----------------------|---------------------|----------------------|-----------------------------|
| 1876. d. | h. | | ° ' " | r. " | ° ' " | r. | ° ' " | ° ' " | ' " |
| June 29.1 | 8.9 | P. | 179 56 | 10 11.26 | 179 56 11.26 | 34.759 | 179 58 51.01 | 179 59 58.54 | + 1 7.53 |
| 29.3 | 14.7 | P. | | 10.60 | 10.60 | 34.855 | 51.81 | | 6.73 |
| 29.9 | 5.7 | E. | | 7.52 | 7.52 | 35.054 | 51.78 | | 6.76 |
| 30.1 | 9.5 | E. | | 5.74 | 5.74 | 35.153 | 51.53 | | 7.01 |
| 30.3 | 14.5 | E. | | 8.02 | 8.02 | 34.989 | 51.30 | | 7.24 |
| 30.4 | 16.5 | E. | 179 56 | 10 9.12 | 179 56 9.12 | 34.926 | 179 58 51.43 | 179 59 58.54 | + 1 7.11 |
| July 1.0 | 7.8 | F. | | 4.08 | 4.08 | 35.367 | 53.14 | | 5.40 |
| 2.4 | 16.2 | S. | | 8.04 | 8.04 | 35.056 | 52.33 | | 6.21 |
| 2.9 | 6.6 | P. | | 7.95 | 7.95 | 35.052 | 52.18 | | 6.36 |
| 3.1 | 9.8 | P. | | 8.95 | 8.95 | 35.017 | 52.64 | | 5.90 |
| 5.4 | 16.8 | P. | 179 56 | 10 9.91 | 179 56 9.91 | 34.912 | 179 58 52.00 | 179 59 58.54 | + 1 6.54 |
| 5.5 | 20.0 | P. | | 7.18 | 7.18 | 35.086 | 51.93 | | 6.61 |
| 5.9 | 5.5 | P. | | 10.14 | 10.14 | 34.880 | 51.74 | | 6.80 |
| 6.1 | 10.5 | P. | | 8.65 | 8.65 | 35.018 | 52.36 | | 6.18 |
| 7.7 | 22.5 | P. | | 7.40 | 7.40 | 35.041 | 51.46 | | 7.08 |
| 9.9 | 5.8 | S. | 179 56 | 10 7.61 | 179 56 7.61 | 35.208 | 179 58 54.24 | 179 59 58.54 | + 1 4.30 |
| 10.9 | 5.7 | P. | | 9.85 | 9.85 | 35.032 | 53.77 | | 4.77 |
| 11.1 | 9.8 | P. | | 8.86 | 8.86 | 35.142 | 54.47 | | 4.07 |
| 11.9 | 6.4 | F. | | 5.96 | 5.96 | 35.293 | 53.88 | | 4.66 |
| 12.1 | 8.6 | F. | | 4.82 | 4.82 | 35.380 | 54.08 | | 4.46 |
| 17.4 | 18.5 | F. | 179 56 | 10 5.92 | 179 56 5.92 | 35.270 | 179 58 53.49 | 179 59 58.54 | + 1 5.05 |
| 17.5 | 20.6 | F. | | 4.90 | 4.90 | 35.365 | 53.93 | | 4.61 |
| 17.9 | 5.7 | S. | | 6.61 | 6.61 | 35.270 | 54.18 | | 4.36 |
| 18.1 | 9.9 | S. | | 6.70 | 6.70 | 35.274 | 54.33 | | 4.21 |
| 18.3 | 15.4 | S. | | 7.79 | 7.79 | 35.183 | 54.03 | | 4.51 |
| 18.4 | 18.4 | S. | 179 56 | 10 8.04 | 179 56 8.04 | 35.181 | 179 58 54.25 | 179 59 58.54 | + 1 4.29 |
| 18.9 | 7.3 | P. | | 8.15 | 8.15 | 35.230 | 55.10 | | 3.44 |
| 19.1 | 10.5 | P. | | 8.80 | 8.80 | 35.172 | 54.88 | | 3.66 |
| 19.9 | 5.7 | E. | | 7.29 | 7.29 | 35.296 | 55.26 | | 3.28 |
| 20.1 | 10.6 | E. | | 10.14 | 10.14 | 35.145 | 55.80 | | 2.74 |
| 21.0 | 8.5 | F. | 179 56 | 10 5.18 | 179 56 5.18 | 35.519 | 179 58 56.56 | 179 59 58.54 | + 1 1.98 |
| 21.1 | 11.1 | F. | | 5.30 | 5.30 | 35.508 | 56.51 | | 2.03 |
| 21.5 | 19.5 | F. | | 5.85 | 5.85 | 35.389 | 54.79 | | 3.75 |
| 21.6 | 21.6 | F. | | 3.82 | 3.82 | 35.512 | 55.10 | | 3.44 |
| 21.9 | 4.0 | S. | | 4.54 | 4.54 | 35.413 | 54.31 | | 4.23 |
| 22.1 | 10.1 | S. | 179 56 | 10 4.81 | 179 56 4.81 | 35.443 | 179 58 55.04 | 179 59 58.54 | + 1 3.50 |
| 22.3 | 15.2 | S. | | 8.08 | 8.08 | 35.213 | 54.77 | | 3.77 |
| 22.5 | 20.1 | S. | | 6.95 | 6.95 | 35.284 | 54.74 | | 3.80 |
| 24.9 | 8.2 | F. | | 1.88 | 1.88 | 35.478 | 52.65 | | 5.89 |
| 25.1 | 10.8 | F. | | 9 56.65 | 55 56.65 | 35.892 | 53.74 | | 4.80 |

TABLE E.—*Observations of the Nadir Point, etc.*—Continued.

| Mean Day and Sidereal Hour. | | Observer. | Reading of Circle A. | Mean of two Readings of the four Mi- croscope Mi- crometers. | Concluded Circle Reading. | Telescope Microm. | Nadir Read- ing. | Nadir Con- stant. | Zenith-Point Correction. | |
|--------------------------------|------|-----------|-------------------------|--|------------------------------|----------------------|---------------------|----------------------|-----------------------------|----------|
| 1876. d. | h. | | ° ' " | r. " | ° ' " | r. | ° ' " | ° ' " | ' " | |
| July | 25.9 | 5 9 | S. | 179 56 | 10 0.05 | 179 56 0.05 | 35.618 | 179 58 42.96 | 179 59 58.54 | + 1 5.58 |
| | 26.1 | 9.7 | S. | | 4.62 | 4.62 | 35.400 | 54.19 | | 4.35 |
| | 26.3 | 15.0 | S. | | 7.91 | 7.91 | 35.264 | 55.38 | | 3.16 |
| | 26.5 | 20.0 | S. | | 2.10 | 2.10 | 35.514 | 53.41 | | 5.13 |
| | 26.9 | 7.0 | P. | | 5.42 | 5.42 | 35.355 | 54.30 | | 4.24 |
| | 27.0 | 8.3 | P. | 179 56 | 10 6.31 | 179 56 6.31 | 35.299 | 179 58 54.33 | 179 59 58.54 | + 1 4.21 |
| | 27.1 | 11 4 | P. | | 8.98 | 8.98 | 35.173 | 55.07 | | 3.47 |
| | 27.3 | 15.8 | P. | | 10.62 | 10.62 | 35.021 | 54.39 | | 4.15 |
| | 27.8 | 20.3 | P. | | 12 10 | 12.10 | 34.880 | 53 70 | | 4.84 |
| | 30.9 | 8.3 | P. | | 8.88 | 8.88 | 34.895 | 50.71 | | 7.83 |
| Aug. | 4.0 | 9.0 | P. | 179 56 | 10 3.32 | 179 56 3.32 | 35.321 | 179 58 51.67 | 179 59 58.54 | + 1 6.87 |
| | 4.4 | 19.1 | P. | | 8.35 | 8.35 | 35.009 | 51.93 | | 6.61 |
| | 4.9 | 8.1 | E. | | 12.06 | 12.06 | 34.823 | 52.79 | | 5.75 |
| | 5.1 | 11.5 | E. | | 9.28 | 9.28 | 35.058 | 53.60 | | 4.94 |
| | 6.5 | 21.8 | F. | | 7.28 | 7.28 | 35.130 | 52.71 | | 5.83 |
| | 6.7 | 1.1 | F. | 179 56 | 10 6.12 | 179 56 6.12 | 35.167 | 179 58 52.12 | 179 59 58.54 | + 1 6.42 |
| | 8.9 | 7.8 | E. | | 9.78 | 9.78 | 34.968 | 52.73 | | 5.81 |
| | 9.1 | 13.5 | E. | | 12.61 | 12.61 | 34.819 | 53.27 | | 5.27 |
| | 9.4 | 18.4 | E. | | 12.42 | 12.42 | 34.806 | 52.89 | | 5.65 |
| | 11.4 | 19.4 | F. | | 3.50 | 3.50 | 35.282 | 51.25 | | 7.29 |
| | 14.9 | 8.4 | F. | 179 56 | 10 3.55 | 179 56 3.55 | 35.288 | 179 58 51.40 | 179 59 58.54 | + 1 7.14 |
| | 15.4 | 20.1 | F. | | 6.01 | 6.01 | 35.153 | 51.80 | | 6.74 |
| | 15.5 | 22.4 | F. | | 8.08 | 8.08 | 35.026 | 51.91 | | 6.63 |
| | 16.3 | 17.2 | E. | | 11.08 | 11.08 | 34.849 | 52.20 | | 6.34 |
| | 16.5 | 20.9 | E. | | 10.72 | 10.72 | 34.881 | 52.34 | | 6.20 |
| | 20.9 | 8.0 | E. | 179 56 | 10 7.11 | 179 56 7.11 | 35.068 | 179 58 51.58 | 179 59 58.54 | + 1 6.96 |
| | 21.1 | 13.5 | E. | | 7.69 | 7.69 | 35.040 | 51.74 | | 6.80 |
| | 21.4 | 20.0 | E. | | 8.69 | 8.69 | 35.009 | 52.27 | | 6.27 |
| | 21.5 | 21.9 | E. | | 9.86 | 9.86 | 34.840 | 50.84 | | 7.70 |
| | 25.9 | 9.5 | F. | | 6.68 | 6.68 | 35.213 | 53.37 | | 5.17 |
| | 26.1 | 12.7 | F. | 179 56 | 10 7.72 | 179 56 7.72 | 35.218 | 179 58 54.49 | 179 59 58.54 | + 1 4.05 |
| | 26.4 | 19.7 | F. | | 9.12 | 9.12 | 35.050 | 53.32 | | 5.22 |
| | 26.6 | 23.6 | F. | | 4.78 | 4.78 | 35.250 | 52.04 | | 6.50 |
| | 27.9 | 8.2 | E. | | 9.52 | 9.52 | 34.967 | 52.45 | | 6.09 |
| | 28.1 | 14.0 | E. | | 9.16 | 9.16 | 35.079 | 53.80 | | 4.74 |
| | 28.3 | 18.8 | E. | 179 56 | 10 9.68 | 179 56 9.68 | 34.937 | 179 58 52.15 | 179 59 58.54 | + 1 6.39 |
| | 28.5 | 22.8 | E. | | 12.25 | 12.25 | 34.716 | 51.34 | | 7.20 |
| | 30.0 | 13.7 | F. | | 5.75 | 5.75 | 35.323 | 54.13 | | 4.41 |
| Sept. | 1.9 | 10.4 | F. | | 5.98 | 5.98 | 35.237 | 53.04 | | 5.50 |
| | 2.0 | 13.7 | F. | | 5.10 | 5.40 | 35.359 | 54.34 | | 4.20 |

TABLE E.—*Observations of the Nadir Point, etc.*—Continued.

| Mean Day and Sidereal Hour. | | | Observer. | Reading of Circle A. | Mean of two Readings of the four Mi- croscope Mi- crometers. | Concluded Circle Reading. | Telescope Microm. | Nadir Read- ing. | Nadir Con- stant. | Zenith-Point Correction. |
|--------------------------------|------|------|-----------|-------------------------|--|------------------------------|----------------------|---------------------|----------------------|-----------------------------|
| 1876. | d. | h. | | ° " | r. " | ° ' " | r. | ° ' " | ° ' " | ' " |
| Sept. | 25 | 22.7 | F. | 179 56 | 10 5.65 | 179 56 5.65 | 35.329 | 179 58 54.12 | 179 59 58.54 | + 1 4.42 |
| | 2.6 | 1.1 | F. | | 3.00 | 3.00 | 35.381 | 52.28 | | 6.26 |
| | 3.9 | 9.1 | S. | | 9 59.05 | 55 59.05 | 35.677 | 52.86 | | 5.68 |
| | 4.4 | 19.2 | S. | | 10 9.29 | 56 9.29 | 35.033 | 53.23 | | 5.31 |
| | 4.5 | 23.1 | S. | | 11.12 | 11.12 | 34.947 | 53.75 | | 4.79 |
| | 12.9 | 9.9 | P. | 179 56 | 10 2.86 | 179 56 2.86 | 35.337 | 179 58 51.46 | 179 59 58.54 | + 1 7.08 |
| | 13.4 | 21.0 | P. | | 3.59 | 3.59 | 35.309 | 51.76 | | 6.78 |
| | 13.5 | 22.7 | P. | | 7.29 | 7.29 | 35.058 | 51.61 | | 6.93 |
| | 14.9 | 10.4 | F. | | 3.00 | 3.00 | 35.399 | 52.55 | | 5.99 |
| | 15.1 | 15.0 | F. | | 1.70 | 1.70 | 35.495 | 52.72 | | 5.82 |
| | 15.3 | 10.4 | F. | 179 56 | 10 2.38 | 179 56 2.38 | 35.466 | 179 58 52.96 | 179 59 58.54 | + 1 5.58 |
| | 18.9 | 11.0 | F. | | 6.52 | 6.52 | 35.241 | 53.64 | | 4.90 |
| | 19.9 | 8.7 | S. | | 4.94 | 4.94 | 35.157 | 50.79 | | 7.75 |
| | 20.1 | 14.9 | S. | | 5.84 | 5.84 | 35.250 | 53.10 | | 5.44 |
| | 20.3 | 19.2 | S. | | 6.72 | 6.72 | 35.170 | 52.77 | | 5.77 |
| | 20.5 | 23.2 | S. | 179 56 | 10 8.28 | 179 56 6.28 | 35.093 | 179 58 53.14 | 179 59 58.54 | + 1 5.40 |
| | 25.3 | 20.9 | P. | | 6.98 | 6 98 | 35.025 | 50.80 | | 7.74 |
| | 26.9 | 11.2 | F. | | 6.35 | 6 35 | 35.018 | 50.06 | | 8.48 |
| | 27.1 | 15.4 | F. | | 9.65 | 9.65 | 34.791 | 49.89 | | 8.65 |
| | 27.4 | 21.8 | F. | | 7.12 | 7.12 | 34.917 | 49.29 | | 9.25 |
| | 27.5 | 0.9 | F. | 179 56 | 10 6.85 | 179 56 6.85 | 34.847 | 179 58 47.94 | 179 59 58.54 | + 1 10.60 |
| | 27.9 | 9.9 | S. | | 8.26 | 8.26 | 34.888 | 49.98 | | 8.56 |
| | 28.1 | 15.0 | S. | | 10.82 | 10.82 | 34.771 | 50.71 | | 7.75 |
| | 28.3 | 19.2 | S. | | 9.98 | 9.98 | 34.761 | 49.77 | | 8.77 |
| | 28.5 | 1.6 | S. | | 9.39 | 9.39 | 34.740 | 48.85 | | 9.69 |
| | 28.9 | 10.5 | P. | 179 56 | 10 7.94 | 179 56 7.94 | 34.939 | 179 58 50.45 | 179 59 58.54 | + 1 8.09 |
| | 29.0 | 12.2 | P. | | 8.31 | 8.31 | 34.879 | 49.90 | | 8.64 |
| | 29.1 | 15.1 | P. | | 9 71 | 9.71 | 34.864 | 51.06 | | 7.48 |
| | 29.3 | 19.5 | P. | | 10.94 | 10.94 | 34.701 | 49.80 | | 8.74 |
| | 29.6 | 2.7 | P. | | 11.18 | 11.18 | 34.688 | 49.84 | | 8.70 |
| Oct. | 1.9 | 10.4 | S. | 179 56 | 10 7.54 | 179 56 7.54 | 34.928 | 179 58 49.88 | 179 59 58.54 | + 1 8.66 |
| | 2.1 | 15.3 | S. | | 10.72 | 10.72 | 34.803 | 51.15 | | 7.39 |
| | 2.3 | 18.9 | S. | | 13.45 | 13.45 | 34.566 | 50.24 | | 8.30 |
| | 2.5 | 1.5 | S. | | 9.42 | 9.42 | 34.800 | 49.80 | | 8.74 |
| | 2.9 | 10.6 | P. | | 8.09 | 8.09 | 34.872 | 49.56 | | 8.98 |
| | 3.0 | 12.4 | P. | 179 56 | 10 9.32 | 179 56 9.32 | 34.797 | 179 58 49.66 | 179 59 58.54 | + 1 8.88 |
| | 3.4 | 22.0 | P. | | 10.98 | 10.98 | 34.665 | 49.29 | | 9.25 |
| | 3.6 | 2.7 | P. | | 8.36 | 8.36 | 34.791 | 48.60 | | 9.94 |
| | 5.9 | 10.5 | S. | | 9.72 | 9.72 | 34.727 | 48.98 | | 9.56 |
| | 6.1 | 14.4 | S. | | 12.24 | 12.24 | 34 658 | 50.44 | | 8.10 |

TABLE E.—*Observations of the Nadir Point, etc.*—Continued.

| Mean Day and Sidereal Hour. | | | Observer. | Reading of Circle A. | Mean of two Readings of the four Mi- croscope Mi- crometers. | Concluded Circle Reading. | Telescope Microm. | Nadir Read- ing. | Nadir Con- stant. | Zenith-Point Correction. |
|--------------------------------|------|----|-----------|-------------------------|--|------------------------------|----------------------|---------------------|----------------------|-----------------------------|
| 1876. d. h. | | | | ° ' " | r. " | ° ' " | r. | ° ' " | ° ' " | ' " |
| Oct. 6.9 | 11.9 | P. | 179 56 | 179 56 | 10 10.48 | 179 56 10.48 | 34.780 | 179 58 50.56 | 179 59 58.54 | + 1 7.98 |
| 7.0 | 12.8 | P. | | | 7.95 | 7.95 | 34.952 | 50.65 | | 7.89 |
| 7.1 | 14.9 | P. | | | 8.80 | 8.80 | 34.916 | 50.95 | | 7.59 |
| 8.9 | 10.8 | P. | | | 8.08 | 8.08 | 34.818 | 48.74 | | 9.80 |
| 9.0 | 12.9 | P. | | | 7.35 | 7.35 | 34.912 | 49.44 | | 9.10 |
| 9.1 | 15.9 | P. | 179 56 | 179 56 | 10 5.48 | 179 56 5.48 | 35.064 | 179 58 49.89 | 179 59 58.44 | + 1 8.65 |
| 9.7 | 6.9 | P. | | | 9.16 | 9.16 | 34.709 | 48.14 | | 10.40 |
| 9.8 | 8.2 | P. | | | 7.66 | 7.66 | 34.802 | 48.07 | | 10.47 |
| 10.7 | 7.5 | S. | | | 10 9.91 | 56 9.91 | 34.667 | 48.25 | | 10.29 |
| 11.1 | 14.4 | F. | | | 9 53.52 | 55 53.52 | 35.833 | 49.70 | | 8.84 |
| 11.3 | 22.4 | F. | 179 56 | 179 56 | 10 4.45 | 179 56 4.45 | 35.006 | 179 58 47.99 | 179 59 58.54 | + 1 10.55 |
| 11.5 | 1.9 | F. | | | 9.45 | 9.45 | 34.711 | 48.47 | | 10.07 |
| 11.8 | 10.0 | F. | | | 2.95 | 2.95 | 35.218 | 49.92 | | 8.82 |
| 11.9 | 10.8 | P. | | | 2.84 | 2.84 | 35.204 | 49.41 | | 9.13 |
| 12.0 | 13.0 | P. | | | 6.99 | 6.99 | 34.897 | 48.85 | | 9.69 |
| 12.1 | 15.7 | P. | 179 56 | 179 56 | 10 8.69 | 179 56 8.69 | 34.855 | 179 58 49.90 | 179 59 58.54 | + 1 8.64 |
| 12.3 | 20.8 | P. | | | 8.49 | 8.49 | 34.785 | 48.64 | | 9.90 |
| 12.4 | 23.1 | P. | | | 9.50 | 9.50 | 34.753 | 49.16 | | 9.38 |
| 12.6 | 4.1 | P. | | | 9.11 | 9.11 | 34.786 | 49.28 | | 9.26 |
| 12.9 | 13.4 | F. | | | 8.61 | 8.61 | 34.967 | 51.55 | | 6.99 |
| 13.1 | 16.3 | F. | 179 56 | 179 56 | 10 4.18 | 179 56 4.18 | 35.264 | 179 58 51.65 | 179 59 58.54 | + 1 6.89 |
| 13.3 | 22.0 | F. | | | 7.60 | 7.60 | 34.947 | 50.23 | | 8.31 |
| 13.5 | 1.7 | F. | | | 3.72 | 3.72 | 35.116 | 48.93 | | 9.61 |
| 14.0 | 13.9 | S. | | | 4.79 | 4.79 | 35.094 | 49.67 | | 8.87 |
| 16.9 | 13.4 | F. | | | 3.32 | 3.32 | 35.113 | 48.49 | | 10.05 |
| 17.1 | 16.8 | F. | 179 56 | 179 56 | 10 6.88 | 179 56 6.88 | 34.998 | 179 58 50.29 | 179 59 58.54 | + 1 8.25 |
| 17.4 | 23.4 | F. | | | 6.85 | 6.85 | 34.953 | 49.57 | | 8.97 |
| 17.5 | 1.0 | F. | | | 6.70 | 6.70 | 34.962 | 49.56 | | 8.98 |
| 18.3 | 20.0 | S. | | | 7.18 | 7.18 | 34.931 | 59.56 | | 8.98 |
| 18.9 | 12.0 | P. | | | 7.68 | 7.68 | 34.888 | 49.40 | | 9.14 |
| 19.0 | 13.6 | P. | 179 56 | 179 56 | 10 8.48 | 179 56 8.48 | 34.809 | 179 58 49.00 | 179 59 58.54 | + 1 9.54 |
| 19.1 | 16.1 | P. | | | 3.25 | 3.25 | 35.341 | 51.91 | | 6.63 |
| 21.3 | 23.2 | F. | | | 5.46 | 5.46 | 35.150 | 51.19 | | 7.35 |
| 23.9 | 12.0 | E. | | | 13.01 | 13.01 | 34.661 | 51.25 | | 7.29 |
| 24.1 | 17.3 | E. | | | 7.32 | 7.32 | 35.078 | 51.95 | | 6.59 |
| 24.3 | 21.5 | P. | 179 56 | 179 56 | 10 8.71 | 179 56 8.71 | 34.783 | 179 58 48.83 | 179 59 58.54 | + 1 9.71 |
| 27.0 | 13.9 | P. | | | 9.89 | 9.89 | 34.726 | 49.13 | | 9.41 |
| 27.1 | 16.9 | P. | | | 11.89 | 11.89 | 34.629 | 49.64 | | 8.90 |
| 27.4 | 23.8 | P. | | | 10.95 | 10.95 | 34.659 | 49.16 | | 9.38 |
| 27.6 | 4.9 | P. | | | 8.20 | 8.20 | 34.757 | 47.92 | | 10.62 |

TABLE E.—*Observations of the Nadir Point, etc.*—Continued.

| Mean Day and Sidereal Hour. | | Observer. | Reading of Circle A. | | Mean of two Readings of the four Mi- croscope Mi- crometers. | | Concluded Circle Reading. | | Telescope Microm. | | Nadir Read- ing. | | Nadir Con- stant. | | Zenith-Point Correction. | | | | |
|--------------------------------|------|-----------|-------------------------|-----|--|----|------------------------------|-----|----------------------|-------|---------------------|-----|----------------------|-------|-----------------------------|----|-------|-----|-------|
| 1876. d. | h. | | ° | ' | r. | " | ° | ' | " | r. | ° | ' | " | ° | ' | " | ' | " | |
| Oct. | 31.3 | 22.0 | S. | 179 | 56 | 10 | 9.55 | 179 | 56 | 9.55 | 34.702 | 179 | 58 | 48.44 | 179 | 59 | 58.54 | + 1 | 10.10 |
| | 31.5 | 3.2 | S. | | | | 9.02 | | | 9.02 | 34.732 | | | 48.36 | | | | | 10.18 |
| | 31.9 | 12.0 | E. | | | | 7.01 | | | 7.01 | 34.938 | | | 49.50 | | | | | 9.04 |
| Nov. | 1.1 | 17.8 | E. | | | | 8.21 | | | 8.21 | 34.978 | | | 51.32 | | | | | 7.22 |
| | 1.3 | 23.0 | E. | | | | 14.89 | | | 14.89 | 34.645 | | | 52.89 | | | | | 5.65 |
| | 1.5 | 2.3 | E. | 179 | 56 | 10 | 12.29 | 179 | 56 | 12.29 | 34.838 | 179 | 58 | 53.24 | 179 | 59 | 58.54 | + 1 | 5.30 |
| | 1.9 | 14.4 | F. | | | | 13.92 | | | 13.92 | 34.738 | | | 53.35 | | | | | 5.19 |
| | 2.1 | 17.4 | F. | | | | 10.15 | | | 10.15 | 35.022 | | | 53.92 | | | | | 4.62 |
| | 3.9 | 12.8 | P. | | | | 9.71 | | | 9.71 | 34.859 | | | 50.99 | | | | | 7.55 |
| | 4.0 | 14.6 | P. | | | | 7.76 | | | 7.76 | 34.971 | | | 50.76 | | | | | 7.78 |
| | 4.1 | 18.1 | P. | 179 | 56 | 10 | 10.25 | 179 | 56 | 10.25 | 34.905 | 179 | 58 | 52.23 | 179 | 59 | 58.54 | + 1 | 6.31 |
| | 5.5 | 2.2 | E. | | | | 7.01 | | | 7.01 | 34.961 | | | 49.86 | | | | | 8.68 |
| | 7.3 | 22.0 | S. | | | | 8.71 | | | 8.71 | 34.873 | | | 50.20 | | | | | 8.34 |
| | 7.5 | 3.2 | S. | | | | 8.90 | | | 8.90 | 34.834 | | | 49.79 | | | | | 8.75 |
| | 7.9 | 12.7 | P. | | | | 4.30 | | | 4.30 | 35.058 | | | 48.62 | | | | | 9.92 |
| | 8.0 | 14.9 | P. | 179 | 56 | 10 | 5.70 | 179 | 56 | 5.70 | 35.041 | 179 | 58 | 49.76 | 179 | 59 | 58.54 | + 1 | 8.78 |
| | 8.1 | 18.2 | P. | | | | 6.10 | | | 6.10 | 35.094 | | | 50.98 | | | | | 7.56 |
| | 8.7 | 7.4 | P. | | | | 6.86 | | | 6.86 | 34.911 | | | 48.94 | | | | | 9.60 |
| | 8.8 | 9.5 | P. | | | | 8.51 | | | 8.51 | 34.825 | | | 49.27 | | | | | 9.27 |
| | 8.9 | 12.6 | E. | | | | 11.01 | | | 11.01 | 34.684 | | | 49.61 | | | | | 8.93 |
| | 9.1 | 18.4 | E. | 179 | 56 | 10 | 11.10 | 179 | 56 | 11.10 | 34.724 | 179 | 58 | 50.31 | 179 | 59 | 58.54 | + 1 | 8.23 |
| | 9.8 | 11.8 | E. | | | | 11.59 | | | 11.59 | 34.588 | | | 48.71 | | | | | 9.83 |
| | 9.9 | 14.3 | S. | | | | 8.29 | | | 8.29 | 34.918 | | | 50.47 | | | | | 8.07 |
| | 10.5 | 2.3 | S. | | | | 5.94 | | | 5.94 | 35.000 | | | 49.38 | | | | | 9.16 |
| | 12.9 | 13.9 | E. | | | | 10.20 | | | 10.20 | 34.789 | | | 50.41 | | | | | 8.13 |
| | 22.0 | 17.0 | F. | 179 | 56 | 10 | 5.36 | 179 | 56 | 5.36 | 35.066 | 179 | 58 | 49.80 | 179 | 59 | 58.54 | + 1 | 8.74 |
| | 22.3 | 23.8 | F. | | | | 8.72 | | | 8.72 | 34.778 | | | 48.77 | | | | | 9.77 |
| | 22.5 | 4.7 | F. | | | | 7.79 | | | 7.79 | 34.846 | | | 48.87 | | | | | 9.67 |
| | 23.9 | 14.0 | S. | | | | 4.84 | | | 4.84 | 35.054 | | | 49.10 | | | | | 9.44 |
| | 24.1 | 17.6 | S. | | | | 5.49 | | | 5.49 | 34.977 | | | 48.58 | | | | | 9.96 |
| | 24.3 | 22.2 | S. | 179 | 56 | 10 | 5.84 | 179 | 56 | 5.84 | 34.948 | 179 | 58 | 48.48 | 179 | 59 | 58.54 | + 1 | 10.06 |
| | 24.9 | 14.4 | E. | | | | 6.32 | | | 6.32 | 34.951 | | | 49.01 | | | | | 9.53 |
| | 26.5 | 3.5 | F. | | | | 5.21 | | | 5.21 | 34.935 | | | 47.65 | | | | | 10.89 |
| | 27.3 | 23.4 | S. | | | | 7.05 | | | 7.05 | 34.755 | | | 46.74 | | | | | 11.80 |
| | 27.5 | 5.5 | S. | | | | 4.71 | | | 4.71 | 34.902 | | | 46.64 | | | | | 11.90 |
| | 28.4 | 2.8 | P. | 179 | 56 | 10 | 5.48 | 179 | 56 | 5.48 | 34.868 | 179 | 58 | 46.89 | 179 | 59 | 58.54 | + 1 | 11.65 |
| | 28.7 | 10.4 | P. | | | | 4.49 | | | 4.49 | 34.959 | | | 47.30 | | | | | 11.24 |
| | 29.3 | 1.1 | E. | | | | 5.55 | | | 5.55 | 34.964 | | | 48.44 | | | | | 10.10 |
| Dec. | 1.3 | 1.0 | S. | | | | 2.34 | | | 2.34 | 35.072 | | | 46.88 | | | | | 11.66 |
| | 2.5 | 5.9 | P. | | | | 4.15 | | | 4.15 | 34.959 | | | 46.97 | | | | | 11.57 |

TABLE E.—*Observations of the Nadir Point, etc.*—Continued.

| Mean Day and Sidereal Hour. | | Observer. | Reading of Circle A. | Mean of two Readings of the four Mi- croscope Mi- crometers. | Concluded Circle Reading. | Telescope Microm. | Nadir Read- ing. | Nadir Con- stant. | Zenith-Point Correction. |
|--------------------------------|------|-----------|-------------------------|--|------------------------------|----------------------|---------------------|----------------------|-----------------------------|
| 1876. d. | h. | | ° ' " | r. " " | ° ' " | r. | ° ' " | ° ' " | ' " |
| Dec. 3.5 | 5.8 | E. | 179 56 | 10 8.72 | 179 56 8.72 | 34.589 | 179 58 45.86 | 179 59 58.54 | + 1 12.68 |
| 5.5 | 5.8 | S. | | 9.59 | 9.59 | 34.483 | 45.12 | | 13.42 |
| 5.9 | 15.3 | P. | | 2.19 | 2.19 | 35.058 | 46.51 | | 12.63 |
| 6.1 | 19.5 | P. | | 10.15 | 10.15 | 34.564 | 46.92 | | 11.62 |
| 6.3 | 1.9 | P. | | 8.84 | 8.84 | 34.656 | 47.01 | | 11.53 |
| 6.6 | 7.1 | P. | 179 56 | 10 10.66 | 179 56 10.66 | 34.509 | 179 58 46.58 | 179 59 58.54 | + 1 11.06 |
| 6.9 | 16.5 | E. | | 3.81 | 3.81 | 35.027 | 47.66 | | 10.88 |
| 7.3 | 1.7 | E. | | 11.15 | 11.15 | 34.426 | 45.79 | | 12.75 |
| 7.5 | 4.9 | E. | | 7.19 | 7 19 | 34.764 | 47.02 | | 11.52 |
| 8.5 | 5.1 | F. | | 5.65 | 5.65 | 34.807 | 46.14 | | 12.40 |
| 12.4 | 4.2 | F. | 179 56 | 10 3.16 | 179 56 3.16 | 35.050 | 179 58 47.36 | 179 59 58.54 | + 1 11.18 |
| 12.7 | 10.0 | F. | | 1.66 | 1.66 | 35.094 | 46.54 | | 12.00 |
| 12.9 | 15.9 | S. | | 9.85 | 9.85 | 34.613 | 47.36 | | 11.18 |
| 13.1 | 19.9 | S. | | 10.41 | 10.41 | 34.668 | 48.76 | | 9.75 |
| 13.5 | 4.9 | S. | | 13.34 | 13.34 | 34.452 | 48.39 | | 10.15 |
| 13.6 | 7.5 | S. | 179 56 | 10 10.75 | 179 56 10.75 | 34.658 | 179 58 48.95 | 179 59 58.54 | + 1 19.59 |
| 13.9 | 16.2 | P. | | 6.56 | 6.56 | 34.919 | 48.76 | | 9.78 |
| 15.1 | 20.2 | E. | | 8.95 | 8.95 | 34.731 | 48.27 | | 10.27 |
| 15.5 | 5.4 | E. | | 8.31 | 8.31 | 34.693 | 47.04 | | 11.50 |
| 17.4 | 4.4 | S. | | 5.29 | 5.29 | 34.747 | 44.86 | | 13.68 |
| 19.1 | 19.8 | E. | 179 56 | 10 8.88 | 179 56 8.88 | 34.500 | 179 58 44.66 | 179 59 58.54 | + 1 13.88 |
| 19.45 | 4.8 | E. | | 10 8.41 | 56 8.41 | 34.507 | 44.30 | | 14.24 |
| 19.9 | 17.4 | F. | | 9 54.78 | 55 54.78 | 34.446 | 45.06 | | 13.48 |
| 20.1 | 21.8 | F. | | 10 2.18 | 56 2.18 | 34.952 | 44.88 | | 13.66 |
| 20.6 | 9.2 | F. | | 9 59.89 | 55 59.89 | 34.971 | 42.89 | | 15.65 |
| 21.2 | . . | S. | 179 56 | 10 6.76 | 179 56 6.76 | 34.656 | 179 58 44.93 | 179 59 58.54 | + 1 13.61 |
| 23.4 | 4.0 | P. | | 8.81 | 8.81 | 34.532 | 45.09 | | 13.45 |
| 26.9 | 16.5 | E. | | 6.41 | 6.41 | 34.736 | 45.81 | | 12.73 |
| 27.1 | 21.5 | E. | | 8.71 | 8.71 | 34.683 | 47.29 | | 11.25 |
| 27.4 | 3.5 | E. | | 10.22 | 10.22 | 34.372 | 44.05 | | 14.49 |
| 31.5 | 6.5 | E. | 179 56 | 10 5.05 | 179 56 5.05 | 34.627 | 179 58 42.77 | 179 59 58.54 | + 1 15.77 |

TABLE F.—*Adopted Zenith-Point Correction in 1876.*

COMBINATION OF RESULTS FROM NADIR AND REFLECTION OBSERVATIONS.

| Mean Day. | Sidereal Hour. | Observer. | Object. | Observed Zenith-Point Correction. | Adopted Zenith-Point Correction. | Mean Day. | Sidereal Hour. | Observer. | Object. | Observed Zenith-Point Correction. | Adopted Zenith-Point Correction. |
|--------------------|----------------|-----------|------------------------|-----------------------------------|----------------------------------|--------------------|----------------|-----------|----------------------|-----------------------------------|----------------------------------|
| 1876. Jan. 12.5 | h. 7.6 | S. | Nadir . . | +1 8.11 | +1 8.11 | 1876. Jan. 27.9 | h. 19.5 | S. | Nadir . . | +1 8.86 | +1 8.86 |
| 12.9 | 18.1 | P. | Nadir . . | +1 8.94 | | 30.2 | 23.8 | E. | Nadir . . | +1 5.68 | +1 5.58 |
| 13.1 | 21.7 | P. | Nadir . . | +1 9.60 | +1 9.27 | 30.2 | 1.6 | E. | Nadir . . | +1 5.47 | |
| 13.9 | 18.6 | E. | Nadir . . | +1 10.44 | +1 10.44 | 31.2 | 0.3 | F. | Nadir . . | +1 6.58 | +1 6.58 |
| 14.5 | 6.5 | E. | Nadir . . | +1 11.46 | | 31.4 | 7.0 | F. | Nadir . . | +1 8.14 | |
| 14.5 | 8.7 | E. | ϵ Hydræ . . | +1 12.24 | | 31.6 | 11.0 | F. | Nadir . . | +1 8.36 | +1 8.25 |
| 14.6 | 9.0 | E. | σ^2 Ursæ Maj. . | +1 11.04 | +1 11.64 | Feb. 2.3 | 4.1 | P. | Nadir . . | +1 8.38 | +1 8.38 |
| 14.6 | 10.0 | E. | Nadir . . | +1 11.76 | | | | | | | |
| 14.6 | 10.4 | E. | γ Draconis . . | +1 11.16 | | 2.6 | 10.9 | P. | Nadir . . | +1 10.49 | +1 10.49 |
| 14.7 | 10.9 | E. | α Ursæ Maj. . | +1 10.92 | | | | | | | |
| 19.9 | 18.5 | S. | Nadir . . | +1 5.44 | +1 4.54 | 4.3 | 5.8 | F. | α Orionis . . | +1 10.42 | |
| 20.1 | 22.3 | S. | Nadir . . | +1 3.63 | | 4.5 | 8.2 | F. | Nadir . . | +1 10.08 | +1 9.91 |
| 20.3 | 4.0 | S. | Nadir . . | +1 6.81 | | 5.1 | 23.6 | S. | Nadir . . | +1 11.59 | +1 11.59 |
| 20.5 | 7.2 | S. | δ Geminorum . | +1 7.72 | +1 7.12 | 5.3 | 4.3 | S. | Nadir . . | +1 11.60 | |
| 20.5 | 8.7 | S. | ϵ Hydræ . . | +1 8.45 | | 5.5 | 8.7 | S. | Nadir . . | +1 13.74 | +1 12.67 |
| 20.6 | 9.8 | S. | Nadir . . | +1 6.88 | | | | | | | |
| 20.8 | 16.4 | S. | Nadir . . | +1 6.04 | +1 6.04 | 6.9 | 19.3 | E. | Nadir . . | +1 8.27 | +1 9.10 |
| 20.9 | 18.7 | P. | Nadir . . | +1 6.15 | | 7.1 | 23.6 | E. | Nadir . . | +1 9.94 | |
| 21.1 | 21.8 | P. | Nadir . . | +1 4.81 | +1 5.48 | 7.9 | 20.3 | F. | Nadir . . | +1 9.99 | +1 9.99 |
| 21.4 | 5.7 | P. | Nadir . . | +1 5.39 | +1 5.98 | 10.3 | 5.1 | P. | β Orionis . . | +1 7.44 | |
| 21.6 | 10.7 | P. | Nadir . . | +1 6.58 | | 10.3 | 5.4 | P. | Nadir . . | +1 6.20 | |
| 23.9 | 17.9 | S. | Nadir . . | +1 7.59 | +1 6.64 | 10.3 | 5.8 | P. | α Orionis . . | +1 7.32 | +1 6.62 |
| 24.1 | 22.2 | S. | Nadir . . | +1 5.69 | | 10.6 | 11.5 | P. | Nadir . . | +1 6.86 | |
| 24.3 | 4.1 | S. | Nadir . . | +1 6.77 | | | | | | | |
| 24.4 | 5.4 | S. | δ Orionis . . | +1 8.08 | +1 7.23 | 11.9 | 20.4 | F. | Nadir . . | +1 7.08 | +1 6.36 |
| 24.5 | 7.9 | S. | Nadir . . | +1 7.52 | | 12.1 | 0.0 | F. | Nadir . . | +1 5.64 | |
| 25.3 | 4.6 | P. | Nadir . . | +1 8.60 | | 12.4 | 7.5 | F. | Nadir . . | +1 7.70 | +1 7.32 |
| 25.3 | 5.0 | P. | Π Orionis . . | +1 8.99 | | 12.5 | 9.8 | F. | Nadir . . | +1 6.95 | |
| 25.4 | 6.1 | P. | 22 Camelop. . | +1 7.62 | +1 8.12 | 16.1 | 0.0 | F. | Nadir . . | +1 5.79 | +1 5.79 |
| 25.4 | 10.7 | P. | ι Leonis . . | +1 8.59 | | 16.5 | 11.0 | F. | Nadir . . | +1 8.02 | +1 8.80 |
| 25.6 | 10.9 | P. | α Ursæ Maj. . | +1 7.20 | | 16.8 | 16.2 | F. | Nadir . . | +1 9.58 | |
| 25.7 | 11.8 | P. | Nadir . . | +1 7.71 | | 16.9 | 20.0 | S. | Nadir . . | +1 8.14 | +1 7.90 |
| 25.9 | 18.4 | E. | Nadir . . | +1 7.02 | +1 6.66 | 17.1 | 0.7 | S. | Nadir . . | +1 7.65 | |
| 26.1 | 23.0 | E. | Nadir . . | +1 6.31 | | 17.3 | 5.3 | S. | Nadir . . | +1 9.06 | |
| 26.4 | 5.8 | E. | α Orionis . . | +1 8.70 | | 17.3 | 5.8 | S. | α Orionis . . | +1 10.06 | +4 8.73 |
| 26.4 | 6.1 | E. | 22 Camelop. . | +1 7.08 | | 17.3 | 6.1 | S. | 22 Camelop. . | +1 7.83 | |
| 26.4 | 6.3 | E. | Nadir . . | +1 8.48 | +1 8.30 | 17.5 | 11.1 | S. | Nadir . . | +1 7.98 | |
| 26.4 | 6.7 | E. | γ Cephei . . | +1 8.62 | | 17.9 | 20.1 | P. | Nadir . . | +1 8.06 | |
| 26.6 | 9.9 | E. | Nadir . . | +1 8.00 | | 18.1 | 23.9 | P. | Nadir . . | +1 8.70 | +1 8.38 |

TABLE F.—*Adopted Zenith-Point Correction, etc.*—Continued.

COMBINATION OF RESULTS FROM NADIR AND REFLECTION OBSERVATIONS.

| Mean Day. | Sidereal Hour. | Observer. | Object. | Observed Zenith-Point Correction. | Adopted Zenith-Point Correction. | Mean Day. | Sidereal Hour. | Observer. | Object. | Observed Zenith-Point Correction. | Adopted Zenith-Point Correction. |
|--------------------|----------------|-----------|----------------------|-----------------------------------|----------------------------------|-------------------|----------------|-----------|----------------------|-----------------------------------|----------------------------------|
| 1876. Feb. 18.3 | h. 6.1 | P. | 22 Camelop. . | +1 8.04 | " " | 1876. Mar. 5.9 | h. 20.8 | E. | Nadir . . | +1 2.59 | " " |
| 18.4 | 7.5 | P. | α Canis Min.. | +1 8.21 | +1 8.14 | 6.1 | 2.2 | E. | Nadir . . | +1 4.12 | +1 3.36 |
| 18.4 | 8.1 | P. | Nadir . . | +1 8.18 | | 6.3 | 6.5 | E. | γ Geminorum | +1 1.14 | |
| 18.8 | 17.3 | P. | Nadir . . | +1 9.08 | +1 9.08 | 6.3 | 6.7 | E. | 51 Cephei . . | +1 0.17 | |
| 18.9 | 19.6 | E. | Nadir . . | +1 7.35 | | 6.3 | 7.7 | E. | Nadir . . | +1 0.18 | |
| 19.1 | 0.9 | E. | Nadir . . | +1 7.31 | +1 7.33 | 6.5 | 10.7 | E. | ι Leonis . . | +1 0.22 | +1 0.02 |
| 19.5 | 9.9 | E. | Nadir . . | +1 8.02 | | 6.5 | 10.9 | E. | α Ursæ Maj.. | +0 58.99 | |
| 19.5 | 10.4 | E. | ρ Leonis . . | +1 8.66 | | 6.5 | 11.6 | E. | Nadir . . | +0 59.40 | |
| 19.5 | 10.9 | E. | α Ursæ Maj.. | +1 6.97 | +1 8.12 | 8.9 | 22.8 | P. | Nadir . . | +1 1.98 | |
| 19.5 | 11.1 | E. | δ Leonis . . | +1 9.52 | | 9.1 | 1.6 | P. | Nadir . . | +1 1.78 | +1 1.88 |
| 19.8 | 18.9 | E. | Nadir . . | +1 7.88 | +1 7.88 | 9.3 | 7.6 | P. | Nadir . . | +1 1.91 | |
| 22.9 | 22.3 | E. | Nadir . . | +1 9.63 | +1 9.63 | 9.3 | 8.0 | P. | 3 Ursæ Maj.. | +1 0.94 | +1 1.74 |
| 24.1 | 0.2 | F. | Nadir . . | +1 9.65 | +1 9.65 | 9.6 | 14.0 | P. | α Draconis . | +1 0.54 | |
| 24.9 | 21.4 | S. | Nadir . . | +1 10.82 | | 9.6 | 14.2 | P. | α Bootis . . | +1 2.46 | +1 1.75 |
| 25.1 | 0.2 | S. | Nadir . . | +1 8.59 | +1 9.70 | 9.7 | 14.6 | P. | Nadir . . | +1 2.24 | |
| 26.1 | 0.8 | P. | Nadir . . | +1 9.39 | +1 9.39 | 13.3 | 8.3 | P. | Nadir . . | +1 2.46 | +1 2.46 |
| Mar. 2.3 | 5.1 | E. | Nadir . . | +1 4.73 | | 13.7 | 14.9 | P. | β Ursæ Min.. | +1 3.43 | |
| 2.3 | 6.5 | E. | γ Geminorum | +1 5.82 | +1 4.94 | 13.7 | 15.2 | P. | β Libræ . . | +1 3.88 | |
| 3.1 | 1.0 | F. | Nadir . . | +1 2.67 | +1 2.67 | 13.7 | 15.6 | P. | α Serpentis . | +1 4.02 | +1 3.48 |
| 3.4 | 8.0 | F. | Nadir . . | +1 4.12 | +1 4.08 | 13.7 | 15.8 | P. | ζ Ursæ Min.. | +1 3.41 | |
| 3.6 | 12.0 | F. | Nadir . . | +1 4.03 | | 13.7 | 16.4 | P. | Nadir . . | +1 3.71 | |
| 3.9 | 21.9 | S. | Nadir . . | +1 4.00 | +1 3.93 | 20.9 | 22.3 | P. | Nadir . . | +1 4.67 | +1 4.52 |
| 4.1 | 0.3 | S. | Nadir . . | +1 3.86 | | 21.1 | 4.0 | P. | Nadir . . | +1 4.38 | |
| 4.4 | 7.8 | S. | Nadir . . | +1 3.70 | | 21.4 | 10.7 | P. | Nadir . . | +1 5.07 | +1 5.52 |
| 4.5 | 10.9 | S. | α Ursæ Maj.. | +1 3.18 | +1 3.94 | 21.7 | 16.9 | P. | Nadir . . | +1 5.97 | |
| 4.5 | 11.9 | S. | Nadir . . | +1 4.31 | | 21.9 | 22.9 | E. | Nadir . . | +1 5.53 | +1 5.31 |
| 5.1 | 2.4 | P. | Nadir . . | +1 1.39 | +1 1.39 | 22.1 | 3.0 | E. | Nadir . . | +1 5.09 | |
| 5.3 | 7.1 | P. | Nadir . . | +1 2.98 | | 22.3 | 8.0 | E. | Nadir . . | +1 5.35 | |
| 5.3 | 7.2 | P. | δ Geminorum | +1 4.02 | | 22.3 | 8.7 | E. | ϵ Hydræ . . | +1 7.33 | |
| 5.5 | 10.9 | P. | α Ursæ Maj.. | +1 3.20 | | 22.3 | 9.0 | E. | κ Cancrî . . | +1 7.42 | +1 6.07 |
| 5.6 | 12.7 | P. | Nadir . . | +1 3.92 | | 22.4 | 9.3 | E. | ι Draconis . | +1 5.94 | |
| 5.6 | 14.0 | P. | α Draconis . | +1 3.09 | +1 3.48 | 22.5 | 11.0 | E. | Nadir . . | +1 4.97 | |
| 5.7 | 14.2 | P. | α Bootis . . | +1 4.00 | | 23.4 | 9.8 | F. | Nadir . . | +1 5.19 | |
| 5.7 | 14.5 | P. | 5 Ursæ Maj.. | +1 2.03 | | 23.5 | 11.5 | F. | ν Leonis . . | +1 6.52 | +1 5.38 |
| 5.7 | 15.2 | P. | Nadir . . | +1 4.00 | | 23.5 | 11.7 | F. | β Leonis . . | +1 5.44 | |
| | | | | | | 23.5 | 12.4 | F. | Nadir . . | +1 5.73 | |
| | | | | | | 26.9 | 23.4 | F. | Nadir . . | +1 2.63 | |
| | | | | | | 27.1 | 3.7 | F. | Nadir . . | +1 2.44 | +1 2.54 |

TABLE F.—*Adopted Zenith-Point Correction, etc.*—Continued.

COMBINATION OF RESULTS FROM NADIR AND REFLECTION OBSERVATIONS.

| Mean Day. | Sidereal Hour. | Observer. | Object. | Observed Zenith-Point Correction. | Adopted Zenith-Point Correction. | Mean Day. | Sidereal Hour. | Observer. | Object. | Observed Zenith-Point Correction. | Adopted Zenith-Point Correction. |
|--------------------|----------------|-----------|-----------------------|-----------------------------------|----------------------------------|-------------------|----------------|-----------|------------------------|-----------------------------------|----------------------------------|
| 1876. Mar. 27.3 | h. 9.2 | F. | Nadir . . | ' " +1 3.06 | ' " +1 3.06 | 1876. Apr. 9.3 | h. 11.4 | S. | λ Draconis . | ' " +1 1.26 | ' " +1 1.26 |
| | | | | | | 9.3 | 11.8 | S. | Nadir . . | +1 1.35 | +1 1.58 |
| 28.9 | 22.3 | P. | Nadir . . | +1 3.33 | +1 3.15 | 9.5 | 14.5 | S. | Nadir . . | +1 1.52 | |
| 29.1 | 5.1 | P. | Nadir . . | +1 2.97 | | | | | | | |
| 31.1 | 2.1 | F. | Nadir . . | +1 3.34 | +1 3.34 | 9.9 | 0.3 | P. | Nadir . . | +1 0.06 | +0 59.84 |
| 31.3 | 9.0 | F. | Nadir . . | +1 4.36 | +1 4.30 | 10.1 | 4.7 | P. | Nadir . . | +0 59.61 | |
| 31.5 | 13.7 | F. | Nadir . . | +1 4.24 | | 10.4 | 10.4 | P. | γ Draconis . | +0 59.99 | |
| 31.9 | 23.7 | S. | Nadir . . | +1 3.43 | +1 2.59 | 10.4 | 10.7 | P. | δ Leonis . . | +1 1.89 | |
| Apr. 1.1 | 2.9 | S. | Nadir . . | +1 1.75 | | 10.4 | 10.9 | P. | Nadir . . | +1 0.66 | +1 1.22 |
| 1.3 | 7.5 | S. | Nadir . . | +1 2.82 | +1 2.73 | 10.6 | 15.6 | P. | α Serpentis . | +1 2.10 | |
| 1.3 | 8.0 | S. | 3 Ursæ Maj.. | +1 2.02 | | 10.6 | 15.8 | P. | ζ Ursæ Min.. | +1 0.54 | |
| 1.5 | 13.6 | S. | Nadir . . | +1 4.61 | +1 3.88 | 10.7 | 16.4 | P. | Nadir . . | +1 2.13 | |
| 1.6 | 14.2 | S. | α Bootis . . | +1 3.84 | | 10.9 | 0.3 | E. | Nadir . . | +1 0.17 | +1 0.17 |
| 2.3 | 8.1 | P. | Nadir . . | +1 4.22 | | 11.1 | 4.3 | E. | Nadir . . | +0 57.99 | +0 57.99 |
| 2.3 | 9.0 | P. | σ^2 Ursæ Maj.. | +1 3.00 | +1 4.20 | 12.1 | 2.3 | F. | Nadir . . | +0 59.19 | +0 57.78 |
| 2.3 | 9.6 | P. | ϵ Leonis . . | +1 5.50 | | 12.1 | 4.0 | F. | Nadir . . | +0 56.36 | |
| 2.4 | 11.3 | P. | Nadir . . | +1 4.07 | | 12.4 | 11.6 | F. | Nadir . . | +0 57.85 | |
| 4.1 | 3.3 | F. | Nadir . . | +1 0.77 | +1 0.77 | 12.5 | 14.5 | F. | 5 Ursæ Min.. | +0 57.38 | +0 58.48 |
| 4.5 | 13.0 | F. | Nadir . . | +1 1.87 | +1 1.42 | 12.6 | 15.2 | F. | Nadir . . | +0 58.20 | |
| 4.6 | 15.2 | F. | Nadir . . | +1 0.97 | | 12.6 | 15.9 | F. | ϵ Cor. Bor. . | +1 0.48 | |
| 4.9 | 23.4 | S. | Nadir . . | +1 1.97 | +1 1.75 | 13.7 | 19.1 | S. | Nadir . . | +0 59.86 | +0 59.86 |
| 5.1 | 2.5 | S. | Nadir . . | +1 1.53 | | 14.7 | 19.2 | P. | δ Draconis . | +1 0.82 | +1 1.42 |
| 5.3 | 7.6 | S. | Nadir . . | +1 1.40 | | 14.8 | 20.0 | P. | Nadir . . | +1 1.40 | |
| 5.3 | 8.7 | S. | ϵ Hydræ . . | +1 3.08 | +1 1.88 | 14.9 | 0.2 | E. | Nadir . . | +1 0.33 | +1 0.28 |
| 5.5 | 14.1 | S. | Nadir . . | +1 1.84 | | 15.1 | 5.2 | E. | Nadir . . | +1 0.22 | |
| 5.9 | 23.3 | P. | Nadir . . | +1 0.90 | +1 0.86 | 15.3 | 8.7 | E. | ϵ Hydræ . . | +1 1.74 | |
| 6.1 | 4.1 | P. | Nadir . . | +1 0.82 | | 15.3 | 8.8 | E. | ι Ursæ Maj.. | +0 59.55 | |
| 6.4 | 10.9 | P. | α Ursæ Maj.. | +1 0.38 | | 15.4 | 11.4 | E. | Nadir . . | +1 1.47 | +1 1.47 |
| 6.4 | 11.4 | P. | τ Leonis . . | +1 0.94 | | 15.4 | 12.0 | E. | ϕ Virginis . | +1 2.84 | |
| 6.4 | 11.5 | P. | Nadir . . | +1 1.27 | | 15.5 | 14.3 | E. | Nadir . . | +1 2.50 | |
| 6.7 | 17.0 | P. | ϵ Ursæ Min.. | +0 59.68 | | 16.9 | 0.3 | S. | Nadir . . | +1 1.15 | +1 1.28 |
| 6.7 | 17.2 | P. | α' Herculis . | +1 0.38 | +1 0.45 | 17.1 | 3.5 | S. | Nadir . . | +1 1.41 | |
| 6.7 | 17.5 | P. | β Draconis . | +0 59.29 | | 18.3 | 8.8 | P. | ι Ursæ Maj.. | +1 1.49 | |
| 6.7 | 17.6 | P. | B.A.C. 5996 | +1 0.50 | | 18.3 | 9.0 | P. | σ^2 Ursæ Maj.. | +1 1.80 | |
| 6.7 | 17.7 | P. | ψ Draconis . | +1 0.64 | | 18.4 | 10.9 | P. | Nadir . . | +1 2.58 | +1 2.53 |
| 6.7 | 18.1 | P. | Nadir . . | +1 0.35 | | 18.5 | 13.7 | P. | Nadir . . | +1 2.57 | |
| 8.1 | 1.6 | . | Nadir . . | +1 0.68 | +1 0.68 | 18.8 | 21.8 | P. | Nadir . . | +1 2.99 | |
| 8.5 | 13.0 | F. | Nadir . . | +1 1.28 | +1 1.42 | 18.9 | 23.8 | E. | Nadir . . | +1 2.52 | +1 2.90 |
| 8.5 | 14.0 | . | Nadir . . | +1 1.56 | | 19.1 | 5.0 | E. | Nadir . . | +1 3.27 | |

TABLE F.—*Adopted Zenith-Point Correction, etc.*—Continued.

COMBINATION OF RESULTS FROM NADIR AND REFLECTION OBSERVATIONS.

| Mean Day. | Sidereal Hour. | Observer. | Object. | Observed Zenith-Point Correction. | Adopted Zenith-Point Correction. | Mean Day. | Sidereal Hour. | Observer. | Object. | Observed Zenith-Point Correction. | Adopted Zenith-Point Correction. |
|-----------|----------------|-----------|------------------------|-----------------------------------|----------------------------------|-----------|----------------|-----------|------------------------|-----------------------------------|----------------------------------|
| 1876. | h. | | | ' " | ' " | 1876. | h. | | | ' " | ' " |
| Apr. 19.3 | 10.4 | E. | ρ Leonis . . | +1 4.09 | | May 4.3 | 10.7 | P. | ζ Leonis . . | +0 59.58 | |
| 19.3 | 10.5 | E. | Nadir . . | +1 3.17 | | 4.3 | 10.9 | P. | α Ursæ Maj. . | +0 57.93 | |
| 19.3 | 10.7 | E. | ζ Leonis . . | +1 5.54 | +1 3.72 | 4.5 | 14.0 | P. | Nadir . . | +0 59.39 | |
| 19.4 | 11.4 | E. | λ Draconis . . | +1 3.14 | | 4.6 | 16.8 | P. | B.A.C. 5686 | +0 59.92 | +0 59.56 |
| 19.4 | 11.8 | E. | γ Ursæ Maj. . | +1 2.42 | | 4.6 | 17.0 | P. | ϵ Ursæ Min. . | +0 59.58 | |
| 19.5 | 13.9 | E. | Nadir . . | +1 3.92 | | 4.7 | 19.5 | P. | κ Aquilæ . . | +1 0.48 | |
| 19.9 | 10.0 | F. | Nadir . . | +1 3.44 | +1 3.44 | 4.7 | 20.8 | P. | Nadir . . | +0 59.72 | |
| 20.4 | 12.3 | F. | Nadir . . | +1 3.32 | | 4.9 | 1.5 | E. | Nadir . . | +0 57.83 | |
| 20.5 | 14.5 | F. | δ Ursæ Min. . | +1 1.15 | +1 2.70 | 5.1 | 5.6 | E. | Nadir . . | +0 59.07 | +0 58.45 |
| 20.5 | 15.0 | F. | Nadir . . | +1 3.01 | | 10.3 | 10.9 | E. | α Ursæ Maj. . | +0 57.52 | |
| 22.3 | 18.6 | P. | Nadir . . | +1 0.26 | | 10.4 | 12.5 | D. | Nadir . . | +0 59.43 | +0 58.78 |
| 22.5 | 14.2 | P. | α Bootis . . | +1 2.00 | | 12.9 | 2.2 | E. | Nadir . . | +0 58.35 | |
| 22.6 | 15.7 | P. | B.A.C. 5216 | +1 2.14 | +1 1.62 | 13.1 | 6.3 | P. | Nadir . . | +0 58.54 | +0 58.44 |
| 22.6 | 15.8 | P. | ζ Ursæ Min. . | +1 1.72 | | 13.4 | 12.8 | E. | Nadir . . | +0 58.35 | |
| 22.7 | 18.7 | P. | Nadir . . | +1 2.74 | | 13.4 | 13.1 | E. | θ Virginis . . | +0 58.87 | |
| 25.4 | 11.1 | S. | Nadir . . | +1 4.32 | +1 4.02 | 13.5 | 14.3 | E. | θ Bootis . . | +0 58.27 | +0 58.51 |
| 25.5 | 15.0 | S. | Nadir . . | +1 3.41 | | 13.5 | 19.9 | E. | Nadir . . | +0 58.56 | |
| 26.4 | 11.8 | P. | γ Ursæ Maj. . | +1 1.10 | | 14.9 | 1.9 | P. | Nadir . . | +0 59.32 | |
| 26.4 | 12.0 | P. | ϕ Virginis . . | +1 2.52 | +1 2.31 | 15.0 | 4.5 | P. | Nadir . . | +0 58.23 | +0 58.18 |
| 26.4 | 12.6 | P. | Nadir . . | +1 2.33 | | 15.1 | 6.4 | P. | Nadir . . | +0 56.98 | |
| 26.6 | 17.1 | P. | Nadir . . | +1 3.29 | | 19.9 | 2.2 | P. | Nadir . . | +0 56.66 | |
| 26.9 | 0.4 | E. | Nadir . . | +1 0.34 | +1 0.18 | 20.1 | 7.7 | P. | Nadir . . | +0 55.15 | +0 55.90 |
| 27.1 | 5.7 | E. | Nadir . . | +1 0.01 | | 21.9 | 2.8 | P. | Nadir . . | +0 55.66 | |
| 28.9 | 0.9 | S. | Nadir . . | +1 0.07 | +1 0.07 | 22.1 | 6.8 | P. | Nadir . . | +0 54.68 | +0 55.17 |
| 29.2 | 8.3 | S. | Nadir . . | +0 58.95 | | 22.9 | 2.5 | P. | Nadir . . | +0 58.13 | |
| 29.3 | 10.9 | S. | α Ursæ Maj. . | +0 58.60 | +0 59.44 | 23.1 | 6.0 | P. | Nadir . . | +0 57.10 | +0 57.32 |
| 29.5 | 14.0 | S. | Nadir . . | +1 0.14 | | 23.3 | 11.6 | S. | Nadir . . | +0 58.02 | |
| 30.9 | 0.5 | E. | Nadir . . | +1 1.52 | +1 1.14 | 23.5 | 16.3 | S. | Nadir . . | +0 57.29 | +0 57.66 |
| May 1.1 | 5.6 | E. | Nadir . . | +1 0.76 | | 27.3 | 12.6 | S. | Nadir . . | +0 57.96 | |
| 1.3 | 9.4 | E. | α Hydræ . . | +1 3.08 | | 27.5 | 16.5 | S. | Nadir . . | +0 57.81 | +0 57.88 |
| 1.3 | 10.5 | E. | Nadir . . | +1 1.89 | +1 2.22 | 28.9 | 2.3 | E. | Nadir . . | +0 58.36 | |
| 1.5 | 13.7 | E. | Nadir . . | +1 1.94 | | 29.1 | 6.5 | E. | γ Geminorum | +0 56.09 | +0 57.12 |
| 1.5 | 13.7 | E. | η Ursæ Maj. . | +1 1.96 | | 29.1 | 7.1 | E. | Nadir . . | +0 57.58 | |
| 3.3 | 9.9 | S. | Nadir . . | +1 0.69 | +1 0.91 | 29.3 | 10.9 | E. | α Ursæ Maj. . | +0 55.56 | |
| 3.5 | 16.0 | S. | Nadir . . | +1 1.13 | | 29.3 | 12.5 | E. | Nadir . . | +0 56.24 | |
| 3.9 | 1.6 | P. | Nadir . . | +1 0.23 | +0 59.22 | 29.3 | 12.8 | E. | β Camelop. . | +0 57.76 | +0 56.49 |
| 4.1 | 5.7 | P. | Nadir . . | +0 58.22 | | 29.4 | 13.8 | E. | η Bootis . . | +0 56.78 | |
| | | | | | | 29.4 | 14.2 | E. | α Bootis . . | +0 56.60 | |
| | | | | | | 29.5 | 16.3 | E. | Nadir . . | +0 55.92 | |

TABLE F.—*Adopted Zenith-Point Correction, etc.*—Continued.

COMBINATION OF RESULTS FROM NADIR AND REFLECTION OBSERVATIONS.

| Mean Day. | Sidereal Hour. | Observer. | Object. | Observed Zenith-Point Correction. | Adopted Zenith-Point Correction. | Mean Day. | Sidereal Hour. | Observer. | Object. | Observed Zenith-Point Correction. | Adopted Zenith-Point Correction. |
|-----------|----------------|-----------|------------------------|-----------------------------------|----------------------------------|-----------|----------------|-----------|-----------------------|-----------------------------------|----------------------------------|
| 1876. | h. | | | ' " | ' " | 1876. | h. | | | ' " | ' " |
| May 31.3 | 11.9 | S. | Nadir . . | +0 57.95 | | June 28.9 | 4.6 | P. | Nadir . . | +1 6.50 | |
| 31.4 | 14.5 | S. | 5 Ursæ Min.. | +0 58.27 | +0.58.31 | 28.9 | 5.1 | P. | α Aurigæ. . | +1 6.76 | +1 7.14 |
| 31.5 | 16.4 | S. | Nadir . . | +0 59.09 | | 29.1 | 8.9 | P. | Nadir . . | +1 7.53 | |
| | | | | | | 29.3 | 13.7 | P. | η Ursæ Maj.. | +1 7.34 | +1 7.44 |
| 31.9 | 2.4 | P. | Nadir . . | +0 59.75 | | 29.3 | 14.7 | P. | Nadir . . | +1 6.73 | |
| 31.9 | 3.3 | P. | α Persei . . | +0 58.04 | | 29.9 | 5.7 | E. | Nadir . . | +1 6.76 | +1 6.88 |
| June 1.0 | 4.4 | P. | Nadir . . | +0 59.59 | +0 59.09 | 30.1 | 9.5 | E. | Nadir . . | +1 7.01 | |
| 1.0 | 5.1 | P. | α Aurigæ. . | +0 58.81 | | 30.3 | 14.5 | E. | Nadir . . | +1 7.24 | |
| 1.1 | 6.8 | P. | Nadir . . | +0 58.48 | | 30.3 | 14.9 | E. | β Ursæ Min.. | +1 7.04 | +1 7.28 |
| 1.1 | 7.6 | P. | β Geminorum | +0 59.23 | | 30.3 | 15.2 | E. | β Libræ . . | +1 7.75 | |
| | | | | | | 30.4 | 16.5 | E. | Nadir . . | +1 7.11 | |
| 1.3 | 12.7 | P. | Nadir . . | +0 58.50 | | July 1.1 | 7.8 | F. | Nadir . . | +1 5.40 | +1 5.40 |
| 1.4 | 13.8 | P. | η Ursæ Maj.. | +0 58.00 | | 2.4 | 16.2 | S. | Nadir . . | +1 6.21 | +1 6.21 |
| 1.4 | 14.2 | P. | α Bootis . . | +0 58.78 | | 2.9 | 4.8 | P. | ϵ Aurigæ. . | +1 6.86 | |
| 1.4 | 14.5 | P. | 5 Ursæ Min.. | +0 57.70 | | 2.9 | 6.6 | P. | Nadir . . | +1 6.36 | |
| 1.4 | 14.7 | P. | ϵ Bootis . . | +0 58.30 | | 3.1 | 9.4 | P. | θ Ursæ Maj.. | +1 4.95 | +1 6.02 |
| 1.5 | 17.5 | P. | α Ophiuchi . | +0 59.30 | +0 58.84 | 3.1 | 9.6 | P. | ϵ Leonis . . | +1 7.20 | |
| 1.5 | 17.6 | P. | ω Draconis . | +0 58.31 | | 3.1 | 9.8 | P. | Nadir . . | +1 5.90 | |
| 1.5 | 17.9 | P. | Nadir . . | +0 58.64 | | 5.3 | 15.8 | P. | ζ Ursæ Min.. | +1 6.73 | |
| 1.7 | 19.8 | P. | ϵ Draconis . | +0 59.18 | | 5.4 | 16.8 | P. | Nadir . . | +1 6.54 | |
| 1.7 | 20.0 | P. | τ Aquilæ. . | +1 0.02 | | 5.5 | 18.9 | P. | B.A.C.6491 | +1 6.79 | |
| 1.7 | 20.5 | P. | ϵ Delphini . | +1 0.48 | | 5.5 | 19.2 | P. | δ Draconis . | +1 6.50 | +1 6.65 |
| 1.7 | 20.7 | P. | Nadir . . | +0 59.59 | | 5.5 | 19.4 | P. | B.A.C.6690 | +1 6.54 | |
| | | | | | | 5.5 | 19.7 | P. | B.A.C.6799 | +1 6.16 | |
| 1.9 | 2.4 | E. | Nadir . . | +0 57.98 | | 5.5 | 20.0 | P. | Nadir . . | +1 6.16 | |
| 2.0 | 5.1 | E. | α Aurigæ. . | +0 56.18 | +0 56.78 | 5.9 | 4.5 | P. | α Tauri . . | +1 8.02 | |
| 2.1 | 8.0 | E. | Nadir . . | +0 55.61 | | 5.9 | 5.1 | P. | α Aurigæ. . | +1 6.00 | |
| 2.3 | 12.6 | E. | Nadir . . | +0 56.15 | +0 56.15 | 5.9 | 5.5 | P. | Nadir . . | +1 6.80 | |
| 2.9 | 4.4 | F. | Nadir . . | +0 53.54 | | 6.1 | 8.8 | P. | ϵ Ursæ Maj.. | +1 5.60 | +1 6.68 |
| 3.0 | 5.1 | F. | α Aurigæ. . | +0 53.16 | +0 53.66 | 6.1 | 9.4 | P. | θ Ursæ Maj.. | +1 5.77 | |
| 3.1 | 8.0 | F. | Nadir . . | +0 53.66 | | 6.1 | 10.1 | P. | α Leonis . . | +1 7.78 | |
| 5.4 | 14.2 | P. | α Bootis . . | +0 57.18 | | 6.1 | 10.5 | P. | Nadir . . | +1 6.18 | |
| 5.4 | 14.3 | P. | θ Bootis . . | +0 56.44 | +0 57.40 | 7.5 | 19.2 | P. | δ Draconis . | +1 6.61 | |
| 5.5 | 17.3 | P. | Nadir . . | +0 58.57 | | 7.5 | 19.7 | P. | α Aurigæ. . | +1 7.35 | |
| 26.3 | 14.3 | E. | Nadir . . | +1 7.17 | | 7.6 | 21.3 | P. | γ Pegasi . . | +1 6.51 | +1 6.78 |
| 26.4 | 15.4 | E. | α Serpentis . | +1 9.46 | | 7.6 | 21.7 | P. | B.A.C.7589 | +1 6.34 | |
| 26.4 | 15.9 | E. | ϵ Cor. Bor. . | +1 8.40 | +1 7.61 | 7.7 | 22.5 | P. | Nadir . . | +1 7.08 | |
| 26.4 | 16.5 | E. | A Draconis . | +1 6.93 | | 9.9 | 5.8 | S. | Nadir . . | +1 4.30 | +1 4.30 |
| 26.5 | 18.3 | E. | Nadir . . | +1 6.79 | | | | | | | |
| 27.1 | 8.0 | F. | Nadir . . | +1 6.45 | +1 6.45 | | | | | | |
| 27.9 | 5.0 | S. | Nadir . . | +1 5.95 | +1 5.86 | | | | | | |
| 28.1 | 8.3 | S. | Nadir . . | +1 5.78 | | | | | | | |

TABLE F.—*Adopted Zenith-Point Correction, etc.*—Continued.

COMBINATION OF RESULTS FROM NADIR AND REFLECTION OBSERVATIONS.

| Mean Day. | Sidereal Hour. | Observer. | Object. | Observed Zenith-Point Correction. | Adopted Zenith-Point Correction. | Mean Day. | Sidereal Hour. | Observer. | Object. | Observed Zenith-Point Correction. | Adopted Zenith-Point Correction. |
|--------------------|----------------|-----------|---------------------|-----------------------------------|----------------------------------|--------------------|----------------|-----------|----------------------------|-----------------------------------|----------------------------------|
| 1876. July 10.9 | h. 4.5 | P. | α Tauri . . | +1 6.68 | " " | 1876. July 27.2 | h. 14.2 | P. | α Bootis . . | +1 3.76 | " " |
| 10.9 | 5.1 | P. | α Aurigæ. . | +1 5.08 | | 27.3 | 15.3 | P. | γ^2 Ursæ Min. . | +1 2.84 | |
| 10.9 | 5.7 | P. | Nadir . . | +1 4.77 | +1 4.91 | 27.3 | 15.8 | P. | Nadir . . | +1 4.15 | +1 4.14 |
| 11.1 | 9.8 | P. | Nadir . . | +1 4.07 | | 27.5 | 19.5 | P. | κ Aquilæ . . | +1 5.07 | |
| 11.1 | 10.6 | P. | α Leonis . . | +1 4.62 | | 27.5 | 19.8 | P. | ε Draconis . . | +1 4.20 | |
| | | | | | | 27.5 | 20.3 | P. | Nadir . . | +1 4.84 | |
| 11.9 | 5.1 | F. | α Aurigæ. . | +1 4.48 | | Aug. 4.4 | 19.1 | P. | Nadir . . | +1 6.61 | +1 6.71 |
| 11.9 | 6.4 | F. | Nadir . . | +1 4.66 | +1 4.74 | 4.4 | 19.2 | P. | δ Draconis . . | +1 6.20 | |
| 12.1 | 8.6 | F. | Nadir . . | +1 4.46 | | 6.5 | 21.8 | F. | Nadir . . | +1 5.83 | +1 5.83 |
| 17.4 | 18.5 | F. | Nadir . . | +1 5.05 | +1 4.83 | 8.9 | 7.8 | E. | Nadir . . | +1 5.81 | |
| 17.5 | 20.6 | F. | Nadir . . | +1 4.61 | | 9.1 | 10.9 | E. | α Ursæ Maj. . | +1 6.46 | +1 5.93 |
| 17.9 | 5.7 | S. | Nadir . . | +1 4.36 | +1 4.28 | 9.1 | 11.8 | E. | γ Ursæ Maj. . | +1 4.97 | |
| 18.1 | 9.9 | S. | Nadir . . | +1 4.21 | | 9.1 | 13.5 | E. | Nadir . . | +1 5.27 | |
| 18.3 | 15.4 | S. | Nadir . . | +1 4.51 | +1 4.40 | 9.4 | 18.4 | E. | Nadir . . | +1 5.65 | |
| 18.4 | 18.4 | S. | Nadir . . | +1 4.29 | | 9.4 | 19.2 | E. | δ Draconis . . | +1 4.35 | +1 6.00 |
| 18.9 | 5.3 | P. | β Tauri . . | +1 4.38 | | 9.4 | 19.5 | E. | κ Aquilæ . . | +1 6.60 | |
| 18.9 | 7.3 | P. | Nadir . . | +1 3.44 | +1 3.60 | 9.4 | 19.7 | E. | γ Aquilæ . . | +1 7.24 | |
| 19.1 | 10.5 | P. | Nadir . . | +1 3.66 | | 11.4 | 19.4 | F. | Nadir . . | +1 7.29 | +1 7.29 |
| 19.9 | 5.7 | E. | Nadir . . | +1 3.28 | +1 3.01 | 14.9 | 7.4 | F. | α^2 Geminorum | +1 7.44 | |
| 20.1 | 10.6 | E. | Nadir . . | +1 2.74 | | 14.9 | 8.4 | F. | Nadir . . | +1 7.14 | +1 6.77 |
| 21.0 | 8.5 | F. | Nadir . . | +1 1.98 | +1 2.00 | 14.9 | 8.8 | F. | ι Ursæ Maj. . | +1 5.34 | |
| 21.1 | 11.1 | F. | Nadir . . | +1 2.03 | | 15.4 | 20.1 | F. | Nadir . . | +1 6.74 | |
| 21.5 | 19.5 | F. | Nadir . . | +1 3.75 | | 15.5 | 22.4 | F. | Nadir . . | +1 6.63 | +1 6.68 |
| 21.5 | 21.1 | F. | ζ Cygni . . | +1 3.33 | +1 3.28 | 16.3 | 17.2 | E. | Nadir . . | +1 6.33 | |
| 21.6 | 21.6 | F. | Nadir . . | +1 3.44 | | 16.3 | 17.5 | E. | β Draconis . . | +1 5.64 | +1 6.18 |
| 21.9 | 4.0 | S. | Nadir . . | +1 4.23 | +1 3.86 | 16.3 | 17.6 | E. | ω Draconis . . | +1 5.30 | |
| 22.1 | 10.1 | S. | Nadir . . | +1 3.50 | | 16.5 | 20.9 | E. | Nadir . . | +1 6.20 | |
| 22.3 | 15.2 | S. | Nadir . . | +1 3.77 | +1 3.79 | 20.9 | 8.0 | E. | Nadir . . | +1 6.96 | |
| 22.5 | 20.1 | S. | Nadir . . | +1 3.80 | | 21.0 | 10.9 | E. | α Ursæ Maj. . | +1 5.16 | +1 6.49 |
| 25.0 | 7.6 | F. | β Geminorum | +1 4.99 | | 21.1 | 11.8 | E. | γ Ursæ Maj. . | +1 5.82 | |
| 25.0 | 8.2 | F. | Nadir . . | +1 5.89 | +1 5.00 | 21.1 | 13.5 | E. | Nadir . . | +1 6.80 | |
| 25.1 | 10.8 | F. | Nadir . . | +1 4.80 | | 21.4 | 20.0 | E. | Nadir . . | +1 6.27 | |
| 25.9 | 5.9 | S. | Nadir . . | +1 5.58 | +1 4.97 | 21.4 | 20.6 | E. | α Cygni . . | +1 6.10 | +1 6.62 |
| 26.1 | 9.7 | S. | Nadir . . | +1 4.35 | | 21.4 | 20.8 | E. | μ Aquarii . . | +1 6.04 | |
| 26.3 | 15.0 | S. | Nadir . . | +1 3.16 | +1 4.14 | 21.5 | 21.9 | E. | Nadir . . | +1 7.70 | |
| 26.5 | 20.0 | S. | Nadir . . | +1 5.13 | | 25.9 | 9.5 | F. | Nadir . . | +1 5.17 | +1 4.61 |
| 26.9 | 7.0 | P. | Nadir . . | +1 4.24 | | 26.1 | 12.7 | F. | Nadir . . | +1 4.05 | |
| 27.0 | 8.3 | P. | Nadir . . | -1 4.21 | +1 3.97 | 26.4 | 19.7 | F. | Nadir . . | +1 5.22 | +1 5.86 |
| 27.1 | 11.4 | P. | Nadir . . | +1 3.47 | | 26.6 | 23.6 | F. | Nadir . . | +1 6.50 | |

TABLE F.—*Adopted Zenith-Point Correction, etc.*—Continued.

COMBINATION OF RESULTS FROM NADIR AND REFLECTION OBSERVATIONS.

| Mean Day. | Sidereal Hour. | Observer. | Object. | Observed Zenith-Point Correction. | Adopted Zenith-Point Correction. | Mean Day. | Sidereal Hour. | Observer. | Object. | Observed Zenith-Point Correction. | Adopted Zenith-Point Correction. |
|-----------|----------------|-----------|----------------------|-----------------------------------|----------------------------------|------------|----------------|-----------|-------------------------|-----------------------------------|----------------------------------|
| 1876. | h. | | | " | " | 1876. | h. | | | " | " |
| Aug. 27.9 | 8.2 | E. | Nadir . . | +1 6.09 | | Sept. 27.9 | 9.9 | S. | Nadir . . | +1 8.56 | |
| 28.0 | 11.8 | E. | γ Ursæ Maj. . | +1 5.18 | +1 5.54 | 27.9 | 10.9 | S. | α Ursæ Maj. . | +1 8.24 | +1 8.40 |
| 28.1 | 14.0 | E. | Nadir . . | +1 4.74 | | 28.1 | 15.0 | S. | Nadir . . | +1 7.78 | |
| 28.3 | 17.9 | E. | γ Draconis . | +1 5.49 | | 28.3 | 19.2 | S. | Nadir . . | +1 8.77 | +1 9.23 |
| 28.3 | 18.8 | E. | Nadir . . | +1 6.39 | | 28.5 | 1.6 | S. | Nadir . . | +1 9.69 | |
| 28.4 | 19.2 | E. | δ Draconis . | +1 6.08 | +1 6.57 | 28.9 | 10.5 | P. | Nadir . . | +1 8.09 | |
| 28.4 | 19.5 | E. | κ Aquilæ . | +1 6.92 | | 28.9 | 10.9 | P. | α Ursæ Maj. . | +1 7.76 | +1 8.14 |
| 28.4 | 20.8 | E. | μ Aquarii . | +1 6.58 | | 29.0 | 12.2 | P. | Nadir . . | +1 8.64 | |
| 28.5 | 22.8 | E. | Nadir . . | +1 7.20 | | 29.1 | 15.1 | P. | Nadir . . | +1 7.48 | |
| 30.1 | 13.7 | F. | Nadir . . | +1 4.41 | +1 4.41 | 29.3 | 19.5 | P. | Nadir . . | +1 8.74 | |
| Sept. 1.9 | 10.4 | F. | Nadir . . | +1 5.50 | +1 4.85 | 29.3 | 20.2 | P. | κ Cephei . | +1 7.46 | |
| 2.1 | 13.7 | F. | Nadir . . | +1 4.20 | | 29.3 | 20.5 | P. | ϵ Delphini . | +1 9.72 | |
| 2.5 | 22.7 | F. | Nadir . . | +1 4.42 | +1 5.34 | 29.3 | 20.8 | P. | μ Aquarii . | +1 8.98 | +1 8.77 |
| 2.6 | 1.1 | F. | Nadir . . | +1 6.26 | | 29.3 | 21.5 | P. | β Cephei . | +1 8.36 | |
| 3.9 | 9.1 | S. | Nadir . . | +1 5.68 | +1 5.68 | 29.5 | 1.6 | P. | σ Piscium . | +1 8.88 | |
| 4.4 | 19.2 | S. | Nadir . . | +1 5.31 | +1 5.05 | 29.6 | 2.7 | P. | Nadir . . | +1 8.70 | |
| 4.5 | 23.1 | S. | Nadir . . | +1 4.79 | | Oct. 1.9 | 10.4 | S. | Nadir . . | +1 8.66 | +1 8.02 |
| 13.4 | 20.8 | P. | μ Aquarii . | +1 7.38 | | 2.1 | 15.3 | S. | Nadir . . | +1 7.39 | |
| 13.4 | 21.0 | P. | Nadir . . | +1 6.78 | +1 6.80 | 2.3 | 18.9 | S. | Nadir . . | +1 8.30 | +1 8.52 |
| 13.4 | 21.3 | P. | α Cephei . | +1 5.72 | | 2.5 | 1.5 | S. | Nadir . . | +1 8.74 | |
| 13.5 | 22.7 | P. | Nadir . . | +1 6.93 | | 2.9 | 10.6 | P. | Nadir . . | +1 8.98 | |
| 14.9 | 10.4 | F. | Nadir . . | +1 5.99 | +1 5.90 | 2.9 | 10.9 | P. | α Ursæ Maj. . | +1 7.39 | |
| 15.1 | 15.0 | F. | Nadir . . | +1 5.82 | | 2.9 | 11.1 | P. | δ Leonis . | +1 0.02 | +1 9.00 |
| 18.9 | 11.0 | F. | Nadir . . | +1 4.90 | +1 4.90 | 3.0 | 12.4 | P. | Nadir . . | +1 8.88 | |
| 19.9 | 18.7 | S. | Nadir . . | +1 7.75 | +1 6.60 | 3.1 | 14.2 | P. | α Bootis . | +1 9.57 | |
| 20.1 | 14.9 | S. | Nadir . . | +1 5.44 | | 3.4 | 22.0 | P. | Nadir . . | +1 9.25 | |
| 20.3 | 19.2 | S. | Nadir . . | +1 5.77 | +1 5.58 | 3.4 | 22.6 | P. | ζ Pegasi . | +1 9.76 | |
| 20.5 | 23.2 | S. | Nadir . . | +1 5.40 | | 3.5 | 0.0 | P. | α Androm. . | +1 9.25 | |
| 25.3 | 19.2 | P. | δ Draconis . | +1 7.37 | | 3.5 | 0.6 | P. | α Cassiopeæ . | +1 9.75 | +1 9.74 |
| 25.3 | 19.5 | P. | κ Aquilæ . | +1 7.81 | | 3.5 | 1.6 | P. | σ Piscium . | +1 9.49 | |
| 25.3 | 19.7 | P. | γ Aquilæ . | +1 7.92 | +1 7.69 | 3.5 | 1.9 | P. | ς Cassiopeæ . | +1 9.92 | |
| 25.3 | 20.2 | P. | κ Cephei . | +1 6.84 | | 3.6 | 2.3 | P. | ι Cassiopeæ . | +1 9.42 | |
| 25.3 | 20.9 | P. | Nadir . . | +1 7.74 | | 3.6 | 2.7 | P. | Nadir . . | +1 9.94 | |
| 26.9 | 11.2 | F. | Nadir . . | +1 8.48 | +1 8.56 | 5.9 | 10.5 | S. | Nadir . . | +1 9.56 | +1 8.83 |
| 27.1 | 15.4 | F. | Nadir . . | +1 8.65 | | 6.1 | 14.4 | S. | Nadir . . | +1 8.10 | |
| 27.4 | 21.8 | F. | Nadir . . | +1 9.25 | +1 9.92 | 6.9 | 11.9 | P. | Nadir . . | +1 7.98 | |
| 27.5 | 0.9 | F. | Nadir . . | +1 10.60 | | 7.0 | 12.8 | P. | Nadir . . | +1 7.89 | +1 7.82 |
| | | | | | | 7.1 | 14.9 | P. | Nadir . . | +1 7.59 | |

TABLE F.—*Adopted Zenith-Point Correction, etc.*—Continued.

COMBINATION OF RESULTS FROM NADIR AND REFLECTION OBSERVATIONS.

| Mean Day. | Sidereal Hour. | Observer. | Object. | Observed Zenith-Point Correction. | Adopted Zenith-Point Correction. | Mean Day. | Sidereal Hour. | Observer. | Object. | Observed Zenith-Point Correction. | Adopted Zenith-Point Correction. |
|-------------------|----------------|-----------|-----------------------|-----------------------------------|----------------------------------|--------------------|----------------|-----------|-----------------------|-----------------------------------|----------------------------------|
| 1876. Oct. 8.9 | h. 10.8 | P. | Nadir . . | +1 9.80 | " " | 1876. Oct. 13.9 | h. . . | S. | Nadir . . | +1 8.87 | +1 8.87 |
| 8.9 | 10.9 | P. | α Ursæ Maj. . | +1 8.78 | | 16.9 | 13.4 | F. | Nadir . . | +1 10.05 | +1 9.15 |
| 9.0 | 12.9 | P. | Nadir . . | +1 9.10 | +1 9.15 | 17.1 | 16.8 | F. | Nadir . . | +1 8.25 | |
| 9.0 | 13.7 | P. | η Ursæ Maj. . | +1 8.40 | | 17.4 | 23.4 | F. | Nadir . . | +1 8.97 | +1 8.98 |
| 9.0 | 14.2 | P. | α Bootis . . | +1 9.18 | | 17.5 | 1.0 | F. | Nadir . . | +1 8.98 | |
| 9.1 | 15.9 | P. | Nadir . . | +1 8.65 | | 18.3 | 20.0 | S. | Nadir . . | +1 8.98 | |
| 9.7 | 6.9 | P. | Nadir . . | +1 10.40 | | 18.3 | 20.8 | S. | μ Aquarii . | +1 10.46 | +1 9.33 |
| 9.7 | 7.1 | P. | 47 Geminorum | +1 10.56 | +1 10.40 | 18.4 | 22.8 | S. | ι Cephei . | +1 8.16 | |
| 9.8 | 8.2 | P. | Nadir . . | +1 10.47 | | 18.9 | 11.7 | P. | β Leonis . | +1 9.78 | |
| 10.7 | 7.5 | S. | Nadir . . | +1 10.29 | +1 10.29 | 18.9 | 12.0 | P. | Nadir . . | +1 9.14 | +1 9.41 |
| 11.1 | 14.4 | F. | Nadir . . | +1 8.84 | +1 8.84 | 19.0 | 13.6 | P. | Nadir . . | +1 9.54 | |
| 11.3 | 22.4 | F. | Nadir . . | +1 10.55 | +1 10.31 | 19.1 | 16.1 | P. | Nadir . . | +1 6.63 | +1 6.63 |
| 11.5 | 1.9 | F. | Nadir . . | +1 10.07 | | 21.3 | 23.2 | F. | Nadir . . | +1 7.35 | +1 7.35 |
| 11.8 | 9.8 | F. | μ Leonis . . | +1 10.42 | +1 9.52 | 23.9 | 12.0 | E. | Nadir . . | +1 7.29 | |
| 11.8 | 10.0 | F. | Nadir . . | +1 8.82 | | 23.9 | 13.7 | E. | η Ursæ Maj. . | +1 7.89 | +1 7.36 |
| 11.9 | 10.8 | P. | Nadir . . | +1 9.13 | | 24.1 | 15.5 | E. | α Cor. Bor. . | +1 7.29 | |
| 11.9 | 10.9 | P. | α Ursæ Maj. . | +1 8.48 | | 24.1 | 17.3 | E. | Nadir . . | +1 6.59 | |
| 12.0 | 13.0 | P. | Nadir . . | +1 9.69 | +1 9.07 | 24.3 | 20.5 | E. | ϵ Delphini . | +1 8.64 | |
| 12.0 | 14.2 | P. | α Bootis . . | +1 9.04 | | 24.3 | 20.8 | E. | μ Aquarii . | +1 8.34 | +1 8.08 |
| 12.1 | 15.7 | P. | Nadir . . | +1 8.64 | | 24.3 | 21.3 | E. | α Cephei . | +1 7.26 | |
| 12.3 | 20.8 | P. | Nadir . . | +1 9.90 | | 24.3 | 21.5 | E. | Nadir . . | +1 7.91 | |
| 12.3 | 21.3 | P. | α Cephei . . | +1 8.84 | | 26.9 | 12.7 | P. | Nadir . . | +1 9.71 | |
| 12.3 | 21.7 | P. | 11 Cephei . . | +1 9.90 | | 26.9 | 13.7 | P. | η Ursæ Maj. . | +1 8.99 | +1 9.40 |
| 12.3 | 21.9 | P. | B.A.C. 7646 | +1 8.64 | | 27.0 | 13.9 | P. | Nadir . . | +1 9.41 | |
| 12.3 | 22.0 | P. | α Aquarii . | +1 9.64 | | 27.1 | 16.9 | P. | Nadir . . | +1 8.90 | |
| 12.3 | 22.3 | P. | π Aquarii . | +1 10.74 | | 27.3 | 21.8 | P. | B.A.C. 7612 | +1 8.19 | |
| 12.3 | 22.6 | P. | ζ Pegasi . . | +1 10.45 | +1 9.63 | 27.3 | 22.8 | P. | ι Cephei . | +1 8.18 | |
| 12.4 | 22 8 | P. | ι Cephei . . | +1 8.46 | | 27.4 | 23.6 | P. | ι Piscium . | +1 9.66 | |
| 12.4 | 23.1 | P. | Nadir . . | +1 9.38 | | 27.4 | 23.8 | P. | Nadir . . | +1 9.38 | |
| 12.6 | 3.1 | P. | ζ Arietis . . | +1 9.12 | | 27.4 | 23.9 | P. | ω Piscium . | +1 10.32 | |
| 12.6 | 3.6 | P. | δ Persei . . | +1 9.20 | | 27.5 | 3.1 | P. | ζ Arietis . | +1 9.08 | +1 9.41 |
| 12.6 | 3.7 | P. | η Tauri . . | +1 9.65 | | 27.5 | 3.3 | P. | α Persei . . | +1 8.96 | |
| 12.6 | 4.1 | P. | Nadir . . | +1 9.26 | | 27.5 | 3.6 | P. | δ Persei . . | +1 8.04 | |
| 12.9 | 13.4 | F. | Nadir . . | +1 6.99 | +1 6.94 | 27.5 | 3.7 | P. | η Tauri . . | +1 8.78 | |
| 12.9 | 16.3 | F. | Nadir . . | +1 6.89 | | 27.5 | 3.8 | P. | ζ Persei . . | +1 9.92 | |
| 13.3 | 21.6 | F. | ϵ Pegasi . . | +1 8.70 | | 27.6 | 4.9 | P. | Nadir . . | +1 10.62 | |
| 13.3 | 22.0 | F. | Nadir . . | +1 8.31 | +1 8.94 | 27.6 | 5.1 | P. | α Aurigæ . . | +1 9.82 | |
| 13.4 | 22.8 | F. | λ Aquarii . . | +1 9.60 | | 31.3 | 22.0 | S. | Nadir . . | +1 10.10 | +1 10.14 |
| 13.5 | 1.7 | F. | Nadir . . | +1 9.61 | | 31.5 | 3.2 | S. | Nadir . . | +1 10.18 | |

TABLE F.—*Adopted Zenith-Point Correction, etc.*—Continued.

COMBINATION OF RESULTS FROM NADIR AND REFLECTION OBSERVATIONS.

| Mean Day. | Sidereal Hour. | Observer. | Object. | Observed Zenith-Point Correction. | Adopted Zenith-Point Correction. | Mean Day. | Sidereal Hour. | Observer. | Object. | Observed Zenith-Point Correction. | Adopted Zenith-Point Correction. |
|-----------|----------------|-----------|---------------------------|-----------------------------------|----------------------------------|-----------|----------------|-----------|----------------------|-----------------------------------|----------------------------------|
| 1876. | h. | | | ' " | ' " | 1876. | h. | | | ' " | ' " |
| Oct. 31.9 | 12.0 | E. | Nadir . . | +1 9.04 | +1 9.68 | Nov. 9.8 | 11.8 | E. | Nadir . . | +1 9.83 | +1 9.83 |
| 31.9 | 13.7 | E. | η Ursæ Maj. . | +1 9.72 | | 9.9 | 14.3 | S. | Nadir . . | +1 8.07 | +1 8.07 |
| Nov. 1.1 | 17.8 | E. | Nadir . . | +1 7.22 | +1 7.00 | 10.3 | 23.6 | S. | ι Piscium . | +1 8.05 | |
| 1.1 | 17.9 | E. | γ Draconis . | +1 6.18 | | 10.3 | 23.9 | S. | ω Piscium . | +1 8.72 | |
| 1.3 | 22.8 | E. | ι Cephei . . | +1 6.58 | | 10.4 | 0.6 | S. | α Cassiopeæ . | +1 7.99 | +1 8.52 |
| 1.3 | 23.0 | E. | Nadir . . | +1 5.65 | | 10.5 | 2.3 | S. | Nadir . . | +1 9.16 | |
| 1.3 | 23.4 | E. | θ Piscium . | +1 5.10 | +1 5.71 | 12.9 | 13.7 | E. | η Ursæ Maj. . | +1 8.14 | |
| 1.3 | 23.6 | E. | ι Piscium . | +1 5.75 | | 12.9 | 13.9 | E. | Nadir . . | +1 8.13 | +1 8.44 |
| 1.5 | 2.3 | E. | Nadir . . | +1 5.30 | | 22.0 | 17.0 | F. | Nadir . . | +1 8.74 | |
| 1.9 | 14.4 | F. | Nadir . . | +1 5.19 | +1 4.90 | 22.1 | 17.9 | F. | γ Draconis . | +1 6.88 | +1 8.12 |
| 2.1 | 17.4 | F. | Nadir . . | +1 4.62 | | 22.3 | 22.8 | F. | λ Aquarii . | +1 9.72 | |
| 3.9 | 12.8 | P. | Nadir . . | +1 7.55 | | 22.3 | 23.4 | F. | θ Piscium . | +1 8.90 | |
| 4.0 | 14.6 | P. | Nadir . . | +1 7.78 | +1 7.02 | 22.3 | 23.6 | F. | γ Cephei . . | +1 9.42 | |
| 4.1 | 17.9 | P. | γ Draconis . | +1 5.83 | | 22.3 | 23.8 | F. | Nadir . . | +1 9.77 | +1 9.42 |
| 4.1 | 18.1 | P. | Nadir . . | +1 6.31 | | 22.5 | 3.6 | F. | δ Persei . . | +1 8.28 | |
| 5.5 | 2.2 | P. | Nadir . . | +1 8.68 | | 22.5 | 4.7 | F. | Nadir . . | +1 9.67 | |
| 5.5 | 3.3 | P. | α Persei . . | +1 7.44 | +1 8.39 | 23.9 | 13.7 | S. | η Ursæ Maj. . | +1 8.76 | |
| 5.5 | 3.6 | E. | δ Persei . . | +1 7.86 | | 23.9 | 14.0 | S. | Nadir . . | +1 9.44 | |
| 5.5 | 3.8 | E. | ζ Persei . . | +1 8.58 | | 23.9 | 14.2 | S. | α Bootis . . | +1 8.98 | +1 9.44 |
| 7.3 | 22.0 | S. | Nadir . . | +1 8.34 | | 24.1 | 17.6 | S. | Nadir . . | +1 9.96 | |
| 7.3 | 22.8 | S. | ι Cephei . . | +1 8.20 | +1 8.72 | 24.3 | 22.2 | S. | Nadir . . | +1 10.06 | |
| 7.4 | 0.1 | S. | γ Pegasi . . | +1 9.23 | | 24.3 | 22.8 | S. | ι Cephei . . | +1 9.73 | |
| 7.9 | 12.7 | P. | Nadir . . | +1 9.92 | | 24.4 | 1.4 | S. | η Piscium . | +1 10.68 | +1 10.61 |
| 7.9 | 13.7 | P. | η Ursæ Maj. . | +1 8.06 | | 24.5 | 4.7 | S. | γ Camelop. . | +1 10.87 | |
| 7.9 | 14.2 | P. | α Bootis . . | +1 8.90 | | 24.5 | 5.1 | S. | β Orionis . | +1 10.92 | |
| 8.0 | 14.9 | P. | Nadir . . | +1 8.78 | +1 8.46 | 24.9 | 13.7 | E. | η Ursæ Maj. . | +1 8.92 | |
| 8.1 | 17.3 | P. | α^1 Herculis . | +1 8.51 | | 24.9 | 14.2 | E. | α Bootis . . | +1 8.48 | +1 9.11 |
| 8.1 | 17.5 | P. | α Ophiuchi . | +1 7.56 | | 24.9 | 14.4 | E. | Nadir . . | +1 9.53 | |
| 8.1 | 18.2 | P. | Nadir . . | +1 7.56 | | 26.4 | 2.9 | F. | α Ceti . . | +1 10.58 | |
| 8.7 | 7.4 | P. | Nadir . . | +1 9.60 | | 26.5 | 3.5 | F. | Nadir . . | +1 10.89 | +1 11.06 |
| 8.7 | 8.7 | P. | ε^2 Hydræ . . | +1 9.41 | | 26.5 | 4.7 | F. | γ Camelop. . | +1 11.32 | |
| 8.7 | 8.8 | P. | ι Ursæ Maj. . | +1 8.66 | +1 9.43 | 27.3 | 22.8 | S. | ι Cephei . . | +1 11.94 | |
| 8.7 | 9.0 | P. | σ^2 Ursæ Maj. . | +1 8.88 | | 27.3 | 23.4 | S. | Nadir . . | +1 11.80 | |
| 8.8 | 9.5 | P. | Nadir . . | +1 9.27 | | 27.3 | 0.6 | S. | α Cassiopeæ . | +1 10.98 | +1 12.16 |
| 8.8 | 9.6 | P. | ε Leonis . . | +1 9.96 | | 27.4 | 1.6 | S. | ω Piscium . | +1 12.38 | |
| 8.9 | 12.6 | E. | Nadir . . | +1 8.93 | | 27.4 | 2.0 | S. | α Arietis . . | +1 13.16 | |
| 8.9 | 13.7 | E. | η Ursæ Maj. . | +1 7.31 | | 27.5 | 5.5 | S. | Nadir . . | +1 11.90 | |
| 8.9 | 14.2 | E. | α Bootis . . | +1 8.16 | +1 8.09 | | | | | | |
| 9.1 | 17.9 | E. | γ Draconis . | +1 6.80 | | | | | | | |
| 9.1 | 18.4 | E. | Nadir . . | +1 8.23 | | | | | | | |

TABLE F.—*Adopted Zenith-Point Correction, etc.*—Continued.

COMBINATION OF RESULTS FROM NADIR AND REFLECTION OBSERVATIONS.

| Mean Day. | Sidereal Hour. | Observer. | Object. | Observed Zenith-Point Correction. | Adopted Zenith-Point Correction. | Mean Day. | Sidereal Hour. | Observer. | Object. | Observed Zenith-Point Correction. | Adopted Zenith-Point Correction. |
|-----------|----------------|-----------|------------------------|-----------------------------------|----------------------------------|-----------|----------------|-----------|----------------------|-----------------------------------|----------------------------------|
| 1876. | h. | | | " | " | 1876. | h. | | | " | " |
| Nov. 28.4 | 1.6 | P. | α Piscium . | +1 11.94 | | Dec. 6.9 | 16.5 | E. | Nadir . | +1 10.88 | +1 10.88 |
| 28.4 | 1.9 | P. | 50 Cassiopeæ . | +1 11.65 | | 7.3 | 0.9 | E. | ϵ Piscium . | +1 12.96 | |
| 28.4 | 2.8 | P. | Nadir . | +1 11.65 | | 7.3 | 1.2 | E. | Polaris . | +1 11.62 | |
| 28.4 | 3.3 | P. | α Persei . | +1 11.10 | | 7.3 | 1.7 | E. | Nadir . | +1 12.75 | +1 12.61 |
| 28.5 | 3.6 | P. | δ Persei . | +1 11.32 | | 7.4 | 3.3 | E. | α Persei . | +1 11.94 | |
| 28.5 | 3.8 | P. | ζ Persei . | +1 11.71 | | 7.5 | 4.9 | E. | Nadir . | +1 11.52 | |
| 28.5 | 4.2 | P. | γ Tauri . | +1 11.28 | +1 11.39 | 7.5 | 5.3 | E. | β Tauri . | +1 14.10 | |
| 28.5 | 5.5 | P. | ϵ Orionis . | +1 10.96 | | 8.5 | 5.1 | F. | Nadir . | +1 12.40 | +1 12.40 |
| 28.7 | 8.8 | P. | ι Ursæ Maj. . | +1 10.17 | | 12.4 | 4.2 | F. | Nadir . | +1 11.18 | |
| 28.7 | 9.0 | P. | σ^2 Ursæ Maj. . | +1 10.22 | | 12.5 | 4.8 | F. | ι Aurigæ . | +1 12.40 | |
| 28.7 | 9.6 | P. | ϵ Leonis . | +1 11.70 | | 12.7 | 8.8 | F. | ι Ursæ Maj. . | +1 11.49 | +1 12.06 |
| 28.7 | 10.0 | P. | α Leonis . | +1 11.38 | | 12.7 | 10.0 | F. | Nadir . | +1 12.00 | |
| 28.7 | 10.4 | P. | Nadir . | +1 11.24 | | 12.7 | 10.7 | F. | ι Leonis . | +1 12.98 | |
| 29.3 | 1.1 | E. | Nadir . | +1 10.10 | +1 10.10 | 12.8 | 11.8 | F. | γ Ursæ Maj. . | +1 11.52 | |
| Dec. 1.3 | 1.0 | S. | Nadir . | +1 11.66 | +1 11.66 | 12.9 | 15.9 | S. | Nadir . | +1 11.18 | +1 10.48 |
| 2.5 | 5.9 | P. | Nadir . | +1 11.57 | +1 11.57 | 13.1 | 19.9 | S. | Nadir . | +1 9.78 | |
| 3.4 | 3.1 | E. | ζ Arietis . | +1 11.78 | | 13.5 | 4.9 | S. | Nadir . | +1 10.15 | |
| 3.4 | 3.3 | E. | α Persei . | +1 11.52 | | 13.5 | 5.4 | S. | δ Orionis . | +1 10.71 | |
| 3.5 | 5.8 | E. | Nadir . | +1 12.68 | +1 12.06 | 13.5 | 5.8 | S. | α Orionis . | +1 10.91 | +1 10.26 |
| 3.6 | 6.1 | E. | 22 Camelop. . | +1 11.90 | | 13.5 | 6.1 | S. | 22 Camelop. . | +1 10.00 | |
| 3.6 | 6.5 | E. | γ Geminorum | +1 11.62 | | 13.6 | 7.5 | S. | Nadir . | +1 9.59 | |
| 5.4 | 2.3 | S. | ι Cassiopeæ . | +1 11.48 | | 13.7 | 10.9 | S. | α Ursæ Maj. . | +1 9.45 | |
| 5.4 | 3.6 | S. | δ Persei . | +1 12.46 | | 15.0 | 7.9 | E. | γ Draconis . | +1 10.06 | |
| 5.5 | 5.0 | S. | 11 Orionis . | +1 12.82 | | 15.1 | 19.7 | E. | α Aquilæ . | +1 11.46 | +1 10.73 |
| 5.5 | 5.3 | S. | β Tauri . | +1 13.30 | | 15.1 | 20.2 | E. | Nadir . | +1 10.27 | |
| 5.5 | 5.8 | S. | Nadir . | +1 13.42 | +1 13.61 | 15.3 | 1.2 | E. | Polaris . | +1 10.20 | |
| 5.7 | 10.4 | S. | ρ Leonis . | +1 13.99 | | 15.3 | 1.8 | E. | β Arietis . | +1 12.52 | +1 11.54 |
| 5.7 | 10.7 | S. | ι Leonis . | +1 15.18 | | 15.5 | 5.4 | E. | Nadir . | +1 11.50 | |
| 5.7 | 10.9 | S. | α Ursæ Maj. . | +1 14.64 | | 17.4 | 2.3 | S. | ι Cassiopeæ . | +1 11.88 | |
| 5.8 | 11.8 | S. | γ Ursæ Maj. . | +1 13.60 | | 17.4 | 3.1 | S. | ζ Arietis . | +1 13.69 | +1 13.21 |
| 5.9 | 14.2 | P. | α Bootis . | +1 12.56 | | 17.4 | 4.4 | S. | Nadir . | +1 13.68 | |
| 5.9 | 14.3 | P. | θ Bootis . | +1 11.30 | | 19.1 | 19.8 | E. | Nadir . | +1 13.88 | +1 13.88 |
| 5.9 | 15.3 | P. | Nadir . | +1 12.03 | | 19.4 | 3.1 | E. | ζ Arietis . | +1 13.22 | +1 13.62 |
| 5.9 | 15.5 | P. | α Cor. Bor. . | +1 12.66 | +1 12.07 | 19.5 | 4.8 | E. | Nadir . | +1 14.24 | |
| 6.0 | 17.5 | P. | β Draconis . | +1 11.57 | | 19.9 | 17.4 | F. | Nadir . | +1 13.48 | +1 13.57 |
| 6.0 | 17.9 | P. | γ Draconis . | +1 11.34 | | 20.1 | 21.8 | F. | Nadir . | +1 12.66 | |
| 6.1 | 19.5 | P. | Nadir . | +1 11.62 | | 20.6 | 9.2 | F. | Nadir . | +1 15.65 | +1 15.65 |
| 6.3 | 1.9 | P. | Nadir . | +1 11.53 | | | | | | | |
| 6.4 | 2.3 | P. | ι Cassiopeæ . | +1 11.26 | +1 11.82 | | | | | | |
| 6.4 | 3.1 | P. | ζ Arietis . | +1 12.14 | | | | | | | |
| 6.6 | 7.1 | P. | Nadir . | +1 11.96 | | | | | | | |

TABLE F.—*Adopted Zenith-Point Correction, etc.*—Continued.

COMBINATION OF RESULTS FROM NADIR AND REFLECTION OBSERVATIONS.

| Mean Day. | Sidereal Hour. | Observer. | Object. | Observed Zenith-Point Correction. | Adopted Zenith-Point Correction. | Mean Day. | Sidereal Hour. | Observer. | Object. | Observed Zenith-Point Correction. | Adopted Zenith-Point Correction. |
|--------------------|----------------|-----------|-----------------------|---|--|--------------------|----------------|-----------|---------------------|---|--|
| 1876. Dec. 21.2 | h. . . | F. | Nadir . . | +1 13.61 | " " | 1876. Dec. 26.9 | h. 16.5 | E. | Nadir . . | +1 12.73 | " " |
| 21.3 | 2.3 | S. | ι Cassiopeæ . | +1 12.74 | +1 14.28 | 27.1 | 21.5 | E. | Nadir . . | +1 11.25 | +1 11.99 |
| 21.4 | 3.3 | S. | α Persei . . | +1 14.18 | | | | | | | |
| 21.5 | 5.0 | S. | η Orionis . . | +1 15.61 | | 27.3 | 2.6 | E. | γ Ceti . . | +1 14.59 | |
| 23.3 | 0.6 | P. | α Cassiopeæ . | +1 12.74 | | 27.3 | 2.9 | E. | α Ceti . . | +1 15.16 | |
| 23.3 | 2.3 | P. | ι Cassiopeæ . | +1 12.40 | | 27.4 | 3.1 | E. | δ Cephei . . | +1 14.40 | +1 14.34 |
| 23.4 | 3.3 | P. | α Persei . . | +1 13.45 | +1 13.44 | 27.4 | 3.3 | E. | α Persei . . | +1 13.78 | |
| 23.4 | 3.6 | P. | δ Persei . . | +1 12.74 | | 27.4 | 3.5 | E. | Nadir . . | +1 14.49 | |
| 23.4 | 4.0 | P. | Nadir . . | +1 13.45 | | | | | | | |
| 26.7 | 10.9 | P. | α Ursæ Maj. . | +1 12.84 | | 31.4 | 4.7 | E. | η Camelop. . | +1 14.44 | |
| 26.7 | 11.5 | P. | ν Leonis . . | +1 13.50 | +1 13.48 | 31.4 | 5.0 | E. | η Orionis . . | +1 15.06 | |
| 26.7 | 12.1 | P. | γ Draconis . | +1 12.60 | | 31.4 | 5.1 | E. | α Aurigæ . . | +1 15.18 | +1 15.11 |
| 26.8 | 13.3 | P. | α Virginis . . | +1 14.64 | | 31.4 | 5.3 | E. | β Tauri . . | +1 14.34 | |
| | | | | | | 31.5 | 6.5 | E. | Nadir . . | +1 15.77 | |

THE MERIDIAN TRANSIT INSTRUMENT.

During the year 1876 this instrument was used for observing stars whose position in declination had been previously determined by the Mural Circle or the Prime Vertical Transit Instrument.

The method of observation was that used in previous years. The transit system consists of five groups or tallies of vertical threads, and in addition to these are three vertical threads movable by a micrometer screw, and two stationary horizontal ones. With the clamp end of the axis to the east, the tallies are named, in the order of the transit of stars above the pole, A, B, C, D, and E.

The tally over which an object has been observed is shown by the inspection of the intervals between the threads. The individual threads of each tally are designated by the numbers 1, 2, 3, 4, and 5, for A, C, and E, 1, 2, and 3, for B and D, respectively. One vertical thread, A₀, is outside of tally A, and another, E₆, is outside of E. These two, with A₅, B₃, C₃, D₁, and E₁, constitute a system over which transits with eye and ear may be conveniently observed.

On the 12th of January, 1871, Mr. GARDNER inserted a new set of threads on a plate scored by Mr. WILLIAM WURDEMAN.

From a number of observations of Polaris, above and below the pole, the equatorial intervals between each thread and the mean of B₁, B₂, B₃, C₁, C₂, C₃, C₄, C₅, D₁, D₂, and D₃, were found to be as follows, the notation corresponding to clamp east:

| Thread. | Interval. | Thread. | Interval. | Thread. | Interval. | Thread. | Interval. | Thread. | Interval. |
|----------------|-----------|----------------|-----------|----------------|-----------|----------------|-----------|----------------|-----------|
| | s. | | s. | | s. | | s. | | s. |
| A ₁ | +37.637 | . | . | C ₁ | +3.200 | D ₁ | -15.046 | E ₁ | -30.198 |
| A ₂ | +35.806 | . | . | C ₂ | +1.665 | D ₂ | -17.571 | E ₂ | -32.702 |
| A ₃ | +34.151 | B ₁ | +19.064 | C ₃ | +0.003 | D ₃ | -19.213 | E ₃ | -34.266 |
| A ₄ | +32.634 | B ₂ | +17.584 | C ₄ | -1.651 | . | . | E ₄ | -35.945 |
| A ₅ | +29.988 | B ₃ | +15.134 | C ₅ | -3.167 | . | . | E ₅ | -37.880 |

The times of transits of all objects more than 5° distant from the pole were recorded by the Howard and Davis chronograph.

INSTRUMENTAL ERRORS.

Aided by a collimating eye-piece, the error of level and collimation were obtained by reversing the instrument over a basin of mercury, and measuring with the micrometer-screw of the eye-piece the distance between the central thread and its image seen

in the mercury. If we represent by $2\mathcal{A}$, the distance of the central thread west of its image when the clamp end of the axis is east; by $2\mathcal{A}^1$, the same quantity, when the clamp is west; by p , the excess of the radius of the clamp pivot divided by the distance between the pivots; and by r , the reduction of the central thread to the mean of the system $B_1, B_2, B_3, C_1, C_2, C_3, C_4, C_5, D_1, D_2, D_3$, and by a the correction for diurnal aberration $= -0^s.016$ in this latitude, we have:

$$\begin{aligned} c &= -\frac{1}{2}(\mathcal{A} - \mathcal{A}^1) - p + r + a, \text{ for clamp east.} \\ c &= -\frac{1}{2}(\mathcal{A} - \mathcal{A}^1) + p - r + a, \text{ for clamp west.} \\ b &= -\frac{1}{2}(\mathcal{A} + \mathcal{A}^1) - p, \text{ for clamp east.} \\ b &= -\frac{1}{2}(\mathcal{A} + \mathcal{A}^1) + p, \text{ for clamp west.} \end{aligned}$$

The value of p , as determined in 1864, was $p = +0^s.008$; the numerical value of r for the current year is $r = -0^s.003$. All the observations for determining the errors of collimation and their results are given in the subjoined table, in which r , the value of a revolution of the micrometer, is $1^s.5865$. When great changes occur in the value of c between consecutive dates, they have been caused by adjustment with the collimating screw.

| Date. | 2Δ | $2\Delta^1$ | C. E. | C. W. | Date. | 2Δ | $2\Delta^1$ | C. E. | C. W. |
|----------|-----------|-------------|---------|---------|----------|-----------|-------------|---------|---------|
| 1876. | r. | r. | s. | s. | 1876. | r. | r. | s. | s. |
| Jan. 21 | - 0.25 | - 0.40 | + 0.051 | - 0.083 | July 13 | - 0.20 | - 0.50 | + 0.093 | - 0.125 |
| Feb. 3 | - 0.11 | - 0.21 | + 0.031 | - 0.063 | Aug. 5 | - 0.19 | - 0.51 | + 0.101 | - 0.133 |
| 20 | - 0.30 | - 0.40 | + 0.031 | - 0.063 | Sept. 27 | 0.00 | - 0.17 | + 0.041 | - 0.073 |
| Mar. 24 | - 0.25 | - 0.35 | + 0.015 | - 0.037 | Oct. 20 | + 0.36 | + 0.14 | + 0.061 | - 0.093 |
| April 10 | - 0.42 | - 0.51 | + 0.027 | - 0.059 | Nov. 6 | + 0.34 | 0.00 | + 0.109 | - 0.141 |
| May 1 | - 0.52 | - 0.75 | + 0.083 | - 0.115 | Dec. 6 | + 0.72 | + 0.47 | + 0.073 | - 0.105 |
| 26 | - 0.95 | - 0.95 | + 0.009 | - 0.023 | 18 | + 0.85 | + 0.50 | + 0.113 | - 0.145 |
| 26 | - 0.75 | - 1.00 | + 0.091 | - 0.123 | 1877. | | | | |
| June 6 | - 0.18 | - 0.56 | + 0.143 | - 0.175 | Jan. 3 | + 0.80 | + 0.63 | + 0.041 | - 0.073 |
| 16 | - 0.10 | - 0.43 | + 0.123 | - 0.155 | | | | | |

When observations to determine the value of c are tolerably accordant on successive dates, a mean is adopted for the whole period of such accordance; and where the differences are too great to permit the inference that they may be due to errors of observation, the changes are assumed to have been uniformly progressive.

The values used in the reductions are stated at the bottom of each page of the printed observations.

The distance which the line of collimation passes from the pole, and the point in which the meridian intercepts the equator are used instead of errors of level and azimuth.

When the error of collimation is known, the first distance is directly obtained by observations of stars very near the pole, and may be represented by n . The second distance is determined by combining the value of n with the error of the level.

Designating the latter by b , the latitude of the Observatory by φ , and representing this second distance by m , we obviously have

$$m = -n \tan \varphi + b \sec \varphi$$

and the correction applicable to the observed transit of any star, to reduce it to the meridian, will be obtained by the formula,

$$\text{Correction} = m + n \tan \delta + c \sec \delta$$

in which δ represents the apparent declination of the star.

An approximate clock-error having been first obtained from one or more equatorial stars, the value of n was determined generally by comparing the time of transit of Polaris, δ Ursæ Minoris, λ Ursæ Minoris, or 51 Cephei, with the right ascension given in the American Ephemeris and Nautical Almanac for the year 1876.

The value of n , found in this manner and used in the reduction of the stars, is published in the table at the bottom of the page of the published Observations, under the head of "Corrections," etc.

It will be readily seen that if m is neither large nor subject to great variation, it will be eliminated through the clock-error. It has not been used separately from the clock-error except when the instrument was used for regulating the mean time of the Observatory, and is therefore not always published in its usual place.

The clock-error was obtained from the corrected transits of one or more of the standard stars whose mean place for 1876 is given in the American Ephemeris.

The apparent place of these stars for the date was taken from the Ephemeris for 1876. The clock used for observing was that of CHARLES FRODSHAM.

EXPLANATION OF THE PRINTED OBSERVATIONS.

Column 1 contains the date and initial letter of the observer's name, the day commencing at apparent noon.

Column 2 contains the name of the object, or its approximate declination.

The following system of nomenclature was adopted. Stars contained in the Catalogue of the British Association are designated in the order of precedence:

1. By the constellation and Bayer letter there given.
2. By the constellation and the Flamsteed number there given.
3. By their number in the catalogue.

Other stars found in published catalogues are designated by the name and number in the catalogue.

Column 3 contains the number for reference.

The following abbreviations occur:

O. Arg. N.—For Oeltzen's Catalogue from Argelander's Northern Zones.

O. Arg. S.—For Oeltzen's Catalogue from Argelander's Southern Zones.

Weisse (2) for Weisse's Catalogue from Bessel's Zones, from 15 to 45 degrees of north declination.

Some anonymous stars, used in the comparisons of the Equatorial, are denominated by a number, followed by the letter W, or the word "Washington."

Columns 4 to 14, inclusive, contain the seconds and tenths of the transits over the several threads, as noted by the observer at the time, or as subsequently read from

the chronographic record; but as there are twenty-one threads, over each of which observations were taken at different times, the numbers over the columns may not represent the thread at which a star was observed, and this can only become known by comparing the observation with the equatorial intervals.

Column 15 contains the minutes, seconds, and decimals of a second obtained by taking the mean of the preceding times of transits over the threads observed.

Column 16 contains the sum of the corrections necessary to reduce the numbers of the preceding column to the clock-time at which the object crossed the great circle passing through the pole, and the point in which the line of collimation intersects the equator.

It consists of two parts:

1. For broken observations of stars, from the mean of the threads $B_1, B_2, B_3, C_1, C_2, C_3, C_4, C_5, D_1, D_2,$ and D_3 , by the formula,

$$R = \text{equatorial interval} \times \sec \delta$$

or, if the star was so near the pole that the difference between the sine and arc of the reduction was sensible,

$$\sin R = \sin \text{equatorial interval} \times \sec \delta.$$

2. The correction for collimation and polar azimuth computed by the formula

$$\text{Correction} = n \tan \delta + c \sec \delta,$$

of which the method of obtaining the factors n and c has already been given.

Column 17 contains the correction for clock-errors, obtained as stated, and brought forward to the instant of observation by the rate.

Column 18 contains the apparent right ascension of the object observed, obtained from the sum of the three columns immediately preceding.

Column 19 contains the corrections applicable to the preceding column to reduce the observations of the stars to their mean places 1876.0, or the instant when the sun's mean longitude was 280° . These were computed from "constants for the reduction of fixed stars," given in the American Ephemeris and Nautical Almanac.

The corrections include no proper motions except those used in the list of time and azimuth stars.

There will be found at the foot of the page the adopted clock and instrumental corrections, observations of the reflected image of the middle thread, position of the clamp E or W., and such notes as the observations called for.

The several observations of each fixed star reduced to its mean place for 1876.0 are collected in pages 459 to 489.

As a general rule, the results for the fundamental stars are not given where there were less than four observations in the group used for determining clock-errors.

The magnitude of each star, when estimated by the observer at the time of observation, is given in the tables.

The observations and reductions of the year with this instrument were made by Prof. M. YARNALL, U. S. N., and the list of mean places found on pages 459 to 489 was made by Prof. H. H. LOCKWOOD and Lieut. E. W. STURDY, U. S. N.

THE XXVI-INCH EQUATORIAL.

The observations with this instrument during the year 1876 consist of observations of double stars, and a series of observations of the satellites of Saturn by Professor HALL; observations of the satellites of Uranus and Neptune by Professors HALL and HOLDEN; and various other observations, such as the discovery and observation of several faint companions of Procyon by Professors HOLDEN and WATSON on January 12; the occultation of Saturn by the moon on August 6 and September 2 by Professor HALL; drawings of Jupiter and observations of several nebulae by Professor HOLDEN; and the discovery of a white spot on the Ball of Saturn by Professor HALL on December 7. The usual observations of the companion of Sirius were also made. During the summer months Professor HOLDEN was absent in Europe, which will account for the fact that no observations were made by him at that time.

The details of the observations of double stars and satellites will be found on pp. 311-387; and the results of these observations are given on pp. 388-399.

In reducing the observations, the value of one revolution of the screw of the micrometer was assumed to be,

$$9''.948;$$

and it has been assumed, also, that this screw is uniform in value of revolution throughout its length, and free from periodical error.

The observations of angle of position and distance were made in the usual manner; the precaution being taken, after each setting of the position circle, and of the micrometer wires, to break up the setting by moving the micrometer several times backward and forward through an arc of thirty or forty degrees, and by moving the wires several revolutions, in order to make the settings as independent as possible. The eye-pieces used were achromatic, made after Steinheil's formula, and are denoted by the symbols, 2 A, 3 A, 5 A, and 6 A. These eye-pieces give on this telescope the magnifying powers 175, 400, 606, and 888.

The form in which the observations are printed is nearly that of the previous years, except that the right ascensions and declinations of the objects observed are omitted from the second column of the detailed observations. This has been done because the double stars are nearly always well-known objects, and, moreover, their positions are given in the order of right ascension in the collected results, pp. 394-399.

In the column of "Observer," in the printed observations, H. denotes Professor HALL, and Hn. Professor HOLDEN. The weights of the observations depend only on the quality of the images; 1 denoting a very poor condition, and 5 a perfect condition of the images.

Since it was deemed important to make an immediate announcement, by direction of Rear-Admiral DAVIS, Superintendent of the Observatory, an account of the discovery and observations of the new companions of Procyon was prepared by Professors HALL and HOLDEN, which was published in the Proceedings of the American Academy of Arts and Sciences, Boston, 1876, p. 185; and also in the *Astronomische Nachrichten*, Band 87, No. 2080. The observations and notes on these companions will be found in this volume as they were made by the various observers. Recent observations have tended to throw some doubt on the existence of these companions; but it was thought best to follow the course adopted, and to leave to the powerful telescopes of the future, and to better atmospheric conditions, the decision of the question as to the reality of the new companions.

The white spot on the Ball of Saturn, discovered by Professor HALL on December 7, was observed by him until January 2, 1877. This spot was also observed by Professor EASTMAN, at Washington, with the 9½-inch Equatorial; by Professor MARIA MITCHELL, at Poughkeepsie; by Professor BOSS, at the Dudley Observatory; by Mr. EDGECOMB, at Hartford, Conn.; and by Mr. A. G. CLARK, at Cambridgeport, Mass. A discussion of the observations, by Professor HALL, was published in *Hendricks' Analyst*, vol. iv, p. 36, and in the *Astronomische Nachrichten*, Band 90, No. 2146. From this discussion it was found that the mean time in which the Ball of Saturn rotates, or the length of Saturn's day, is

$$10^h \ 14^m \ 23^s.8 \pm 2^s.30.$$

The time of this rotation, determined by Sir WILLIAM HERSCHEL in 1794, was

$$10^h \ 16^m \ 0^s.4:$$

and HERSCHEL concluded that his determination could not be in error by as much as two minutes. The result shows that the time of Saturn's rotation generally given in the astronomical text-books as

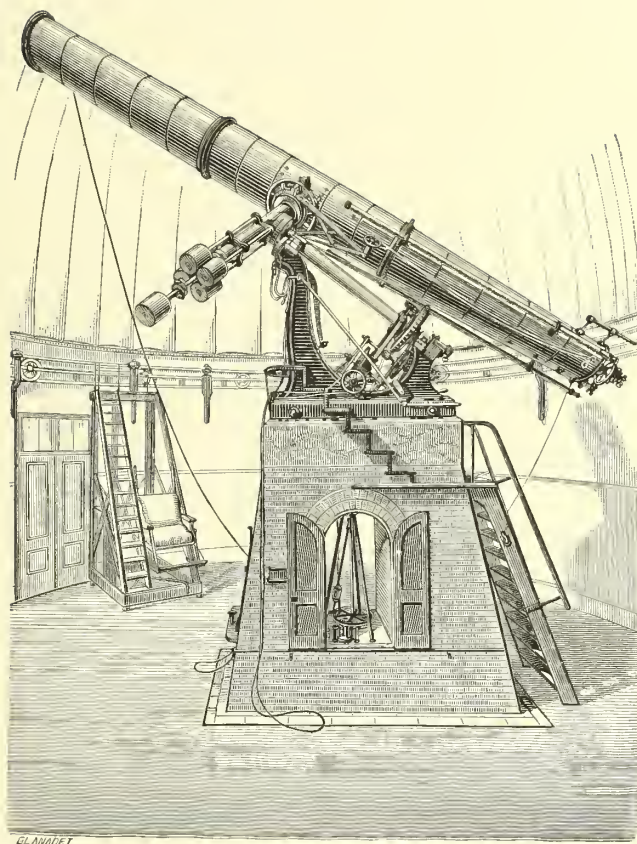
$$10^h \ 29^m \ 16^s.8$$

is erroneous.

The observations of the occultations of Saturn by the moon will be found on p. 400; and the observations of occultations of stars and of Saturn, observed by Professor NEWCOMB and Mr. D. P. TODD, are printed on pp. 401-402.

Several important changes in this instrument were made during this year.

(α) As it was thought that the performance of the objective was not quite so good as when it was first mounted, both surfaces of the flint lens were repolished by Mr. ALVAN CLARK and his son, Mr. ALVAN G. CLARK. This work was done in the dome, and was begun April 20 and finished May 4. There appeared to be a decided improvement in the definition of the glass. During the testing of the objective Mr. GEORGE ANDERSON discovered on April 22 a very faint companion of δ Leonis; and on May 3 Mr. A. G. CLARK found ε Coronæ Borealis to be a difficult double star. While the lenses were separated their radii of curvature were carefully measured with a spherometer by Professor HOLDEN. These measures will be given in Appendix I of the volume for 1877.



XXVI-INCH EQUATORIAL.

(β) In the year 1875 several attempts were made to observe stars for determining the position of this instrument, but the readings of the circles were so confused that nothing certain could be derived from the observations. To remedy this, arrows showing the direction in which the readings should be made were engraved on the verniers of the circle from which the polar distances are read, and the degrees of this circle were numbered by Mr. GARDNER. Arrows were also painted on the holders of the microscopes of the hour circle. After these changes the observations for position of the instrument have been made with ease and certainty.

(γ) During the year 1875 the driving-clock gave much trouble, frequently stopping; and again racing so that no micrometrical measurements could be made. It became evident that the chief difficulty was in the bearing of the shaft of the heavy conical pendulum which rested in a conical cup. In July, 1876, the pendulum was dismounted, and the bearing changed by Mr. GARDNER to a plane agate surface; the lower end of this shaft being turned to a slightly curved surface. The performance of the clock was very much improved; but this clock is of such a complicated construction that it will always need much care.

A description of the 26-inch Equatorial, by Professor HOLDEN, will be found in Appendix I of the Washington Observations for 1874.

OBSERVATIONS

WITH THE

TRANSIT CIRCLE.

1876.

SUMMARY OF THE PRINCIPAL CONSTANTS USED IN REDUCING OBSERVATIONS MADE WITH THE TRANSIT CIRCLE IN 1876.

| | |
|--|--------------------|
| Approximate equatorial interval between any two consecutive vertical threads from I to VII | 12 $\frac{1}{4}$ " |
| One revolution of microscope micrometers | 30" |
| One revolution of the zenith distance micrometer | 15".312 |

Corrections for Inclination and Distance of the Declination Threads.

| From January 12 to April 12. | | | | From April 13 to July 27. | | | |
|------------------------------|--------------------------------|--------------------------|--------------------------|---------------------------|--------------------------------|--------------------------|--------------------------|
| Vertical Thread. | Inclination of Double Threads. | Correction for Thread A. | Correction for Thread B. | Vertical Thread. | Inclination of Double Threads. | Correction for Thread A. | Correction for Thread B. |
| I | — 1.43 | — 2 35.05 | + 2 30.91 | I | — 0.95 | — 2 34.57 | + 2 31.39 |
| II | 0.95 | 34.53 | 31.40 | II | 0 63 | 34.21 | 31.72 |
| III | — 0.48 | 34.00 | 31.89 | III | — 0.32 | 33.84 | 32.05 |
| IV | 0.00 | 33.48 | 32.38 | IV | 0.00 | 33.48 | 32.38 |
| V | + 0.48 | 32.96 | 32.88 | V | + 0.32 | 33.12 | 32.72 |
| VI | 0.95 | 32.43 | 33.37 | VI | 0.63 | 32.75 | 33.05 |
| VII | + 1.43 | — 2 31.91 | + 2 33.86 | VII | + 0.95 | — 2 32.39 | + 2 33.38 |

| From July 28 to December 31. | | | |
|------------------------------|--------------------------------|--------------------------|--------------------------|
| Vertical Thread. | Inclination of Double Threads. | Correction for Thread A. | Correction for Thread B. |
| I | — 1.06 | — 2 34.68 | + 2 31.28 |
| II | 0.71 | 34.28 | 31.65 |
| III | — 0.35 | 33.88 | 32.02 |
| IV | 0.00 | 33.48 | 32.38 |
| V | + 0.35 | 33.08 | 32.75 |
| VI | 0.71 | 32.68 | 33.12 |
| VII | + 1.06 | — 2 32.28 | + 2 33.49 |

| | | | |
|--|---|--|-----------------|
| Constant | { Added to reduction to meridian | | |
| | { Subtracted from zenith point correction | | 1".80 |
| Adopted latitude of the Transit Circle | | | +38° 53' 38".80 |
| One division of the hanging level | | | 0".058 |
| Position of the instrument | | | Clamp west. |

Circle B, on the east end of the axis was used this year in observing; the reading of its horizontal microscope being 48".0 when the telescope was pointed to the zenith.

In reversing the instrument, the notation of the vertical threads is also reversed, so that the first thread reached by an equatorial star is always called thread I.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. | | |
|---------|---------|-------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|--------------|---------|----------------|---------------------------|----------------------------|----------------|----|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | | | Clock adopted. | |
| 1876. | | | | | | | | | | | m. | s. | s. | s. | s. | h. | m. | s. | s. |
| Jan. 12 | 1 | β Orionis | S. | 32.0 | 34.6 | 36.2 | 42.5 | 44.5 | 46.4 | 52.5 | 54.1 | 56.8 | 8 44.38 | + 0.36 | - 8.74 | - 8.71 | 5 8 36.03 | + 0.03 | |
| | 2 | β Tauri | S. | 23.0 | 25.8 | 27.6 | 34.7 | 37.0 | 39.2 | 46.1 | 48.0 | 50.9 | 18 36.92 | + 0.40 | - 8.71 | - 8.71 | 5 18 28.61 | - 0.02 | |
| | 3 | δ Orionis | S. | 37.7 | 40.2 | 41.8 | 47.9 | 50.0 | 52.0 | 58.0 | 59.6 | 2.2 | 25 49.93 | + 0.36 | - 8.67 | - 8.71 | 5 25 41.58 | - 0.07 | |
| | 4 | ϵ Orionis | S. | 52.8 | 55.4 | 56.8 | 2.9 | 5.0 | 7.0 | 13.0 | 14.7 | 17.2 | 30 4.98 | + 0.36 | - 8.64 | - 8.72 | 5 29 56.62 | + 0.01 | |
| | 5 | α Orionis | S. | .. | .. | .. | .. | .. | .. | 45.5 | 47.0 | 49.6 | 48 37.25 | + 0.36 | - 8.74 | - 8.72 | 5 48 28.89 | - 0.01 | |
| | 6 | δ Ursæ Minoris, S.P. | S. | .. | 53.0 | 36.5 | 43.5 | 9.0 | 34.0 | 52.0 | 25.0 | 42.0 | 12 9.02 | - 3.64 | .. | - 8.73 | 18 11 56.65 | - 0.25 | |
| | 7 | δ Cephei | S. | 5.0 | 58.5 | 30.0 | 37.5 | 19.5 | 2.0 | 8.5 | 39.5 | 34.0 | 42 19.39 | + 4.84 | .. | - 8.74 | 6 42 15.49 | - 0.09 | |
| | 8 | δ Argus | S. | 14.9 | 16.9 | 21.1 | 23.4 | 25.6 | 27.8 | 30.0 | 34.4 | 36.2 | 2 25.57 | + 0.37 | - 8.71 | - 8.76 | 8 2 17.18 | - 0.11 | |
| | 9 | ϵ Hydræ | S. | 10.0 | 12.5 | 14.0 | 20.3 | 22.4 | 24.5 | 30.6 | 32.1 | 34.8 | 40 22.36 | + 0.36 | - 8.76 | - 8.77 | 8 40 13.95 | - 0.05 | |
| | 10 | α Hydræ | S. | 27.0 | 29.6 | 31.2 | 37.4 | 39.4 | 41.4 | 47.5 | 49.1 | 51.7 | 21 39.37 | + 0.36 | - 8.88 | - 8.79 | 9 21 30.94 | + 0.06 | |
| | 11 | Uranus | S. | 32.9 | 35.6 | 37.2 | 43.6 | 45.8 | 47.9 | 54.0 | 55.5 | 58.5 | 26 45.70 | + 0.37 | .. | - 8.80 | 9 26 37.27 | .. | |
| | 12 | Moon II, S. | S. | .. | .. | 36.9 | 39.2 | 41.4 | 43.5 | 45.8 | .. | .. | 37 41.36 | + 0.38 | .. | - 8.80 | 9 37 32.94 | - 71.19 | |
| | 13 | α Herculis | P. | 54.5 | 57.2 | 58.6 | 5.0 | 7.1 | 9.3 | 15.5 | 17.0 | 19.6 | 9 7.09 | + 0.20 | - 8.67 | - 8.68 | 17 8 58.61 | + 0.01 | |
| | 14 | α Ophiuchi | P. | 5.5 | 8.2 | 9.8 | 16.0 | 18.2 | 20.3 | 26.6 | 28.1 | 30.7 | 29 18.16 | + 0.18 | - 8.70 | - 8.68 | 17 29 9.66 | + 0.05 | |
| | 15 | μ Herculis | P. | 29.6 | 32.6 | 34.4 | 41.1 | 43.4 | 45.8 | 52.6 | 54.5 | 57.4 | 41 43.50 | + 0.30 | - 8.70 | - 8.68 | 17 41 35.12 | + 0.02 | |
| | 16 | α Lyræ | P. | 35.3 | 38.6 | 40.5 | 48.4 | 51.0 | 53.7 | 1.4 | 3.4 | 6.7 | 32 51.00 | + 0.42 | - 8.67 | - 8.68 | 18 32 42.74 | + 0.01 | |
| | 17 | δ Draconis | P. | 3.3 | 10.0 | 13.6 | 29.8 | 35.0 | 40.4 | 45.6 | 4.3 | 7.0 | 12 35.09 | + 1.20 | .. | - 8.68 | 19 12 27.61 | + 0.25 | |
| 13 | 18 | ϵ Ursæ Minoris. . . | E. | .. | .. | 11.6 | 27.0 | 41.8 | 56.9 | 12.4 | .. | .. | 59 41.92 | + 3.96 | .. | - 8.79 | 16 58 37.09 | - 0.37 | |
| | 19 | α Herculis | E. | .. | .. | 3.1 | 5.3 | 7.4 | 9.5 | 11.6 | .. | .. | 9 7.38 | + 0.08 | - 8.82 | - 8.80 | 17 8 58.66 | + 0.04 | |
| | 20 | β Draconis | E. | 24.4 | 28.5 | 31.0 | 41.2 | 44.5 | 47.9 | 57.8 | 0.5 | 4.6 | 27 44.49 | + 0.59 | .. | - 8.80 | 17 27 36.28 | + 0.20 | |
| | 21 | α Ophiuchi | E. | 5.7 | 8.5 | 10.0 | 16.4 | 18.4 | 20.5 | 26.8 | 28.3 | 30.9 | 29 18.39 | + 0.06 | - 8.78 | - 8.80 | 17 29 9.65 | + 0.01 | |
| | 22 | B. A. C. 5996 . . . | E. | 16.3 | 18.9 | 20.5 | 26.6 | 28.6 | 30.6 | 36.8 | 38.4 | 40.9 | 37 28.02 | + 0.01 | .. | - 8.80 | 17 37 19.83 | + 1.07 | |
| | 23 | μ Herculis | E. | .. | .. | 39.0 | 41.4 | 43.7 | 46.1 | 48.4 | .. | .. | 41 43.72 | + 0.20 | - 8.80 | - 8.81 | 17 41 35.11 | - 0.01 | |
| | 24 | δ Ursæ Minoris. . . | E. | .. | .. | 47.0 | 22.0 | 56.0 | .. | 5.0 | .. | .. | 11 56.08 | + 9.36 | .. | - 8.82 | 18 11 56.62 | - 0.38 | |
| | 25 | α Lyræ | E. | 35.6 | 38.9 | 40.8 | 48.5 | 51.2 | 54.0 | 1.8 | 3.7 | 6.9 | 32 51.27 | + 0.33 | - 8.83 | - 8.83 | 18 32 42.77 | + 0.02 | |
| 14 | 26 | Sun I, N. | E. | 7.0 | 9.6 | 11.5 | 18.0 | 20.3 | 22.5 | 28.9 | 30.6 | 33.4 | 42 20.20 | - 0.16 | .. | - 8.86 | 19 42 11.18 | .. | |
| | 27 | Sun II, S. | E. | .. | .. | 36.0 | 38.2 | 40.5 | 42.7 | 44.9 | .. | .. | 44 40.40 | - 0.16 | .. | - 8.86 | 19 44 31.44 | .. | |
| | 28 | Venus I, N. | E. | 2.5 | 5.3 | 6.8 | 13.4 | 15.4 | 17.7 | 24.0 | 25.6 | 28.3 | 38 15.44 | - 0.12 | .. | - 8.91 | 21 38 6.41 | + 0.42 | |
| | 29 | δ Ursæ Minoris, S.P. | E. | .. | .. | .. | .. | .. | 58.5 | 31.5 | 50.0 | .. | 12 16.13 | - 10.53 | .. | - 9.15 | 18 11 56.45 | - 0.60 | |
| | 30 | Julia | E. | 12.0 | 15.3 | 17.3 | 24.7 | 27.3 | 30.0 | 37.7 | 39.6 | 43.0 | 12 27.43 | + 0.38 | .. | - 9.15 | 6 12 18.66 | .. | |
| | 31 | γ Geminorum | E. | 30.5 | 33.3 | 34.8 | 41.1 | 43.2 | 45.5 | 51.9 | 53.5 | 56.1 | 30 43.32 | + 0.15 | - 9.05 | - 9.15 | 6 30 34.32 | - 0.13 | |
| | 32 | α Canis Majoris . . . | E. | 38.7 | 41.4 | 43.2 | 49.5 | 51.7 | 53.8 | 0.2 | 1.8 | 4.5 | 39 51.64 | - 0.09 | - 9.24 | - 9.14 | 6 39 42.41 | + 0.02 | |
| | 33 | δ Cephei | E. | .. | .. | 31.0 | 13.5 | 57.5 | 39.0 | 2.5 | 32.5 | 28.5 | 42 13.53 | + 12.53 | .. | - 9.14 | 6 42 16.92 | + 1.37 | |
| | 34 | Hesperia | E. | 22.3 | 25.2 | 27.0 | 33.0 | 35.1 | 37.2 | 43.4 | 44.8 | 47.6 | 58 35.07 | + 0.09 | .. | - 9.14 | 6 58 26.02 | .. | |
| | 35 | Melste | E. | 41.7 | 43.8 | 45.8 | .. | .. | .. | 2.0 | 3.8 | 6.5 | 11 53.93 | + 0.11 | .. | - 9.13 | 7 11 44.91 | .. | |
| | 36 | α Canis Minoris (R.) | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| | 37 | Ariadne | E. | 27.1 | 29.8 | 31.5 | 38.0 | 40.0 | 42.0 | 48.4 | 50.0 | 52.5 | 16 39.92 | + 0.15 | .. | - 9.10 | 8 16 30.97 | .. | |
| | 38 | ϵ Hydræ (R.) | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| | 39 | ϵ Hydræ | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| | 40 | σ^2 Ursæ Majoris (R.) | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| | 41 | σ^2 Ursæ Majoris . . . | E. | .. | .. | .. | .. | .. | .. | 0.8 | 5.0 | 11.9 | 59 39.57 | + 1.36 | .. | - 9.08 | 8 59 31.85 | - 0.08 | |
| | 42 | Aegina | E. | .. | .. | 16.6 | 19.2 | 21.2 | 23.9 | 26.0 | .. | .. | 8 21.38 | + 0.18 | .. | - 9.08 | 9 8 12.48 | .. | |
| | 43 | Harmonia | E. | 20.3 | 23.0 | 24.6 | 31.4 | 33.5 | 35.6 | 42.0 | 43.9 | 46.3 | 19 33.40 | + 0.18 | .. | - 9.08 | 9 19 24.50 | .. | |
| | 44 | Uranus I, N. | E. | 15.3 | 17.9 | 19.6 | .. | .. | .. | 36.5 | 38.0 | 40.8 | 26 28.02 | + 0.18 | .. | - 9.07 | 9 26 19.10 | .. | |
| | 45 | Uranus II, S. | E. | .. | .. | .. | 26.4 | 28.4 | 30.5 | 32.6 | .. | .. | 26 28.41 | + 0.15 | .. | - 9.07 | 9 26 19.49 | .. | |
| | 46 | 9 Draconis (R.) . . . | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| | 47 | 9 Draconis | E. | .. | .. | .. | .. | 51.8 | 0.9 | 18.0 | 24.5 | 35.1 | 24 43.35 | + 2.38 | .. | - 9.05 | 10 24 36.68 | - 0.22 | |
| | 48 | 226 Cephei, S. P. . . | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| | 49 | 7 Leonis | E. | 41.9 | 44.6 | 46.0 | 52.3 | 54.4 | 56.4 | 2.7 | 4.6 | 6.9 | 42 54.40 | + 0.11 | - 9.05 | - 9.04 | 10 42 45.47 | + 0.01 | |
| | 50 | 1 Cephei, S. P. . . . | E. | 47.2 | 43.3 | 33.8 | 28.6 | 3.6 | 18.7 | 13.7 | 5.9 | 0.2 | 45 23.67 | - 1.58 | .. | - 9.04 | 22 45 13.05 | + 0.21 | |

6. Bisections at threads B₁ and C
 11, 48. Thread B used.
 12, 17, 19. Bisections at sets B and D.
 18. Bisections at set C.
 33. Bisections at C₁ and D.
 34, 35, 37, 42, 43, 44, 45. Thread A used.
 40, 46. Bisections at threads II and III.
 41, 42. Bisections at threads V and VI.
 42. Telescope micrometer reading decreased one revolution in reduction.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom ^r . | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | |
| | | r. " | " | " | " | | | | | | | " | " | " | " | " | " |
| 1 | 312 42 | 10 2.4 | 3.5 | 27.5 | 7.2 | 32 | .. | 350 | .. | 218 | .. | 68.1 | 47 13 14.3 | .. | + 1 6.6 | 98 20 42.1 | - 1.0 |
| 2 | 349 32 | 3.3 | 1.7 | 27.5 | 5.1 | 32 | .. | 310 | .. | 275 | .. | 68.1 | 10 23 14.0 | 23.8 | + 11.3 | 61 29 46.5 | - 0.3 |
| 3 | 320 40 | 9 26.1 | 25.5 | 21.1 | 0.4 | 36 | .. | 733 | .. | 616 | .. | 68.1 | 39 16 14.8 | .. | + 50.5 | 90 23 26.5 | - 1.6 |
| 4 | 319 46 | 10 4.6 | 5.2 | 1.5 | 8.0 | 33 | .. | 670 | .. | 520 | .. | 68.1 | 40 9 36.6 | .. | + 52.1 | 91 16 49.9 | - 2.5 |
| 5 | 328 26 | 4.6 | 4.0 | 29.0 | 7.0 | 35 | .. | 022 | .. | .. | .. | 68.1 | 31 29 56.4 | .. | + 37.9 | 82 36 55.5 | - 1.9 |
| 6 | 54 24 | 1.0 | 2.2 | 25.3 | 2.3 | 32 | 888 | .. | .. | .. | 732 | 68.1 | 305 31 19.1 | .. | - 1 26.5 | 356 36 13.8 | + 0.2 |
| 7 | 48 16 | 5.3 | 4.2 | 0.4 | 5.1 | 37 | 440 | .. | 454 | .. | .. | 68.1 | 311 40 34.6 | .. | - 1 9.5 | 2 45 46.3 | - 1.1 |
| 8 | 297 8 | 4.8 | 5.6 | 2.0 | 7.0 | 36 | .. | 740 | .. | 552 | .. | 68.1 | 62 48 23.3 | 21.4 | + 2 0.5 | 113 56 45.0 | - 1.3 |
| 9 | 327 56 | 2.9 | 3.0 | 28.5 | 6.4 | 37 | .. | 522 | .. | 410 | .. | 68.1 | 32 0 33.8 | .. | + 38.9 | 83 7 33.9 | - 2.0 |
| 10 | 312 56 | 2.6 | 4.0 | 29.3 | 7.2 | 34 | .. | 414 | .. | 272 | .. | 68.1 | 46 59 46.5 | .. | + 1 6.8 | 98 7 14.5 | - 1.1 |
| 11 | 336 56 | 3.6 | 3.0 | 27.9 | 5.8 | 36 | .. | 990 | .. | 832 | .. | 68.1 | 23 2 57.7 | .. | + 26.5 | 74 9 45.4 | .. |
| 12 | 338 12 | 1.8 | 1.2 | 25.1 | 3.3 | 39 | 370 | .. | 518 | .. | 690 | 68.1 | 21 45 3.0 | 20.4 | + 24.9 | 72 51 49.1 | .. |
| 13 | 335 34 | 0.9 | 0.9 | 26.4 | 3.2 | 33 | .. | 080 | .. | 985 | .. | 69.3 | 24 21 24.8 | 23.1 | + 28.2 | 75 28 14.2 | 0.0 |
| 14 | 333 42 | 9 27.7 | 26.7 | 23.4 | 1.2 | 36 | 590 | .. | 390 | 360 | .. | 69.3 | 26 14 14.4 | .. | + 30.7 | 77 21 6.3 | 0.0 |
| 15 | 348 50 | 23.8 | 22.4 | 17.2 | 25.2 | 36 | .. | 055 | .. | 900 | .. | 69.3 | 11 6 1.8 | .. | + 12.2 | 62 12 35.2 | + 0.8 |
| 16 | 359 42 | 10 3.0 | 3.8 | 28.5 | 8.1 | 34 | 085 | 095 | .. | 995 | 970 | 69.3 | 0 13 43.5 | 25.4 | + 0.2 | 51 20 4.9 | + 0.9 |
| 17 | 28 28 | 14.5 | 13.5 | 9.5 | 16.8 | 33 | 525 | .. | 500 | .. | 425 | 69.3 | 331 27 45.0 | .. | - 33.6 | 22 33 32.6 | - 2.0 |
| 18 | 43 16 | 5.0 | 3.5 | 0.2 | 7.0 | 37 | 770 | .. | .. | .. | 740 | 70.4 | 316 40 41.9 | 23.5 | - 58.8 | 7 46 4.3 | + 0.6 |
| 19 | 335 34 | 0.2 | 0.7 | 26.7 | 5.3 | 33 | .. | 000 | .. | 930 | .. | 70.4 | 24 21 25.3 | .. | - 28.2 | 75 28 14.7 | + 0.3 |
| 20 | 13 26 | 3.3 | 2.2 | 29.5 | 5.5 | 37 | .. | 505 | .. | 510 | .. | 70.4 | 346 30 37.6 | .. | - 14.9 | 37 36 43.9 | + 2.6 |
| 21 | 333 42 | 9 26.7 | 25.0 | 22.7 | 29.3 | 36 | .. | .. | .. | 415 | .. | 70.4 | 26 14 14.3 | .. | + 30.7 | 77 21 6.2 | - 0.4 |
| 22 | 325 40 | 26.3 | 26.5 | 23.0 | 2.0 | 35 | .. | 180 | .. | 105 | .. | 70.4 | 34 15 54.1 | .. | + 42.3 | 85 22 57.6 | - 12.8 |
| 23 | 348 50 | 28.0 | 26.6 | 23.0 | 0.7 | 35 | .. | .. | .. | 560 | 550 | 70.4 | 11 6 2.7 | .. | + 12.2 | 62 12 36.1 | + 1.5 |
| 24 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 25 | 359 42 | 28.6 | 28.3 | 25.7 | 1.5 | 34 | 365 | 350 | .. | 295 | 235 | 70.4 | 0 13 44.1 | 27.0 | + 0.2 | 51 20 5.5 | + 1.2 |
| 26 | 300 0 | 21.2 | 22.2 | 19.0 | 27.7 | 34 | 805 | 745 | .. | .. | .. | 70.4 | 59 55 43.1 | 29.0 | + 1 45.9 | 111 3 50.2 | .. |
| 27 | 299 28 | 10 0.0 | 0.3 | 28.0 | 3.2 | 36 | .. | .. | .. | 190 | 140 | 70.4 | 60 28 15.1 | .. | + 1 48.2 | 111 36 24.5 | .. |
| 28 | 305 10 | 9 28.2 | 28.0 | 26.8 | 2.5 | 32 | .. | 625 | .. | 640 | .. | 70.4 | 54 45 18.2 | .. | + 1 27.3 | 105 53 6.7 | .. |
| 29 | 54 24 | 10 6.0 | 5.0 | 28.3 | 5.3 | 32 | .. | .. | .. | 250 | 325 | 71.6 | 305 31 18.4 | .. | - 1 27.0 | 356 36 12.6 | - 0.2 |
| 30 | 357 40 | 9 29.8 | 28.2 | 24.3 | 2.6 | 31 | .. | 235 | .. | 135 | .. | 71.6 | 2 14 57.4 | 22.5 | + 2.4 | 53 21 21.0 | - 0.2 |
| 31 | 337 34 | 29.5 | 28.2 | 24.4 | 1.7 | 39 | .. | 030 | .. | 900 | .. | 71.6 | 22 22 56.1 | .. | + 25.6 | 73 20 42.9 | + 2.1 |
| 32 | 304 30 | 29.5 | 28.2 | 25.3 | 3.2 | 31 | .. | 266 | .. | 060 | .. | 71.6 | 55 24 57.1 | .. | + 1 30.2 | 106 32 48.5 | + 0.2 |
| 33 | 48 16 | 10 6.9 | 6.6 | 1.5 | 8.2 | 37 | .. | .. | 150 | .. | 895 | 71.6 | 311 40 34.7 | .. | - 1 9.9 | 2 45 46.0 | - 0.6 |
| 34 | 330 6 | 5.6 | 5.8 | 2.0 | 10.3 | 37 | .. | 995 | .. | 875 | .. | 71.6 | 29 48 14.3 | .. | + 35.7 | 80 55 11.2 | - 2.9 |
| 35 | 331 54 | 3.5 | 3.3 | 29.3 | 6.3 | 39 | .. | 330 | .. | 540 | .. | 71.6 | 28 0 34.5 | .. | + 33.2 | 79 7 28.9 | - 1.8 |
| 36 | 213 16 | 7.2 | 10.2 | 5.3 | 8.3 | 33 | 160 | 105 | .. | .. | .. | 71.6 | 146 39 34.8 | .. | - 41.0 | 84 27 27.4 | - 0.4 |
| 37 | 337 28 | 4.6 | 4.6 | 0.0 | 8.5 | 37 | .. | 270 | .. | 100 | .. | 71.6 | 22 26 1.4 | 20.5 | + 25.8 | 73 32 48.4 | - 2.1 |
| 38 | 211 56 | 7.3 | 8.2 | 4.3 | 7.5 | 32 | 510 | 435 | .. | .. | .. | 71.6 | 147 59 23.7 | .. | - 39.1 | 83 7 36.6 | + 0.4 |
| 39 | 327 56 | 1.3 | 28.7 | 24.5 | 28.3 | 37 | .. | .. | .. | 475 | 425 | 71.6 | 32 0 33.8 | .. | + 39.1 | 83 7 34.1 | - 2.1 |
| 40 | 151 12 | 3.8 | 1.3 | 27.3 | 3.0 | 35 | 010 | 800 | .. | .. | .. | 71.6 | 208 43 55.5 | .. | + 34.3 | 22 21 51.4 | - 4.2 |
| 41 | 28 40 | 9 26.4 | 24.3 | 19.5 | 27.0 | 35 | .. | .. | .. | 800 | 840 | 71.6 | 331 16 4.9 | .. | - 34.3 | 22 21 51.8 | - 3.8 |
| 42 | 340 50 | 26.3 | 25.5 | 21.7 | 0.9 | 31 | .. | .. | .. | 575 | 625 | 71.6 | 19 2 13.0 | .. | + 21.6 | 70 8 55.8 | - 2.0 |
| 43 | 340 48 | 10 2.7 | 3.4 | 28.0 | 3.6 | 36 | .. | 920 | .. | 750 | .. | 71.6 | 19 5 53.5 | .. | + 21.7 | 70 12 36.4 | - 2.1 |
| 44 | 336 54 | 0.0 | 28.8 | 25.3 | 3.1 | 43 | 225 | .. | .. | .. | 085 | 71.6 | 23 1 27.8 | .. | + 26.6 | 74 8 15.6 | .. |
| 45 | 336 54 | 0.0 | 28.8 | 25.3 | 3.1 | 43 | .. | 505 | .. | 370 | .. | 71.6 | 23 1 32.0 | .. | + 26.6 | 74 8 19.8 | .. |
| 46 | 142 30 | 9 25.5 | 26.5 | 21.5 | 27.3 | 37 | 210 | 170 | .. | .. | .. | 71.6 | 217 26 21.1 | .. | + 48.1 | 13 39 9.0 | - 0.9 |
| 47 | 37 22 | 25.5 | 23.0 | 20.2 | 27.0 | 33 | .. | .. | .. | 890 | 800 | 71.6 | 322 33 36.5 | .. | - 48.1 | 13 39 9.6 | - 0.3 |
| 48 | 65 26 | 28.9 | 26.3 | 23.1 | 28.2 | 30 | 765 | .. | .. | .. | .. | 71.6 | 294 31 19.9 | .. | - 2 17.1 | 345 35 24.0 | + 0.8 |
| 49 | 332 16 | 10 1.3 | 0.7 | 28.3 | 3.6 | 39 | .. | 620 | .. | 455 | .. | 71.6 | 27 41 7.4 | .. | + 33.0 | 78 48 1.6 | + 1.5 |
| 50 | 75 26 | 2.5 | 29.5 | 24.0 | 2.0 | 33 | 020 | .. | .. | .. | 060 | 71.6 | 284 30 42.8 | .. | - 3 59.7 | 335 33 4.3 | - 0.3 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " | " | " | " |
| 2 | 30.08 | 26.0 | 11 | - 0.2 | .. | .. | - 0.2 |
| 8 | 30.13 | 23.5 | 12 | - 21 54.9 | - 16 17.6 | .. | - 38 12.5 |
| 12 | 30.17 | 22.3 | 26 | - 7.8 | + 16 17.2 | .. | + 16 9.4 |
| 13 | 30.32 | 24.1 | 27 | - 7.8 | - 16 17.2 | .. | - 16 25.0 |
| 16 | 30.30 | 26.6 | 28 | - 5.0 | + 5.9 | .. | + 1.0 |
| 18 | 30.38 | 23.5 | 44 | - 0.2 | + 2.1 | .. | + 1.9 |
| 25 | 30.36 | 27.5 | 45 | - 0.2 | - 2.1 | .. | - 2.3 |
| 26 | 30.30 | 30.5 | | | | | |
| 30 | 30.25 | 26.5 | | | | | |
| 37 | 30.25 | 25.0 | | | | | |

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|------------------|---------|-----------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | |
| | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| 1876. Jan. 14 | 1 | a Ursæ Majoris (R.) | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 2 | a Ursæ Majoris | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 7 40.68 | + 0.20 | - 8.97 | - 9.03 | 11 7 31.85 | - 0.12 |
| | 3 | δ Leonis | E. | .. | .. | 36.4 | 38.5 | 40.6 | 42.8 | 45.1 | .. | .. | .. | .. | .. | .. | 11 13 9.35 | + 0.02 |
| | 4 | δ Crateris | E. | 5.8 | 8.5 | 10.0 | 16.4 | 18.5 | 20.5 | 26.8 | 28.5 | 31.0 | 13 18.44 | - 0.07 | - 9.06 | - 9.02 | 11 23 41.36 | + 65.51 |
| | 5 | Moon II, S. | E. | 37.8 | 40.4 | 42.0 | 48.2 | 50.3 | 52.3 | 58.7 | 0.3 | 2.9 | 23 50.32 | + 0.06 | .. | - 9.02 | .. | .. |
| | 6 | B. A. C. 3934 | E. | 26.0 | 28.4 | 33.3 | 35.0 | 37.9 | 40.4 | 42.8 | 47.8 | 49.6 | 28 38.04 | - 0.19 | .. | - 9.02 | 11 28 28.83 | - 0.61 |
| | 7 | B. A. C. 3948 | E. | 47.7 | 50.9 | 52.6 | 59.8 | 2.2 | 4.7 | 11.9 | 13.7 | 16.8 | 31 2.26 | - 0.19 | .. | - 9.02 | 11 30 53.05 | - 0.56 |
| | 8 | β Leonis | E. | 41.0 | 43.7 | 45.5 | 51.8 | 53.9 | 56.0 | 2.3 | 3.8 | 6.6 | 42 53.84 | + 0.14 | - 9.03 | - 9.01 | 11 42 44.97 | 0.00 |
| | 9 | ε Ursæ Minoris | S. | 16.0 | 35.0 | 46.2 | 31.9 | 46.8 | 1.7 | 46.9 | 58.0 | 17.3 | 58 46.64 | - 0.30 | .. | - 8.40 | 16 58 37.94 | - 0.09 |
| | 10 | a Ophiuchi | S. | 5.4 | 7.5 | 9.4 | 15.9 | 18.0 | 20.1 | 26.2 | 27.8 | 30.4 | 29 17.86 | + 0.34 | - 8.38 | - 8.40 | 17 29 9.80 | + 0.01 |
| | 11 | μ Herculis | S. | 29.5 | 32.5 | 34.1 | 41.2 | 43.3 | 45.7 | 52.6 | 54.2 | 57.3 | 41 43.38 | + 0.20 | - 8.41 | - 8.39 | 17 41 35.28 | + 0.02 |
| | 12 | B. A. C. 6082 | S. | .. | .. | 1.8 | 4.5 | 7.0 | 9.5 | 12.0 | .. | .. | 52 6.96 | + 0.25 | .. | - 8.39 | 17 51 58.82 | + 1.31 |
| | 13 | δ Ursæ Minoris | S. | .. | .. | 48.0 | 57.5 | 33.0 | 6.5 | 41.5 | .. | .. | 12 6.60 | - 1.19 | .. | - 8.39 | 18 11 57.02 | - 0.70 |
| | 14 | B. A. C. 1368 | S. | 28.6 | 31.6 | 33.5 | 41.3 | 43.7 | 46.3 | 53.8 | 55.6 | 58.8 | 18 43.69 | + 0.58 | .. | - 8.30 | 4 18 35.97 | + 1.30 |
| | 15 | ε Tauri | S. | 21.3 | 23.0 | 27.3 | 29.4 | 31.7 | 33.7 | 35.9 | 40.0 | 41.8 | 21 31.57 | + 0.32 | - 8.28 | - 8.30 | 4 21 23.59 | - 0.03 |
| | 16 | a Tauri | S. | 44.7 | 47.3 | 48.8 | 55.3 | 57.5 | 59.5 | 5.9 | 7.4 | 10.0 | 28 57.38 | + 0.33 | - 8.29 | - 8.30 | 4 28 49.41 | - 0.03 |
| | 17 | B. A. C. 1440 | S. | 10.3 | 13.3 | 15.0 | 22.3 | 24.6 | 27.2 | 34.3 | 36.0 | 38.9 | 32 24.66 | + 0.54 | .. | - 8.30 | 4 32 16.90 | - 1.28 |
| | 18 | ι Aurigæ | S. | 49.8 | 52.9 | 54.7 | 2.0 | 4.4 | 6.9 | 14.2 | 16.0 | 19.2 | 49 4.46 | + 0.27 | - 8.33 | - 8.30 | 4 48 56.43 | - 0.01 |
| | 19 | B. A. C. 1666 | S. | 46.8 | 50.0 | 51.7 | 59.4 | 1.9 | 4.3 | 11.8 | 13.5 | 16.7 | 16 1.79 | + 0.57 | .. | - 8.29 | 5 15 54.07 | - 1.48 |
| | 20 | B. A. C. 1694 | S. | .. | .. | 26.5 | 29.2 | 31.7 | 34.0 | 36.8 | .. | .. | 19 31.64 | + 0.60 | .. | - 8.29 | 5 19 23.95 | - 1.53 |
| | 21 | B. A. C. 1724 | S. | 52.5 | 55.9 | 57.8 | 5.5 | 7.9 | 10.6 | 18.0 | 20.1 | 23.3 | 24 7.96 | + 0.60 | .. | - 8.29 | 5 24 0.37 | - 1.54 |
| | 22 | B. A. C. 1767 | S. | 10.2 | 12.9 | 14.6 | 21.2 | 23.4 | 25.6 | 32.0 | 33.7 | 36.6 | 30 23.36 | + 0.31 | .. | - 8.29 | 5 30 15.38 | - 1.36 |
| | 23 | B. A. C. 1825 | S. | 17.6 | 20.8 | 22.8 | 30.7 | 33.5 | 36.2 | 44.0 | 46.0 | 49.4 | 39 33.44 | + 0.61 | .. | - 8.29 | 5 39 25.76 | - 1.62 |
| | 24 | B. A. C. 1842 | S. | 14.0 | 17.0 | 22.1 | 25.0 | 27.8 | 30.4 | 32.8 | 38.0 | 40.3 | 41 27.59 | + 0.61 | .. | - 8.29 | 5 41 19.91 | - 1.62 |
| | 25 | B. A. C. 1897 | S. | 21.2 | 24.2 | 26.1 | 43.5 | 45.9 | 48.5 | 55.8 | 57.6 | 0.6 | 48 45.93 | + 0.56 | .. | - 8.29 | 5 48 38.20 | - 1.54 |
| | 26 | B. A. C. 1976 | S. | 29.8 | 33.0 | 34.8 | 42.4 | 44.8 | 47.2 | 54.5 | 56.6 | 59.7 | 2 44.76 | + 0.57 | .. | - 8.29 | 6 2 37.04 | - 1.57 |
| | 27 | B. A. C. 1996 | S. | 0.2 | 3.3 | 5.3 | 12.7 | 15.3 | 17.7 | 25.0 | 27.0 | 30.3 | 6 15.20 | + 0.57 | .. | - 8.29 | 6 6 7.48 | - 1.58 |
| | 28 | δ Ursæ Minoris, S. P. | S. | .. | .. | 12.5 | 37.5 | 4.5 | 29.5 | 5.5 | .. | .. | 12 3.84 | + 1.68 | .. | - 8.29 | 18 11 57.23 | - 0.54 |
| | 29 | B. A. C. 2098 | S. | .. | .. | 52.2 | 54.9 | 57.3 | 0.2 | 3.0 | .. | .. | 21 57.52 | + 0.63 | .. | - 8.29 | 6 21 49.86 | - 1.70 |
| | 30 | γ Geminorum | S. | 29.5 | 32.3 | 33.8 | 40.3 | 42.4 | 44.5 | 50.7 | 52.5 | 55.0 | 30 42.33 | + 0.32 | - 8.20 | - 8.29 | 6 30 34.36 | - 0.12 |
| | 31 | a Canis Majoris | S. | 37.2 | 39.9 | 41.6 | 48.0 | 50.1 | 52.3 | 58.5 | 0.2 | 2.8 | 39 50.07 | + 0.46 | - 8.21 | - 8.28 | 6 39 42.25 | - 0.15 |
| | 32 | δ Geminorum (R) | S. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 33 | δ Geminorum | S. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 34 | B. A. C. 2685 | S. | 59.0 | 2.2 | 4.2 | 11.9 | 14.3 | 16.9 | 24.7 | 26.5 | 29.7 | 57 14.38 | + 0.59 | .. | - 8.27 | 7 57 6.70 | - 1.60 |
| | 35 | B. A. C. 2735 | S. | 12.6 | 15.7 | 17.7 | 25.2 | 27.7 | 30.0 | 37.5 | 39.4 | 42.6 | 3 27.60 | + 0.58 | .. | - 8.27 | 8 3 19.91 | - 1.56 |
| | 36 | Anonymous | S. | 35.6 | 38.2 | 39.8 | .. | .. | .. | 56.9 | 58.6 | 1.4 | 9 48.42 | + 0.32 | .. | - 8.27 | 8 9 40.47 | - 1.71 |
| | 37 | Ariadne | S. | .. | .. | 45.0 | 47.3 | 49.7 | 51.8 | 53.7 | .. | .. | 9 49.50 | + 0.32 | .. | - 8.27 | 8 9 41.55 | .. |
| | 38 | B. A. C. 2820 | S. | .. | .. | 45.8 | 48.6 | 51.2 | 53.6 | 56.2 | .. | .. | 18 51.08 | + 0.60 | .. | - 8.27 | 8 18 43.41 | - 1.57 |
| | 39 | B. A. C. 2877 | S. | 43.4 | 46.7 | 48.7 | 56.5 | 59.2 | 1.8 | 9.5 | 11.4 | 14.9 | 26 59.12 | + 0.60 | .. | - 8.27 | 8 26 51.45 | - 1.56 |
| | 40 | ε Hydræ (R.) | S. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 41 | ε Hydræ | S. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 42 | B. A. C. 3081 | S. | 20.5 | 24.0 | 26.0 | 34.0 | 36.8 | 39.6 | 47.4 | 49.6 | 52.8 | 55 36.74 | + 0.62 | .. | - 8.26 | 8 55 29.10 | - 1.49 |
| | 43 | Aegina | S. | 46.8 | 49.7 | .. | .. | .. | .. | 8.5 | 10.2 | .. | 2 59.89 | + 0.31 | .. | - 8.25 | 9 2 51.95 | .. |
| | 44 | Harmonia | S. | 54.3 | 56.8 | 58.6 | 5.2 | 7.3 | 9.6 | 16.1 | 18.0 | 20.6 | 14 7.39 | + 0.31 | .. | - 8.25 | 9 13 59.45 | .. |
| | 45 | Parthenope | S. | 47.2 | 50.1 | 51.8 | 58.0 | 0.2 | 2.4 | 8.6 | 10.4 | 13.1 | 23 9.20 | + 0.33 | .. | - 8.25 | 9 22 52.28 | .. |
| | 46 | Uranus | S. | 18.2 | 21.0 | 22.6 | 29.0 | 31.0 | 33.0 | 39.5 | 41.1 | 43.8 | 25 31.02 | + 0.33 | .. | - 8.25 | 9 25 23.10 | .. |
| | 47 | ε Leonis | S. | 44.7 | 47.7 | 49.4 | 56.1 | 58.4 | 0.6 | 7.3 | 9.1 | 11.7 | 38 58.33 | + 0.30 | - 8.29 | - 8.25 | 9 38 50.38 | - 0.02 |
| | 48 | a Leonis | S. | 42.8 | 45.5 | 47.0 | 53.4 | 55.4 | 57.5 | 3.8 | 5.2 | 7.8 | 1 55.38 | + 0.34 | - 8.22 | - 8.25 | 10 1 47.47 | - 0.07 |
| | 49 | B. A. C. 3494 | S. | 50.7 | 53.6 | 55.4 | 2.7 | 5.1 | 7.4 | 14.7 | 16.4 | 19.6 | 8 5.07 | + 0.55 | .. | - 8.25 | 10 7 57.37 | - 1.16 |
| | 50 | γ ¹ Leonis | S. | 4.3 | 7.2 | 8.7 | 15.5 | 17.6 | 19.8 | 26.3 | 27.8 | 30.7 | 13 17.54 | + 0.31 | - 8.26 | - 8.25 | 10 13 9.60 | - 0.01 |

1, Bisections at threads III and IV.

2, 7, 20, 23. Thread B used.

5, Bisections at threads II and VI.

6, 21, 24, 36, 37, 43, 44, 45. Thread A used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Corrections. | Apparent Zenith Distance, South. | External Thermom ^r . | Refraction. | Apparent North-Polar Distance. | Miscellan ^{us} Corrections. | | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|---------------------------|----------------------------------|---------------------------------|-------------|--------------------------------|--------------------------------------|-------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | | | | | | |
| 1 | 156 24 | 10 3.5 | 6.0 | 29.8 | 4.4 | 30 | 630 | .. | 580 | .. | 71.6 | 203 30 52.5 | .. | + | 27.4 | 27 35 1.3 | - 1.4 | |
| 2 | 23 28 | 2.1 | 2.6 | 27.8 | 1.7 | 29 | .. | .. | .. | 490 | 485 | 71.6 | 336 29 8.2 | .. | - | 27.4 | 27 35 2.0 | - 0.7 |
| 3 | 342 16 | 5.2 | 5.3 | 1.2 | 7.8 | 39 | .. | .. | .. | 880 | 785 | 71.6 | 17 41 17.1 | .. | + | 20.0 | 68 47 58.4 | + 1.7 |
| 4 | 306 58 | 3.0 | 4.0 | 29.4 | 6.8 | 37 | .. | .. | .. | 630 | 536 | 71.6 | 52 58 40.7 | .. | + | 23.4 | 104 6 25.3 | - 0.2 |
| 5 | 325 26 | 0.2 | 29.6 | 25.6 | 3.8 | 36 | 405 | 520 | 725 | 950 | 000 | 71.6 | 34 30 23.0 | .. | + | 43.0 | 85 37 27.2 | .. |
| 6 | 288 50 | 9 28.0 | 27.9 | 25.5 | 1.0 | 25 | .. | .. | .. | 620 | 420 | 71.6 | 71 0 57.3 | .. | + | 3 1.6 | 122 10 20.1 | + 6.5 |
| 7 | 288 50 | 28.0 | 27.9 | 25.5 | 1.0 | 34 | .. | .. | .. | 950 | 770 | 71.6 | 71 8 26.1 | .. | + | 3 2.9 | 122 17 50.2 | + 6.7 |
| 8 | 336 18 | 10 5.3 | 4.5 | 0.5 | 7.3 | 32 | .. | 680 | .. | 560 | .. | 71.6 | 23 37 24.9 | 17.0 | + | 27.6 | 74 44 13.7 | + 1.3 |
| 9 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 10 | 333 42 | 9 27.4 | 3.4 | 9.5 | 5.7 | 36 | .. | 800 | .. | 630 | .. | 64.5 | 26 14 20.1 | 35.1 | + | 29.8 | 77 21 11.1 | + 3.3 |
| 11 | 348 50 | 10 3.8 | 6.5 | 1.3 | 6.5 | 35 | .. | 550 | .. | 440 | .. | 64.5 | 11 6 2.0 | .. | + | 11.8 | 62 12 35.0 | - 0.2 |
| 12 | 358 18 | 13.0 | 17.0 | 10.0 | 15.8 | 34 | 112 | 120 | .. | .. | .. | 64.5 | 1 37 49.4 | .. | + | 1.7 | 52 44 12.3 | -18.2 |
| 13 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 14 | 285 16 | 12.4 | 16.3 | 10.2 | 14.7 | 35 | .. | 360 | .. | 270 | .. | 66.8 | 74 40 10.1 | .. | + | 3 37.0 | 125 50 8.3 | - 4.2 |
| 15 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 16 | 337 18 | 9.0 | 12.5 | 4.5 | 10.0 | 33 | 270 | 286 | .. | .. | .. | 67.1 | 22 37 34.0 | .. | + | 25.2 | 73 44 20.4 | 0.0 |
| 17 | 290 24 | 7.5 | 8.8 | 3.9 | 8.4 | 34 | .. | 742 | .. | 650 | .. | 67.1 | 69 31 54.7 | .. | + | 2 40.5 | 120 40 56.4 | - 2.7 |
| 18 | 354 0 | 2.0 | 3.4 | 26.5 | 2.9 | 32 | .. | 610 | .. | 490 | .. | 67.1 | 5 55 16.3 | 37.0 | + | 6.3 | 57 1 43.8 | + 1.2 |
| 19 | 286 16 | 9.5 | 13.7 | 6.0 | 11.2 | 33 | 960 | 890 | .. | .. | .. | 67.1 | 73 39 44.4 | .. | + | 3 23.7 | 124 49 29.3 | - 1.7 |
| 20 | 283 42 | 8.4 | 10.9 | 4.9 | 11.0 | 35 | 830 | .. | .. | .. | .. | 67.1 | 76 16 44.2 | .. | + | 4 3.2 | 127 27 8.6 | - 1.9 |
| 21 | 283 42 | 8.4 | 10.9 | 4.9 | 11.0 | 28 | .. | .. | .. | 270 | 306 | 67.1 | 76 9 45.8 | .. | + | 4 1.3 | 127 20 8.3 | - 1.7 |
| 22 | 342 6 | 7.8 | 9.6 | 2.6 | 9.6 | 32 | 200 | 200 | .. | .. | .. | 67.1 | 17 49 15.9 | .. | + | 19.4 | 68 55 56.5 | + 9.3 |
| 23 | 281 42 | 8.5 | 10.0 | 4.0 | 9.8 | 35 | 786 | 598 | .. | .. | .. | 67.1 | 78 16 41.8 | .. | + | 4 44.5 | 129 27 47.5 | - 1.3 |
| 24 | 281 42 | 8.5 | 10.0 | 4.0 | 9.8 | 32 | .. | .. | .. | 512 | 524 | 67.1 | 78 10 49.8 | .. | + | 4 42.3 | 129 21 53.3 | - 1.2 |
| 25 | 287 16 | 8.5 | 9.5 | 5.0 | 10.2 | 36 | .. | 150 | .. | 024 | .. | 67.1 | 72 40 17.1 | .. | + | 3 11.0 | 123 49 49.3 | - 0.3 |
| 26 | 286 48 | 12.4 | 16.2 | 9.9 | 14.5 | 35 | 510 | 472 | .. | .. | .. | 67.1 | 73 8 11.6 | .. | + | 3 17.5 | 124 17 50.3 | + 0.2 |
| 27 | 286 18 | 12.0 | 13.5 | 9.5 | 14.5 | 34 | 060 | 990 | .. | .. | .. | 67.1 | 73 37 48.2 | .. | + | 3 23.6 | 124 47 33.0 | + 0.3 |
| 28 | 54 24 | 6.4 | 7.5 | 29.9 | 5.5 | 32 | .. | .. | 260 | .. | 210 | 67.1 | 305 31 14.8 | 35.3 | - | 1 24.7 | 356 36 11.3 | + 0.3 |
| 29 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 30 | 337 34 | 7.8 | 8.4 | 2.0 | 7.6 | 38 | .. | 730 | .. | 614 | .. | 67.1 | 22 22 55.1 | .. | + | 25.0 | 73 29 41.3 | + 0.3 |
| 31 | 304 30 | 1.4 | 4.0 | 26.5 | 4.3 | 31 | .. | 600 | .. | 467 | .. | 67.1 | 55 25 0.8 | .. | + | 1 27.7 | 106 32 49.7 | + 0.2 |
| 32 | 196 36 | 11.6 | 16.3 | 7.2 | 9.6 | 32 | 090 | 018 | .. | .. | .. | 67.1 | 163 19 17.0 | .. | - | 18.2 | 67 47 22.4 | + 0.2 |
| 33 | 343 16 | 5.5 | 7.8 | 29.6 | 5.8 | 37 | .. | .. | .. | 792 | 792 | 67.1 | 16 40 41.2 | .. | + | 18.2 | 67 47 20.6 | - 1.6 |
| 34 | 284 10 | 2.5 | 4.4 | 27.6 | 5.4 | 35 | .. | .. | .. | 618 | 616 | 67.1 | 75 46 5.1 | .. | + | 3 55.1 | 126 56 21.4 | + 4.0 |
| 35 | 286 14 | 8.7 | 7.9 | 4.6 | 11.5 | 31 | 950 | 870 | .. | .. | .. | 67.1 | 73 41 11.7 | .. | + | 3 24.6 | 124 50 57.5 | + 4.0 |
| 36 | 337 42 | 4.6 | 5.3 | 29.2 | 5.0 | 35 | .. | .. | .. | .. | 200 | 67.1 | 22 11 27.3 | .. | + | 24.7 | 73 18 13.2 | + 2.4 |
| 37 | 337 42 | 4.6 | 5.3 | 29.2 | 5.0 | 36 | .. | .. | .. | .. | 340 | 67.1 | 22 11 44.7 | .. | + | 24.8 | 73 18 30.7 | - 2.0 |
| 38 | 283 14 | 9.4 | 5.9 | 11.5 | 10.6 | 37 | .. | .. | .. | 320 | 245 | 67.1 | 76 42 37.4 | .. | + | 4 12.5 | 127 53 11.1 | + 4.6 |
| 39 | 282 28 | 11.8 | 14.0 | 7.9 | 12.5 | 34 | .. | 380 | .. | 300 | .. | 67.1 | 77 27 53.6 | 35.2 | + | 4 26.9 | 128 38 41.7 | + 4.9 |
| 40 | 211 56 | 10.2 | 14.0 | 7.8 | 8.7 | 32 | 310 | 296 | .. | .. | .. | 67.1 | 147 59 20.0 | .. | - | 37.9 | 83 7 39.1 | + 2.3 |
| 41 | 327 56 | 7.4 | 9.8 | 2.3 | 8.8 | 37 | .. | .. | .. | 336 | 292 | 67.1 | 32 0 36.1 | .. | + | 37.9 | 83 7 35.2 | - 1.6 |
| 42 | 280 22 | 7.4 | 8.9 | 4.8 | 9.0 | 37 | 210 | 156 | .. | .. | .. | 67.1 | 79 34 31.7 | .. | + | 5 19.9 | 130 46 12.8 | + 5.8 |
| 43 | 341 14 | 5.0 | 7.4 | 29.0 | 7.5 | 36 | .. | 150 | .. | 810 | .. | 67.1 | 18 39 38.7 | .. | + | 20.5 | 69 46 20.4 | - 2.0 |
| 44 | 341 28 | 8.5 | 10.8 | 3.6 | 11.1 | 40 | .. | .. | .. | 040 | 050 | 67.1 | 18 26 46.1 | .. | + | 20.3 | 69 33 27.6 | - 2.0 |
| 45 | 337 14 | 5.7 | 8.4 | 1.5 | 7.6 | 36 | .. | 725 | .. | 490 | .. | 67.1 | 22 39 49.4 | .. | + | 25.4 | 73 46 36.0 | - 1.9 |
| 46 | 337 0 | 0.2 | 2.4 | 25.0 | 2.1 | 39 | .. | .. | .. | 190 | 140 | 67.1 | 22 56 57.4 | .. | + | 25.7 | 74 3 44.3 | .. |
| 47 | 345 24 | 4.4 | 5.3 | 29.5 | 4.8 | 38 | 310 | 300 | .. | .. | .. | 67.1 | 14 32 45.5 | .. | + | 15.8 | 65 39 22.5 | - 1.1 |
| 48 | 333 38 | 11.0 | 12.0 | 7.2 | 13.2 | 38 | .. | 120 | .. | 980 | .. | 67.1 | 26 18 50.0 | .. | + | 30.1 | 77 25 41.3 | + 0.2 |
| 49 | 288 40 | 1.8 | 4.4 | 28.9 | 5.2 | 34 | 680 | 650 | .. | .. | .. | 67.1 | 71 15 48.3 | .. | + | 2 57.8 | 122 25 7.3 | + 5.4 |
| 50 | 341 30 | 0.1 | 2.0 | 23.2 | 2.2 | 32 | 830 | 750 | .. | .. | .. | 67.1 | 18 25 16.9 | 33.1 | + | 20.3 | 69 31 58.4 | - 0.6 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| 8 | in. | ° | | | | | |
| 10 | 30.28 | 21.0 | 5 | -32 32.2 | - 15 46.1 | . | - 48 18.3 |
| 18 | 30.16 | 37.0 | 46 | - 0.2 | . | . | - 0.2 |
| 28 | 30.28 | 39.2 | | | | | |
| 39 | 30.27 | 37.8 | | | | | |
| 50 | 30.28 | 37.0 | | | | | |
| | 30.30 | 36.5 | | | | | |

For summary of the elements of reduction see page 3.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. |
|------------------|---------|--------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|--------|----|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | m. | s. | |
| | | | | | | | | | | | | | | | | | | | | |
| 1876. Jan. 20 | 1 | ϵ Bootis | S. | 28.6 | 31.3 | 33.1 | 40.1 | 42.3 | 44.5 | 51.4 | 53.2 | 56.2 | 39 42.30 | + 0.30 | - 8.17 | - 8.16 | 14 39 34.44 | - 0.01 | | |
| | 2 | α^2 Libræ | S. | 56.0 | 58.8 | 0.5 | 6.6 | 8.7 | 10.9 | 17.2 | 18.7 | 21.4 | 44 8.76 | + 0.47 | - 8.19 | - 8.16 | 14 44 1.07 | + 0.02 | | |
| | 3 | β Ursæ Minoris | S. | 27.0 | 37.9 | 42.8 | 6.0 | 13.7 | 21.5 | 44.5 | 49.9 | 59.6 | 51 13.66 | - 0.01 | . | - 8.16 | 14 51 5.49 | - 0.01 | | |
| | 4 | β Bootis | S. | 8.3 | 11.7 | 13.5 | 21.8 | 24.5 | 27.3 | 35.3 | 37.2 | 40.7 | 57 24.51 | + 0.25 | . | - 8.16 | 14 57 16.60 | + 0.05 | | |
| | 5 | δ Cephei, S. P. | S. | 43.4 | 31.9 | 25.0 | 56.8 | 48.0 | 38.8 | 10.7 | 4.0 | 52.5 | 4 47.90 | + 0.56 | . | - 8.16 | 3 4 40.30 | + 0.49 | | |
| | 6 | β Libræ | S. | 15.2 | 17.8 | 19.3 | 25.5 | 27.5 | 29.6 | 35.8 | 37.5 | 40.0 | 10 27.58 | + 0.43 | - 8.14 | - 8.15 | 15 10 19.86 | - 0.01 | | |
| | 7 | μ^1 Bootis | S. | 40.6 | 43.9 | 45.8 | 53.7 | 56.1 | 58.7 | 6.4 | 8.4 | 11.6 | 19 56.13 | + 0.26 | - 8.13 | - 8.15 | 15 19 48.24 | - 0.03 | | |
| | 8 | α Coronæ Borealis . . . | S. | 20.0 | 23.0 | 24.7 | 31.8 | 34.0 | 36.2 | 43.0 | 44.7 | 47.6 | 29 33.89 | + 0.30 | - 8.14 | - 8.15 | 15 29 26.04 | - 0.01 | | |
| | 9 | α Serpentis | S. | 4.8 | 7.5 | 9.0 | 15.0 | 17.1 | 19.2 | 25.3 | 26.8 | 29.4 | 38 17.12 | + 0.37 | - 8.18 | - 8.14 | 15 38 9.35 | + 0.06 | | |
| | 10 | Jupiter I, S. | S. | 28.0 | 30.6 | 32.2 | . | . | . | 49.3 | 50.9 | 53.7 | 41 40.78 | + 0.48 | . | - 8.14 | 15 41 33.12 | . | | |
| | 11 | Jupiter II, N. | S. | . | . | 38.8 | 41.0 | 43.2 | 45.3 | 47.5 | . | . | 41 43.16 | + 0.48 | . | - 8.14 | 15 41 35.50 | . | | |
| | 12 | Moon II, S. | S. | . | . | . | . | 27.4 | 29.7 | 34.4 | 36.0 | 39.0 | 13 24.88 | + 0.53 | . | - 8.13 | 16 13 17.28 | -67.97 | | |
| | 13 | μ Herculis | P. | 29.5 | 32.3 | 34.0 | 41.0 | 43.3 | 45.7 | 52.5 | 54.2 | 57.2 | 41 43.30 | + 0.38 | - 8.40 | - 8.40 | 17 41 35.28 | 0.00 | | |
| | 14 | γ Draconis | P. | 30.4 | 34.5 | 37.0 | 46.9 | 50.1 | 53.4 | 3.3 | 5.5 | 9.7 | 53 50.09 | + 0.31 | . | - 8.39 | 17 53 42.01 | - 0.02 | | |
| | 15 | δ Ursæ Minoris | P. | 40.0 | 22.0 | 48.0 | 57.0 | 32.0 | 7.0 | 39.0 | 15.0 | . | 12 6.04 | - 0.70 | . | - 8.38 | 18 11 56.96 | - 0.86 | | |
| | 16 | η Serpentis | P. | 48.3 | 50.8 | 52.4 | 58.3 | 0.5 | 2.5 | 8.8 | 10.3 | 12.8 | 15 0.52 | + 0.46 | - 8.37 | - 8.38 | 18 14 52.60 | + 0.05 | | |
| | 17 | α Lyræ | P. | 35.2 | 38.4 | 40.4 | 48.4 | 50.9 | 53.5 | 1.4 | 3.3 | 6.6 | 32 50.90 | + 0.35 | - 8.38 | - 8.37 | 18 32 42.90 | + 0.03 | | |
| | 18 | β Lyræ | P. | 22.0 | 25.1 | 26.9 | 34.3 | 36.8 | 39.3 | 46.5 | 48.3 | 51.4 | 45 36.73 | + 0.36 | - 8.41 | - 8.36 | 18 45 28.73 | + 0.08 | | |
| | 19 | α Aquilæ | P. | 36.9 | 39.5 | 41.0 | 47.4 | 49.5 | 51.5 | 57.9 | 59.4 | 2.0 | 59 49.46 | + 0.42 | - 8.43 | - 8.35 | 18 59 41.53 | + 0.14 | | |
| | 20 | δ Draconis | P. | 3.9 | 10.6 | 14.6 | 30.6 | 36.0 | 41.3 | 57.3 | 1.0 | 7.6 | 12 35.88 | + 0.22 | . | - 8.36 | 19 12 27.74 | + 0.31 | | |
| | 21 | Sun I, N. | P. | 59.1 | 1.6 | 3.5 | 10.0 | 12.2 | 14.4 | 20.8 | 22.6 | 25.2 | 12 12.19 | + 0.50 | . | - 8.30 | 20 12 4.39 | . | | |
| | 22 | Sun II, S. | P. | 17.8 | 20.6 | 22.3 | 28.8 | 31.0 | 33.0 | 39.8 | 41.4 | 43.9 | 14 30.96 | + 0.50 | . | - 8.30 | 20 14 23.16 | . | | |
| 21 | 23 | α Cephei | P. | 15.8 | 21.2 | 24.4 | 37.6 | 42.0 | 46.4 | 59.3 | 2.6 | 8.0 | 15 41.92 | + 0.21 | . | - 8.26 | 21 15 33.87 | + 0.15 | | |
| | 24 | β Aquarii | P. | . | 59.0 | 0.5 | 6.7 | 8.7 | . | . | . | . | 25 8.73 | + 0.45 | - 8.31 | - 8.25 | 21 25 0.93 | + 0.09 | | |
| | 25 | β Cephei | P. | . | . | . | . | . | . | 30.6 | 34.9 | 42.7 | 27 6.79 | + 0.14 | . | - 8.25 | 21 26 58.68 | - 0.34 | | |
| | 26 | ϵ Pegasi | P. | 0.1 | 2.7 | 4.3 | 10.5 | 12.6 | 14.6 | 20.7 | 22.3 | 24.9 | 38 12.52 | + 0.41 | - 8.25 | - 8.24 | 21 38 4.69 | + 0.02 | | |
| | 27 | α Aquarii | P. | 19.5 | 22.0 | 23.5 | 29.7 | 31.8 | 33.8 | 39.9 | 41.5 | 44.0 | 59 31.74 | + 0.39 | - 8.17 | - 8.23 | 21 59 23.90 | - 0.03 | | |
| | 28 | Venus I, N. | P. | 34.8 | 37.3 | 38.9 | 45.3 | 47.4 | 49.5 | 55.7 | 57.3 | 0.0 | 11 47.36 | + 0.48 | . | - 8.22 | 22 11 39.62 | + 0.42 | | |
| | 29 | Venus S. | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | | |
| | 30 | Durch. + 17°, III 5 | P. | 49.6 | 52.2 | 54.0 | . | . | . | 11.4 | 13.3 | . | 58 2.68 | + 0.40 | . | - 8.21 | 5 57 54.87 | - 1.45 | | |
| | 31 | B. A. C. 1976 | P. | 29.9 | 32.8 | 34.8 | 42.3 | 44.8 | 47.4 | 54.7 | 56.6 | 59.8 | 2 44.79 | + 0.62 | . | - 8.21 | 6 2 37.20 | - 1.56 | | |
| | 32 | δ Ursæ Minoris, S. P. | P. | . | . | 13.0 | 38.0 | 4.0 | 29.0 | 55.0 | 46.0 | 21.0 | 12 3.93 | + 1.28 | . | - 8.21 | 18 11 57.00 | - 0.88 | | |
| | 33 | μ Geminorum | P. | 23.5 | 26.4 | 28.0 | 34.6 | 36.8 | 39.1 | 45.8 | 47.4 | 50.1 | 15 36.86 | + 0.38 | - 8.15 | - 8.21 | 6 15 29.93 | - 0.10 | | |
| | 34 | B. A. C. 2077 | P. | 22.3 | 25.3 | 27.2 | 35.0 | 37.6 | 40.3 | 47.8 | 49.8 | 53.0 | 19 37.59 | + 0.64 | . | - 8.21 | 6 19 30.02 | - 1.62 | | |
| | 35 | B. A. C. 2136 | P. | 42.4 | 45.4 | 47.2 | 54.9 | 57.3 | 0.0 | 7.2 | 9.0 | 12.3 | 26 57.30 | + 0.62 | . | - 8.21 | 6 26 49.71 | - 1.60 | | |
| | 36 | γ Geminorum | P. | 29.5 | 32.0 | 33.7 | 40.2 | 42.3 | 44.4 | 50.8 | 52.4 | 55.1 | 30 42.27 | + 0.40 | - 8.22 | - 8.21 | 6 30 34.46 | - 0.02 | | |
| | 37 | B. A. C. 2190 | P. | 19.7 | 22.9 | 24.8 | 32.6 | 35.4 | 37.9 | 45.5 | 47.5 | 50.7 | 34 35.22 | + 0.64 | . | - 8.21 | 6 34 27.65 | - 1.65 | | |
| | 38 | α Canis Majoris | P. | 37.2 | 39.9 | 41.6 | 48.0 | 50.1 | 52.2 | 58.5 | 0.2 | 2.9 | 39 50.07 | + 0.52 | - 8.27 | - 8.21 | 6 39 42.38 | - 0.02 | | |
| | 39 | B. A. C. 2258 | P. | . | . | . | . | 31.8 | 34.1 | 39.4 | 41.1 | 44.4 | 47 29.19 | + 0.63 | . | - 8.21 | 6 47 21.61 | - 1.63 | | |
| | 40 | Hesperia | P. | 57.9 | 0.7 | 2.1 | 8.3 | 10.3 | 12.3 | 18.5 | 20.0 | 22.6 | 53 10.30 | + 0.42 | . | - 8.21 | 6 53 2.51 | . | | |
| | 41 | B. A. C. 2452 | P. | 43.0 | 46.0 | 47.9 | 55.1 | 57.5 | 0.0 | 7.3 | 9.0 | 11.8 | 18 57.51 | + 0.60 | . | - 8.21 | 7 18 49.90 | - 1.58 | | |
| | 42 | B. A. C. 2471 | P. | 0.2 | 3.4 | 5.3 | 12.6 | 14.9 | 17.5 | 24.7 | 26.5 | 29.8 | 22 14.99 | + 0.61 | . | - 8.21 | 7 22 7.39 | - 1.60 | | |
| | 43 | B. A. C. 2502 | P. | 15.8 | 18.8 | 20.9 | 28.4 | 31.0 | 33.5 | 41.0 | 43.0 | 46.0 | 29 30.93 | + 0.63 | . | - 8.21 | 7 29 23.35 | - 1.62 | | |
| | 44 | B. A. C. 2536 | P. | 8.2 | 11.4 | 13.2 | 20.9 | 23.4 | 25.9 | 33.7 | 35.5 | 38.6 | 34 23.42 | + 0.63 | . | - 8.21 | 7 34 15.84 | - 1.62 | | |
| | 45 | B. A. C. 2561 | P. | 33.7 | 36.9 | 38.7 | 46.3 | 48.8 | 51.4 | 58.9 | 0.8 | 4.0 | 38 48.83 | + 0.63 | . | - 8.21 | 7 38 41.25 | - 1.61 | | |
| | 46 | B. A. C. 2572 | P. | 31.8 | 35.1 | 36.9 | 44.5 | 47.0 | 49.5 | 57.0 | 58.8 | 2.0 | 39 46.96 | + 0.63 | . | - 8.21 | 7 39 39.38 | - 1.61 | | |
| | 47 | B. A. C. 2629 | P. | 32.0 | 35.3 | 37.0 | 44.4 | 47.0 | 49.5 | 56.9 | 58.7 | 1.8 | 47 46.96 | + 0.62 | . | - 8.21 | 7 47 39.37 | - 1.59 | | |
| | 48 | B. A. C. 2646 | P. | . | . | 4.3 | 6.8 | 9.2 | 11.6 | 14.3 | . | . | 50 9.24 | + 0.62 | . | - 8.21 | 7 50 1.65 | - 1.58 | | |
| | 49 | B. A. C. 2805 | P. | 33.9 | 37.0 | 39.0 | 46.6 | 49.2 | 51.8 | 59.3 | 1.0 | 4.4 | 16 49.13 | + 0.63 | . | - 8.21 | 8 16 41.55 | - 1.56 | | |
| | 50 | B. A. C. 2820 | P. | 35.6 | 38.7 | 40.4 | 48.6 | 51.0 | 53.6 | 1.3 | 3.1 | 6.5 | 18 50.98 | + 0.64 | . | - 8.21 | 8 18 43.41 | - 1.57 | | |

3, 5. Bisections at set C.
 12, 20, 23, 25. Bisections at sets B and D.
 40, 43, 47. Thread A used.
 44, 48. Thread B used.
 45. Telescope micrometer reading decreased one revolution in reduction.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | T. | Refraction. | Apparent North-Polar Distance. | Miscellan's Corrections. | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|-----|--------------------------|----------------------------------|------|-------------|--------------------------------|--------------------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | | | | | | |
| 1 | 348 38 | 10 10.1 | 12.0 | 4.5 | 10.5 | 34 | .. | 430 | .. | 320 | .. | 66.0 | 11 17 51.2 | .. | + | 12.2 | 62 24 24.6 | - 1.5 |
| 2 | 305 32 | 2.6 | 5.0 | 28.9 | 6.0 | 34 | 742 | 690 | .. | .. | .. | 66.0 | 54 23 48.7 | .. | + | 1 25.1 | 105 31 35.0 | - 0.3 |
| 3 | 35 42 | 2.6 | 4.0 | 26.3 | 2.5 | 39 | 598 | .. | .. | .. | 582 | 66.0 | 324 15 3.0 | .. | - | 43.9 | 15 20 40.3 | - 3.9 |
| 4 | 1 56 | 8.2 | 11.6 | 5.2 | 9.7 | 39 | 740 | 690 | .. | .. | .. | 66.0 | 358 1 11.4 | 34.2 | - | 2.1 | 49 7 30.5 | - 2.2 |
| 5 | 63 44 | 5.7 | 8.0 | 1.6 | 5.7 | 37 | 708 | .. | .. | .. | 712 | 66.0 | 296 12 38.0 | .. | - | 2 3.3 | 347 16 55.9 | - 1.1 |
| 6 | 312 8 | 8.9 | 12.0 | 6.0 | 13.0 | 35 | .. | 230 | .. | 160 | .. | 66.0 | 47 48 4.2 | .. | + | 1 7.2 | 98 55 32.6 | - 1.1 |
| 7 | 358 52 | 6.4 | 7.6 | 0.8 | 6.7 | 39 | .. | 900 | .. | 810 | .. | 66.0 | 1 5 11.3 | .. | + | 1.2 | 52 11 33.7 | - 1.2 |
| 8 | 348 10 | 1.5 | 3.0 | 25.5 | 5.3 | 34 | .. | 600 | .. | 468 | .. | 66.0 | 11 45 45.6 | .. | + | 12.7 | 61 52 19.5 | - 0.1 |
| 9 | 327 52 | 4.0 | 4.8 | 29.4 | 6.2 | 36 | 162 | 100 | .. | .. | .. | 66.0 | 32 4 11.1 | .. | + | 38.2 | 83 11 10.5 | - 1.2 |
| 10 | 302 24 | 7.3 | 8.5 | 3.5 | 10.0 | 38 | .. | 104 | .. | 990 | .. | 66.0 | 57 32 45.1 | .. | + | 1 35.5 | 108 40 41.8 | .. |
| 11 | 302 24 | 7.3 | 8.5 | 3.5 | 10.0 | 36 | 260 | .. | .. | .. | 980 | 66.0 | 57 32 15.5 | .. | + | 1 35.5 | 108 40 12.2 | .. |
| 12 | 294 14 | 7.2 | 10.0 | 3.2 | 10.0 | 39 | 640 | .. | 900 | .. | 840 | 66.0 | 65 43 12.7 | 35.6 | + | 2 14.2 | 116 51 48.1 | .. |
| 13 | 348 50 | 1.8 | 4.2 | 27.0 | 5.2 | 35 | .. | 760 | .. | 560 | .. | 65.5 | 11 6 3.0 | 43.2 | + | 11.8 | 62 12 36.0 | - 0.5 |
| 14 | 12 32 | 5.2 | 8.0 | 2.3 | 8.5 | 35 | 035 | 075 | .. | 950 | 810 | 65.5 | 347 23 56.9 | .. | - | 13.4 | 38 30 4.7 | + 0.1 |
| 15 | 47 38 | 13.3 | 16.8 | 10.4 | 14.7 | 36 | 780 | .. | 690 | .. | 725 | 65.5 | 312 18 31.1 | .. | - | 1 5.6 | 3 23 46.7 | - 2.4 |
| 16 | 318 8 | 9.7 | 13.9 | 9.3 | 17.0 | 37 | .. | 445 | .. | 345 | .. | 65.5 | 41 48 39.8 | 45.2 | + | 53.4 | 95 55 54.4 | - 2.1 |
| 17 | 359 42 | 2.0 | 6.0 | 29.8 | 4.9 | 34 | 455 | 485 | .. | 370 | 315 | 65.5 | 0 13 45.2 | .. | + | 0.2 | 51 20 6.6 | + 0.1 |
| 18 | 354 16 | 5.0 | 10.0 | 3.0 | 8.1 | 37 | .. | 515 | .. | 400 | .. | 65.5 | 5 40 35.1 | .. | + | 5.9 | 56 47 2.2 | - 1.4 |
| 19 | 334 44 | 5.4 | 9.3 | 2.5 | 9.1 | 37 | 460 | 410 | .. | 315 | 260 | 65.5 | 25 12 33.6 | .. | + | 28.0 | 76 19 22.8 | + 0.6 |
| 20 | 28 28 | 8.8 | 10.5 | 5.1 | 9.7 | 34 | 145 | .. | 125 | .. | 075 | 65.5 | 331 27 45.8 | 48.6 | - | 32.2 | 22 33 34.8 | - 2.6 |
| 21 | 301 24 | 6.6 | 11.5 | 9.0 | 12.8 | 34 | 525 | 550 | .. | .. | .. | 65.5 | 58 31 52.0 | .. | + | 1 36.1 | 109 39 49.3 | .. |
| 22 | 300 52 | 9 25.4 | 0.7 | 26.3 | 3.3 | 37 | .. | .. | .. | 210 | 220 | 65.5 | 59 4 24.8 | 50.9 | + | 1 38.2 | 110 12 24.2 | .. |
| 23 | 23 6 | 10 7.0 | 11.3 | 7.0 | 10.9 | 36 | 660 | .. | .. | .. | 580 | 65.5 | 336 50 24.7 | .. | - | 25.2 | 27 56 20.7 | - 3.4 |
| 24 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 25 | 31 2 | 2.3 | 5.2 | 29.9 | 6.2 | 32 | .. | .. | .. | .. | 250 | 65.5 | 328 53 12.7 | 50.9 | - | 35.6 | 19 58 58.3 | - 1.9 |
| 26 | 330 22 | 0.0 | 4.5 | 29.5 | 6.1 | 38 | .. | 475 | .. | 370 | .. | 65.5 | 29 34 45.7 | .. | + | 33.4 | 50 41 40.3 | + 0.9 |
| 27 | 320 8 | 7.5 | 12.2 | 7.8 | 15.5 | 35 | 035 | 020 | .. | 890 | 795 | 65.5 | 39 48 15.8 | .. | + | 49.0 | 90 55 26.0 | + 1.7 |
| 28 | 308 12 | 0.5 | 5.4 | 0.9 | 8.8 | 35 | 600 | .. | .. | .. | 310 | 65.5 | 51 44 1.4 | .. | + | 1 14.4 | 102 51 37.0 | .. |
| 29 | 308 12 | 0.5 | 5.4 | 0.9 | 8.8 | 36 | .. | 345 | .. | 160 | .. | 65.5 | 51 44 13.7 | 52.2 | + | 1 14.4 | 102 51 49.3 | .. |
| 30 | 338 58 | 11.3 | 14.5 | 7.3 | 12.2 | 31 | .. | .. | .. | .. | 450 | 66.0 | 20 57 9.9 | 37.8 | + | 23.2 | 72 3 54.3 | + 7.9 |
| 31 | 286 48 | 11.8 | 14.7 | 9.0 | 14.0 | 35 | 760 | 570 | .. | .. | .. | 66.0 | 73 8 12.2 | .. | + | 3 17.6 | 124 17 51.0 | - 0.1 |
| 32 | 54 24 | 4.7 | 8.2 | 0.2 | 6.5 | 32 | 315 | 285 | 285 | 265 | 275 | 66.0 | 305 31 14.5 | .. | - | 1 24.8 | 356 36 10.9 | + 0.1 |
| 33 | 343 38 | 11.1 | 13.4 | 5.2 | 13.3 | 37 | .. | 670 | .. | 505 | .. | 66.0 | 16 18 41.7 | .. | + | 17.8 | 67 25 20.7 | + 0.2 |
| 34 | 284 10 | 0.7 | 2.8 | 27.6 | 5.7 | 38 | .. | .. | .. | 260 | 240 | 66.0 | 75 46 43.5 | .. | + | 3 55.5 | 126 57 0.2 | + 0.4 |
| 35 | 285 56 | 12.0 | 14.4 | 9.1 | 15.2 | 36 | 790 | 785 | .. | .. | .. | 66.0 | 74 0 29.7 | .. | + | 3 25.8 | 125 10 19.7 | + 0.7 |
| 36 | 337 34 | 7.5 | 9.5 | 3.2 | 8.9 | 38 | .. | 805 | .. | .. | .. | 66.0 | 22 22 55.9 | .. | + | 25.0 | 73 29 42.1 | + 1.1 |
| 37 | 283 14 | 7.2 | 10.3 | 4.3 | 10.7 | 37 | .. | 590 | .. | 425 | .. | 66.0 | 76 42 37.5 | .. | + | 4 11.8 | 127 53 10.5 | + 0.9 |
| 38 | 304 30 | 9 29.4 | 2.0 | 20.0 | 3.4 | 31 | .. | .. | .. | 730 | 680 | 66.0 | 55 25 0.5 | .. | + | 1 27.8 | 106 32 49.5 | - 0.2 |
| 39 | 285 2 | 10 4.4 | 7.4 | 2.4 | 7.1 | 38 | .. | .. | .. | 265 | 220 | 66.0 | 74 54 47.0 | .. | + | 3 41.7 | 126 4 49.9 | + 1.4 |
| 40 | 330 30 | 9 28.0 | 0.3 | 22.8 | 1.7 | 35 | .. | 830 | .. | 675 | .. | 66.0 | 29 23 27.5 | .. | + | 34.2 | 80 30 22.9 | - 2.8 |
| 41 | 289 8 | 10 13.5 | 15.6 | 10.0 | 16.5 | 36 | 705 | 650 | .. | .. | .. | 66.0 | 70 48 29.3 | .. | + | 2 52.8 | 121 57 43.3 | + 2.5 |
| 42 | 287 12 | 6.8 | 8.6 | 4.0 | 10.1 | 34 | .. | .. | .. | 855 | 820 | 66.0 | 72 43 56.9 | .. | + | 3 13.1 | 123 53 31.2 | + 2.6 |
| 43 | 284 58 | 9.8 | 12.8 | 7.5 | 13.5 | 29 | .. | 830 | .. | 565 | .. | 66.0 | 74 54 7.2 | .. | + | 3 41.7 | 126 4 10.1 | + 2.8 |
| 44 | 284 58 | 9.8 | 12.8 | 7.5 | 13.5 | 43 | 690 | 660 | .. | .. | .. | 66.0 | 75 2 45.7 | .. | + | 3 44.0 | 126 12 50.9 | + 3.0 |
| 45 | 285 20 | 3.1 | 6.8 | 2.0 | 8.9 | 33 | 935 | 865 | .. | .. | .. | 66.0 | 74 35 22.7 | .. | + | 3 37.2 | 125 45 21.1 | + 3.1 |
| 46 | 285 20 | 3.1 | 6.8 | 2.0 | 8.9 | 35 | .. | 670 | .. | 540 | .. | 66.0 | 74 36 5.4 | .. | + | 3 37.4 | 125 46 4.0 | + 3.1 |
| 47 | 286 38 | 10.7 | 13.4 | 8.4 | 14.5 | 28 | .. | .. | .. | 980 | 985 | 66.0 | 73 13 58.3 | .. | + | 3 19.2 | 124 23 38.7 | + 3.3 |
| 48 | 286 38 | 10.7 | 13.4 | 8.4 | 14.5 | 38 | .. | .. | .. | 540 | 500 | 66.0 | 73 21 30.1 | 37.3 | + | 3 20.7 | 124 31 12.0 | + 3.4 |
| 49 | 285 0 | 3.1 | 5.0 | 28.5 | 6.0 | 32 | 780 | 720 | .. | .. | .. | 66.0 | 74 55 18.3 | .. | + | 3 42.2 | 126 5 21.7 | + 4.1 |
| 50 | 283 14 | 9.8 | 11.8 | 5.8 | 12.7 | 37 | .. | 465 | .. | 250 | .. | 66.0 | 70 42 37.1 | .. | + | 4 12.3 | 127 53 10.6 | + 4.3 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum |
|-----|--------|-----------|-----|-----------|------------|-------------------------|---------|
| 4 | 30.38 | 36.5 | 10 | 1.3 | 14.8 | .. | 16.1 |
| 12 | 30.40 | 37.0 | 11 | 1.3 | 14.8 | .. | 13.5 |
| 13 | 30.44 | 41.3 | 12 | 49 10.3 | 14 45.9 | .. | 3 56.2 |
| 16 | 30.44 | 44.7 | 21 | 7.6 | 16 17.4 | .. | 16 9.8 |
| 20 | 30.43 | 46.3 | 22 | 7.7 | 16 17.4 | .. | 16 25.1 |
| 22 | 30.40 | 47.4 | 28 | 4.9 | 6.4 | 0.5 | 1.0 |
| 25 | 30.40 | 50.5 | 29 | 4.9 | 6.4 | .. | 11.3 |
| 29 | 30.40 | 52.6 | | | | | |
| 30 | 30.41 | 39.3 | | | | | |
| 48 | 30.45 | 39.5 | | | | | |

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. | |
|------------------|---------|--------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|-------|----------------------------|--------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | m. | | |
| | | | | | | | | | | | | | | | | | | | | s. |
| 1876. Jan. 21 | 1 | VIII, 6 | P. | 41.9 | 44.9 | 46.6 | 53.8 | 56.4 | 58.8 | 5.8 | 7.5 | 10.4 | 25 56.23 | + 0.59 | . . | - 8.21 | 8 25 | 48.61 | - 1.50 | |
| | 2 | B. A. C. 2911 . . . | P. | 13.5 | 16.1 | 17.7 | 23.8 | 25.8 | 27.9 | 33.9 | 35.6 | 38.0 | 32 25.81 | + 0.44 | . . | - 8.21 | 8 32 | 18.04 | - 1.56 | |
| | 3 | B. A. C. 2945 . . . | P. | 41.5 | 44.0 | 45.7 | 51.7 | 53.8 | 55.9 | 2.0 | 3.6 | 6.1 | 36 53.81 | + 0.44 | . . | - 8.21 | 8 36 | 46.04 | - 1.56 | |
| | 4 | B. A. C. 2999 . . . | P. | 50.0 | 53.0 | 54.9 | 2.3 | 4.7 | 7.2 | 14.4 | 16.2 | 19.3 | 45 4.67 | + 0.35 | . . | - 8.21 | 8 44 | 56.81 | - 2.07 | |
| | 5 | B. A. C. 3056 . . . | P. | 50.8 | 54.0 | 55.6 | 3.0 | 5.4 | 7.9 | 15.1 | 17.0 | 20.0 | 52 5.42 | + 0.35 | . . | - 8.21 | 8 51 | 57.56 | - 2.06 | |
| | 6 | Aegina | P. | 49.7 | 52.3 | 54.0 | 0.6 | 2.8 | 4.9 | 11.4 | 13.1 | 16.1 | 2 2.77 | + 0.39 | . . | - 8.20 | 9 1 | 54.96 | . . | |
| | 7 | Harmonia | P. | 55.9 | 58.6 | 0.0 | 6.5 | 8.7 | 10.8 | 17.6 | 19.2 | 21.6 | 13 8.77 | + 0.39 | . . | - 8.20 | 9 13 | 0.96 | . . | |
| | 8 | Parthenope | P. | 55.9 | 58.5 | 0.1 | 6.4 | 8.5 | 10.7 | 17.2 | 18.7 | 21.5 | 22 8.61 | + 0.40 | . . | - 8.20 | 9 22 | 0.81 | . . | |
| | 9 | Weisse 774 | P. | . . | . . | 39.8 | 42.0 | 44.0 | 46.6 | 48.0 | . . | . . | 36 43.96 | + 0.46 | . . | - 8.20 | 9 36 | 36.22 | - 1.41 | |
| | 10 | Anonymous | P. | . . | . . | . . | . . | 53.6 | 55.7 | 59.9 | 1.5 | 3.9 | 36 51.67 | + 0.46 | . . | - 8.20 | 9 36 | 43.93 | - 1.41 | |
| 23 | 11 | 51 Cephei, S. P. . . | S. | . . | . . | 48.0 | 4.0 | 23.0 | 40.0 | 59.5 | . . | . . | 42 22.96 | - 1.50 | . . | - 7.62 | 6 42 | 13.84 | - 0.07 | |
| | 12 | 3 Lyre | S. | . . | 31.0 | 33.6 | 36.1 | 38.6 | 41.0 | 45.8 | 47.6 | 50.6 | 45 36.04 | + 0.27 | - 7.57 | - 7.62 | 18 45 | 28.69 | - 0.02 | |
| | 13 | 3 Aquilæ | S. | 15.7 | 18.3 | 19.8 | 26.0 | 28.1 | 30.2 | 36.4 | 37.9 | 40.6 | 40 28.11 | + 0.26 | - 7.66 | - 7.61 | 19 40 | 20.76 | + 0.08 | |
| | 14 | a Aquilæ | S. | 37.9 | 40.4 | 42.0 | 48.0 | 50.3 | 52.3 | 58.0 | 0.1 | 2.7 | 44 50.19 | - 0.26 | - 7.60 | - 7.61 | 19 44 | 42.84 | + 0.03 | |
| 24 | 15 | Sun I, S. | S. | 36.2 | 38.9 | 40.4 | 47.0 | 49.1 | 51.4 | 57.6 | 59.5 | 2.0 | 24 49.12 | + 0.28 | . . | - 7.59 | 20 24 | 41.81 | . . | |
| | 16 | Sun II, N. | S. | 51.5 | 57.2 | 58.8 | 5.3 | 7.4 | 9.7 | 16.0 | 17.7 | 20.5 | 27 7.46 | + 0.28 | . . | - 7.59 | 20 27 | 0.15 | . . | |
| | 17 | a Cygni | S. | . . | 0.1 | 3.7 | 6.0 | 14.7 | 17.5 | 20.3 | 29.0 | 31.2 | 34.7 | 37 17.47 | + 0.26 | - 7.51 | - 7.59 | 20 37 | 10.14 | - 0.06 |
| | 18 | c Cygni | S. | 31.3 | 34.3 | 35.9 | 43.1 | 45.4 | 48.6 | 54.7 | 56.7 | 59.3 | 7 45.41 | + 0.25 | - 7.65 | - 7.58 | 21 7 | 38.08 | + 0.08 | |
| | 19 | a Aquarii | S. | 19.0 | 21.5 | 23.1 | 29.3 | 31.3 | 33.4 | 39.4 | 41.0 | 43.6 | 59 31.29 | + 0.26 | - 7.58 | - 7.57 | 21 59 | 23.98 | + 0.04 | |
| | 20 | Venus I, S. | S. | 38.7 | 41.3 | 42.9 | 49.2 | 51.3 | 53.5 | 59.7 | 1.3 | 3.8 | 25 51.30 | + 0.27 | . . | - 7.56 | 22 25 | 44.01 | + 0.42 | |
| | 21 | Venus II, N. . . . | S. | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | |
| | 22 | q Tauri | S. | 1.5 | 4.3 | 6.0 | 12.6 | 14.9 | 17.1 | 23.7 | 25.6 | 28.3 | 40 14.89 | + 0.24 | - 7.51 | - 7.51 | 3 40 | 7.62 | 0.00 | |
| | 23 | c Persei | S. | 14.0 | 17.0 | 18.7 | 26.0 | 28.5 | 30.6 | 37.9 | 39.9 | 42.7 | 46 28.40 | + 0.24 | - 7.50 | - 7.51 | 3 46 | 21.13 | - 0.02 | |
| | 24 | 3 Eridani | S. | 10.2 | 12.8 | 14.4 | 20.7 | 22.8 | 25.0 | 31.3 | 32.8 | 35.5 | 52 22.83 | + 0.28 | - 7.52 | - 7.51 | 3 52 | 15.60 | + 0.05 | |
| | 25 | B. A. C. 1389 . . . | S. | 19.0 | 22.6 | 24.6 | 32.5 | 35.3 | 38.6 | 46.1 | 48.2 | 51.5 | 22 35.31 | + 0.36 | . . | - 7.51 | 4 22 | 28.16 | - 1.34 | |
| | 26 | B. A. C. 1440 . . . | S. | 10.0 | 13.0 | 14.6 | 21.8 | 24.3 | 26.6 | 33.6 | 35.5 | 38.4 | 32 24.20 | + 0.32 | . . | - 7.51 | 4 32 | 17.01 | - 1.22 | |
| | 27 | B. A. C. 1464 . . . | S. | 33.3 | 36.7 | 38.6 | 46.5 | 49.0 | 51.5 | 59.2 | 1.0 | 4.2 | 37 48.89 | + 0.35 | . . | - 7.51 | 4 37 | 41.73 | - 1.34 | |
| | 28 | B. A. C. 1480 . . . | S. | 8.0 | 11.2 | 13.0 | 20.3 | 22.9 | 25.4 | 32.7 | 34.6 | 37.6 | 41 22.86 | + 0.33 | . . | - 7.51 | 4 41 | 15.98 | - 1.30 | |
| | 29 | B. A. C. 1488 . . . | S. | 53.7 | 58.4 | 3.1 | 5.5 | 7.8 | 10.2 | 12.5 | 17.4 | 22.2 | 43 7.87 | + 0.32 | . . | - 7.51 | 4 43 | 0.68 | - 1.26 | |
| | 30 | B. A. C. 1574 . . . | S. | . . | . . | 4.2 | 6.6 | 9.0 | 11.7 | 14.3 | . . | . . | 0 9.16 | + 0.34 | . . | - 7.50 | 5 0 | 2.00 | - 1.39 | |
| | 31 | B. A. C. 1509 . . . | S. | . . | 46.5 | . . | 56.0 | . . | 3.5 | 8.8 | . . | 13.6 | 3 58.53 | + 0.34 | . . | - 7.50 | 5 3 | 51.37 | - 1.40 | |
| | 32 | B. A. C. 1630 . . . | S. | . . | . . | 28.4 | 31.1 | 33.6 | 36.2 | 41.1 | 43.0 | 46.5 | 9 31.09 | + 0.34 | . . | - 7.50 | 5 9 | 23.93 | - 1.42 | |
| | 33 | δ Orionis (R.) . . . | S. | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | |
| | 34 | δ Orionis | S. | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | |
| | 35 | B. A. C. 1900 . . . | S. | 9.3 | 12.7 | 14.7 | 22.3 | 24.9 | 27.5 | 35.0 | 37.0 | 40.0 | 51 24.82 | + 0.24 | . . | - 7.50 | 5 51 | 17.56 | - 1.68 | |
| | 36 | Durch. 17, 1115 . . | S. | 49.1 | 52.0 | 53.7 | 0.1 | 2.2 | 4.3 | 10.5 | 12.4 | 15.3 | 58 2.18 | + 0.24 | . . | - 7.50 | 5 57 | 54.92 | - 1.45 | |
| | 37 | Durch. 18, 1111 . . | S. | 23.9 | 25.5 | 29.8 | 32.0 | 34.2 | 36.2 | 38.5 | 42.7 | 44.3 | 3 34.12 | + 0.24 | . . | - 7.50 | 6 3 | 26.86 | - 1.48 | |
| | 38 | δ Ursæ Minoris, S. P. | S. | . . | . . | 16.0 | 41.5 | 7.0 | 32.0 | . . | . . | . . | 12 6.95 | - 1.19 | . . | - 7.50 | 18 11 | 58.26 | + 0.03 | |
| | 39 | B. A. C. 2098 . . . | S. | 40.9 | 44.2 | 46.3 | 51.5 | 54.0 | . . | 2.6 | 10.3 | 13.7 | 21 57.12 | + 0.37 | . . | - 7.50 | 6 21 | 49.99 | - 1.67 | |
| | 40 | B. A. C. 2117 . . . | S. | 36.6 | 40.0 | 42.0 | 50.3 | 52.9 | 55.9 | 4.0 | 6.0 | 9.4 | 24 53.01 | + 0.37 | . . | - 7.50 | 6 24 | 45.88 | - 1.68 | |
| | 41 | 51 Cephei | S. | 5.5 | 5.9 | 29.5 | . . | . . | . . | . . | . . | . . | 42 19.77 | + 1.73 | . . | - 7.50 | 6 42 | 14.30 | - 0.58 | |
| | 42 | a ² Geminorum . . . | S. | 35.8 | 39.0 | 40.8 | 48.0 | 50.3 | 52.8 | 0.0 | 2.0 | 4.8 | 26 50.39 | + 0.24 | - 7.52 | - 7.49 | 7 26 | 43.14 | + 0.27 | |
| | 43 | a Canis Minoris . . | S. | 45.1 | 47.6 | 49.2 | 55.4 | 57.4 | 59.5 | 5.5 | 7.1 | 9.7 | 32 57.39 | + 0.25 | - 7.50 | - 7.49 | 7 32 | 50.15 | - 0.15 | |
| | 44 | β Geminorum | S. | 38.7 | 41.7 | 43.5 | 50.4 | 52.7 | 55.0 | 2.0 | 3.7 | 6.7 | 37 52.71 | + 0.24 | - 7.46 | - 7.49 | 7 37 | 45.46 | - 0.06 | |
| 25 | 45 | ι Aurigæ | P. | 48.8 | 52.0 | 53.7 | 1.0 | 3.5 | 5.9 | 13.1 | 15.0 | 18.0 | 49 3.44 | + 0.33 | - 7.41 | - 7.39 | 4 48 | 56.38 | - 0.02 | |
| | 46 | 11 Orionis (R.) . . | P. | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | |
| | 47 | 11 Orionis | P. | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | |
| | 48 | β Orionis | P. | 30.7 | 33.2 | 34.8 | 41.0 | 43.0 | 45.1 | 51.3 | 52.8 | 55.4 | 8 43.03 | + 0.28 | - 7.39 | - 7.39 | 5 8 | 35.92 | 0.00 | |
| | 49 | B. A. C. 1633 . . . | P. | 59.0 | 2.0 | 3.9 | 11.8 | 14.3 | 16.8 | 24.4 | 26.3 | 29.5 | 10 14.22 | + 0.30 | . . | - 7.39 | 5 10 | 7.13 | - 1.42 | |
| | 50 | B. A. C. 1650 . . . | P. | 54.4 | 57.5 | 59.3 | 6.9 | 9.3 | 11.8 | 19.3 | 21.3 | 24.2 | 13 9.33 | + 0.30 | . . | - 7.39 | 5 13 | 2.24 | - 1.41 | |

2, 5, 32, 40. Thread B used.

3, 6, 7, 8, 9, 30, 31, 39. Thread A used.

28. Telescope-micrometer reading has been decreased ten revolutions in reduction.

41. Bisections at set B.

50. Bisections at wires V and VI.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom't. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. |
| | | r. " | " " | " " | " " | | | | | | | | | | | | |
| 1 | 290 22 | 10 5.4 | 8.2 | 1.5 | 8.5 | 35 | .. | .. | .. | 190 | 045 | 66.0 | 69 33 59.0 | .. + 2 | 41.8 | 120 43 2.0 | + 3.9 |
| 2 | 324 52 | 6.0 | 7.5 | 0.8 | 9.0 | 34 | .. | 565 | .. | 455 | .. | 66.0 | 35 6 21.9 | .. + | 42.7 | 86 13 25.8 | + 1.7 |
| 3 | 324 52 | 6.0 | 7.5 | 0.8 | 9.0 | 38 | .. | 805 | .. | 660 | .. | 66.0 | 35 2 20.7 | .. + | 42.6 | 86 9 24.5 | + 1.5 |
| 4 | 353 58 | 7.7 | 10.9 | 3.6 | 10.2 | 32 | .. | 310 | .. | 185 | .. | 66.0 | 5 57 17.4 | .. + | 6.3 | 57 3 44.9 | 0.0 |
| 5 | 353 58 | 7.7 | 10.9 | 3.6 | 10.2 | 31 | .. | 440 | .. | 300 | .. | 66.0 | 5 59 36.3 | .. + | 6.4 | 57 6 3.9 | - 0.6 |
| 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 7 | 341 34 | 9.8 | 12.9 | 5.0 | 12.5 | 37 | .. | 740 | .. | 635 | .. | 66.0 | 18 20 9.1 | .. + | 20.2 | 69 26 50.5 | - 2.0 |
| 8 | 337 20 | 1.6 | 4.7 | 25.0 | 4.0 | 38 | 015 | 980 | .. | .. | .. | 66.0 | 22 34 3.8 | .. + | 25.3 | 73 40 50.3 | - 1.9 |
| 9 | 319 20 | 2.7 | 6.0 | 29.5 | 7.2 | 31 | .. | 765 | .. | .. | .. | 66.0 | 40 33 16.9 | .. + | 52.0 | 91 40 30.1 | 0.0 |
| 10 | 319 20 | 2.7 | 6.0 | 29.5 | 7.2 | 32 | .. | .. | .. | 305 | 300 | 66.0 | 40 35 14.9 | 36.2 + | 52.1 | 91 42 28.2 | + 0.1 |
| 11 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 66.6 | .. | .. | .. | .. | .. |
| 12 | 354 16 | 5.5 | 11.5 | 3.1 | 9.8 | 37 | .. | .. | .. | 354 | 306 | 66.6 | 5 40 36.6 | 42.0 + | 5.9 | 56 47 3.7 | - 0.7 |
| 13 | 331 22 | 1.1 | 5.6 | 27.5 | 6.3 | 37 | 610 | 590 | .. | .. | .. | 66.6 | 28 34 33.2 | .. + | 32.4 | 79 41 26.8 | 0.0 |
| 14 | 329 36 | 1.0 | 7.4 | 0.0 | 5.7 | 38 | 280 | 270 | .. | .. | .. | 66.6 | 30 20 44.4 | .. + | 34.9 | 81 27 40.5 | + 1.1 |
| 15 | 301 34 | 3.7 | 6.9 | 3.3 | 11.5 | 38 | 520 | 230 | .. | .. | .. | 66.6 | 58 22 48.2 | .. + 1 | 36.3 | 109 30 45.7 | .. |
| 16 | 302 6 | 6.2 | 6.7 | 4.8 | 14.2 | 35 | .. | .. | .. | 766 | 680 | 66.6 | 57 50 12.3 | 43.5 + 1 | 34.3 | 108 58 7.8 | .. |
| 17 | 5 52 | 9 29.0 | 4.4 | 27.5 | 2.3 | 33 | .. | 882 | .. | 250 | .. | 66.6 | 354 3 35.6 | .. - | 6.2 | 45 9 50.6 | + 0.1 |
| 18 | 350 46 | 10 4.3 | 7.9 | 1.5 | 4.2 | 36 | .. | 940 | .. | 710 | .. | 66.6 | 9 10 24.8 | .. + | 9.6 | 60 16 55.6 | - 1.2 |
| 19 | 320 8 | 4.3 | 10.1 | 2.2 | 11.5 | 36 | .. | 031 | .. | 886 | .. | 66.6 | 39 48 13.6 | .. + | 49.6 | 90 55 24.4 | - 0.1 |
| 20 | 309 36 | 4.7 | 9.2 | 3.1 | 11.5 | 39 | .. | 960 | .. | 700 | .. | 66.6 | 50 21 12.9 | .. + 1 | 11.7 | 101 28 45.8 | .. |
| 21 | 309 36 | 4.7 | 9.2 | 3.1 | 11.5 | 38 | 956 | .. | .. | .. | 600 | 66.6 | 50 20 56.7 | .. + 1 | 11.7 | 101 28 29.6 | .. |
| 22 | 344 46 | 4.7 | 7.2 | 29.2 | 6.8 | 35 | 170 | 140 | .. | .. | .. | 67.2 | 15 9 58.4 | .. + | 16.4 | 66 16 36.0 | - 0.2 |
| 23 | 352 34 | 4.7 | 6.6 | 28.2 | 5.5 | 37 | .. | 148 | .. | 985 | .. | 67.2 | 7 22 28.1 | .. + | 7.8 | 58 27 57.1 | - 0.1 |
| 24 | 307 12 | 4.7 | 7.2 | 29.7 | 7.2 | 35 | 506 | 506 | .. | .. | .. | 67.2 | 52 44 3.6 | .. + 1 | 19.5 | 103 51 44.3 | - 0.2 |
| 25 | 280 18 | 11.5 | 12.5 | 6.6 | 13.4 | 30 | .. | .. | .. | 650 | 782 | 67.2 | 79 36 58.6 | .. + 5 | 20.9 | 130 48 40.7 | - 5.6 |
| 26 | 200 24 | 3.5 | 5.6 | 29.7 | 5.6 | 34 | 900 | 724 | .. | .. | .. | 67.2 | 69 31 54.1 | .. + 2 | 41.4 | 120 40 56.7 | - 3.3 |
| 27 | 283 42 | 3.6 | 4.6 | 29.0 | 6.0 | 31 | 044 | 050 | .. | .. | .. | 67.2 | 76 12 53.7 | .. + 4 | 3.1 | 127 23 18.0 | - 4.4 |
| 28 | 286 52 | 2.5 | 5.2 | 28.5 | 6.2 | 46 | .. | .. | .. | 350 | 358 | 67.2 | 73 4 17.1 | .. + 3 | 17.2 | 124 13 55.5 | - 3.7 |
| 29 | 290 50 | 9 26.0 | 26.9 | 21.2 | 27.7 | 34 | .. | .. | .. | 596 | 510 | 67.2 | 69 5 42.0 | .. + 2 | 37.9 | 120 14 41.1 | - 2.9 |
| 30 | 285 10 | 27.8 | 0.0 | 23.0 | 1.0 | 33 | 150 | 040 | .. | .. | .. | 67.2 | 74 42 46.1 | .. + 3 | 39.1 | 125 52 46.4 | - 3.3 |
| 31 | 285 10 | 27.8 | 0.0 | 23.0 | 1.0 | 33 | 165 | 235 | .. | .. | .. | 67.2 | 74 42 47.7 | .. + 3 | 39.1 | 125 52 48.0 | - 3.1 |
| 32 | 285 10 | 27.8 | 0.0 | 23.0 | 1.0 | 34 | .. | 110 | .. | 060 | .. | 67.2 | 74 48 8.5 | .. + 3 | 40.4 | 125 58 10.1 | - 2.9 |
| 33 | 219 12 | 10 7.3 | 9.5 | 3.6 | 9.0 | 33 | 908 | 754 | .. | .. | .. | 67.2 | 140 43 40.8 | .. - | 49.7 | 90 23 30.1 | + 0.8 |
| 34 | 320 40 | 9 25.0 | 27.5 | 19.0 | 28.4 | 36 | .. | .. | .. | 848 | 800 | 67.2 | 39 16 16.6 | .. - | 49.7 | 90 23 27.5 | - 1.8 |
| 35 | 358 14 | 10 5.0 | 7.0 | 29.5 | 6.2 | 32 | .. | 452 | .. | 360 | .. | 67.2 | 1 41 17.4 | .. + | 1.8 | 52 47 40.4 | + 12.1 |
| 36 | 338 58 | 9.3 | 8.5 | 2.5 | 9.5 | 31 | .. | 895 | .. | .. | .. | 67.2 | 20 57 11.5 | .. + | 23.3 | 72 3 56.0 | + 7.9 |
| 37 | 339 46 | 4.0 | 5.5 | 28.5 | 6.5 | 33 | .. | 900 | .. | .. | .. | 67.2 | 20 9 38.4 | .. + | 22.3 | 71 16 21.9 | + 7.9 |
| 38 | 54 24 | 4.2 | 5.6 | 28.2 | 5.0 | 32 | 218 | .. | 232 | .. | .. | 67.2 | 305 31 13.2 | .. - 1 | 25.1 | 356 36 9.3 | - 0.5 |
| 39 | 280 10 | 1.3 | 1.5 | 27.1 | 3.0 | 31 | .. | 570 | .. | 504 | .. | 67.2 | 79 42 26.4 | .. + 5 | 24.6 | 130 54 12.2 | - 0.6 |
| 40 | 280 10 | 1.3 | 1.5 | 27.1 | 3.0 | 32 | .. | 980 | .. | 922 | .. | 67.2 | 79 47 53.9 | .. + 5 | 27.3 | 130 59 42.4 | - 0.5 |
| 41 | 48 16 | 8.0 | 7.0 | 1.6 | 7.1 | 36 | 910 | 912 | .. | .. | .. | 67.2 | 311 40 28.5 | .. - 1 | 8.3 | 2 45 41.4 | - 2.2 |
| 42 | 353 12 | 3.8 | 5.2 | 28.4 | 6.6 | 34 | 962 | 000 | .. | .. | .. | 67.2 | 6 43 54.8 | .. + | 7.2 | 57 50 23.2 | - 0.7 |
| 43 | 326 36 | 8.3 | 10.8 | 2.6 | 9.6 | 36 | 670 | 630 | .. | .. | .. | 67.2 | 33 20 24.4 | .. + | 40.1 | 84 27 25.7 | - 3.1 |
| 44 | 349 22 | 6.2 | 5.5 | 29.5 | 7.2 | 34 | 940 | 950 | .. | .. | .. | 67.2 | 10 33 55.3 | 32.8 + | 11.4 | 61 40 27.9 | - 0.7 |
| 45 | 354 0 | 4.8 | 6.5 | 0.9 | 6.9 | 32 | .. | 250 | .. | 120 | .. | 68.1 | 5 55 15.2 | 31.7 + | 6.3 | 57 1 42.7 | + 0.3 |
| 46 | 203 36 | 8.3 | 10.8 | 4.2 | 8.0 | 37 | 710 | 675 | .. | .. | .. | 68.1 | 156 20 41.1 | .. - | 26.4 | 74 46 6.5 | + 2.1 |
| 47 | 336 16 | 3.5 | 5.2 | 27.3 | 5.3 | 32 | .. | .. | .. | 325 | 290 | 68.1 | 23 39 16.3 | .. + | 26.4 | 74 46 3.9 | - 0.5 |
| 48 | 312 42 | 4.0 | 5.9 | 29.5 | 7.0 | 32 | 500 | 430 | .. | .. | .. | 68.1 | 47 13 17.4 | .. + 1 | 5.1 | 98 20 43.7 | - 1.0 |
| 49 | 284 58 | 6.7 | 9.2 | 3.1 | 9.5 | 32 | .. | 135 | .. | 060 | .. | 68.1 | 74 57 15.8 | .. + 3 | 40.8 | 126 7 17.8 | - 3.1 |
| 50 | 286 4 | 9.9 | 11.5 | 6.0 | 13.8 | 32 | .. | .. | .. | 170 | 140 | 68.1 | 73 51 20.7 | .. + 3 | 25.5 | 125 1 7.4 | - 2.8 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " " | " " | " " | " " |
| 10 | 30.44 | 38.3 | 15 | - 7.6 | - 16 18.9 | . | - 16 26.5 |
| 12 | 30.22 | 43.4 | 16 | - 7.6 | + 16 18.9 | . | + 16 11.3 |
| 16 | 30.22 | 45.0 | 20 | - 4.9 | - 8.4 | . | - 13.3 |
| 44 | 30.30 | 35.0 | 21 | - 4.9 | + 8.4 | - 0.6 | + 2.9 |
| 45 | 29.87 | 33.9 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|---------|--------|----------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | |
| 1876. | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| Jan. 25 | 1 | β Tauri | P. | 21.6 | 24.5 | 26.4 | 33.3 | 35.6 | 37.9 | 45.0 | 46.7 | 49.6 | 18 35.62 | + 0.32 | - 7.37 | - 7.39 | 5 18 28.57 | - 0.02 |
| | 2 | B. A. C. 1718 . . . | P. | 7.9 | 11.0 | 12.7 | 20.0 | 22.4 | 24.8 | 32.2 | 34.0 | 37.0 | 23 22.44 | + 0.30 | . | - 7.39 | 5 23 15.35 | - 1.41 |
| | 3 | δ Orionis | P. | 36.3 | 38.9 | 40.5 | 46.5 | 48.8 | 50.8 | 57.0 | 58.4 | 1.0 | 25 48.69 | + 0.28 | - 7.40 | - 7.39 | 5 25 41.58 | - 0.02 |
| | 4 | Orionis | P. | 51.4 | 54.0 | 55.5 | 1.7 | 3.6 | 5.7 | 11.8 | 13.4 | 16.0 | 30 3.68 | + 0.28 | - 7.40 | - 7.39 | 5 29 56.57 | 0.00 |
| | 5 | B. A. C. 1794 . . . | P. | 26.3 | 28.8 | 30.4 | 36.5 | 38.5 | 40.6 | 46.7 | 48.2 | 50.8 | 34 38.53 | + 0.28 | . | - 7.39 | 5 34 31.42 | - 1.27 |
| | 6 | B. A. C. 1825 . . . | P. | 17.0 | 20.5 | 22.5 | 30.5 | 33.0 | 35.7 | 43.6 | 45.7 | 49.0 | 39 33.06 | + 0.31 | . | - 7.39 | 5 39 25.98 | - 1.55 |
| | 7 | B. A. C. 1842 . . . | P. | 11.4 | 14.6 | 16.7 | 24.6 | 27.2 | 30.1 | 38.0 | 40.0 | 43.1 | 41 27.30 | + 0.31 | . | - 7.39 | 5 41 20.22 | - 1.56 |
| | 8 | B. A. C. 1865 . . . | P. | 5.3 | 8.4 | 10.0 | 17.3 | 19.5 | 22.0 | 29.0 | 30.8 | 33.8 | 45 19.57 | + 0.30 | . | - 7.39 | 5 45 12.48 | - 1.44 |
| | 9 | B. A. C. 1882 . . . | P. | 35.7 | 38.7 | 40.4 | 47.5 | 49.8 | 52.0 | 59.2 | 0.9 | 3.8 | 48 49.78 | + 0.32 | . | - 7.39 | 5 48 42.71 | - 1.52 |
| | 10 | B. A. C. 1922 . . . | P. | 1.8 | 5.1 | 7.0 | 14.6 | 17.0 | 19.6 | 27.1 | 29.0 | 32.0 | 53 17.02 | + 0.30 | . | - 7.39 | 5 53 9.93 | - 1.52 |
| | 11 | Durch. 17°, 1115 . | P. | 49.0 | 51.7 | 53.4 | 59.9 | 2.0 | 4.3 | 10.7 | 12.0 | 14.7 | 58 1.97 | + 0.30 | . | - 7.39 | 5 57 54.88 | - 1.45 |
| | 12 | 22 Camelopardalis (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 13 | 22 Camelopardalis . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 14 | δ Ursæ Minoris, S. P. | P. | . | . | 18.0 | 42.4 | 8.3 | 34.0 | 0.0 | 51.0 | 24.3 | 12 8.50 | - 2.96 | . | - 7.38 | 18 11 58.16 | - 0.20 |
| | 15 | B. A. C. 2109 . . . | P. | 28.5 | 31.4 | 33.3 | 40.6 | 43.0 | 45.5 | 52.7 | 54.5 | 57.5 | 23 43.00 | + 0.30 | . | - 7.38 | 6 23 35.02 | - 1.54 |
| | 16 | B. A. C. 2136 . . . | P. | 41.6 | 45.0 | 46.7 | 54.3 | 56.7 | 59.3 | 6.8 | 8.8 | 11.8 | 26 56.78 | + 0.30 | . | - 7.38 | 6 26 49.70 | - 1.58 |
| | 17 | Lalande 12661 . . . | P. | 25.9 | 28.9 | 30.7 | 37.6 | 40.0 | 42.4 | 49.3 | 51.0 | 54.0 | 30 39.98 | + 0.32 | . | - 7.38 | 6 30 32.92 | - 1.72 |
| | 18 | B. A. C. 2190 . . . | P. | 22.5 | 24.3 | 29.4 | 32.0 | 34.8 | 37.3 | 40.0 | 45.2 | 47.1 | 34 34.73 | + 0.31 | . | - 7.38 | 6 34 27.66 | - 1.63 |
| | 19 | B. A. C. 2207 ² . . . | P. | 57.6 | 0.9 | 2.8 | 10.5 | 13.3 | 15.8 | 23.6 | 25.5 | 29.0 | 38 13.22 | + 0.31 | . | - 7.38 | 6 38 6.15 | - 1.64 |
| | 20 | Hesperia | P. | 13.8 | 16.3 | 17.9 | 24.2 | 26.2 | 28.3 | 34.4 | 36.0 | 38.4 | 50 26.17 | + 0.29 | . | - 7.38 | 6 50 19.08 | . |
| | 21 | ϵ Canis Majoris . . . | P. | 39.8 | 42.6 | 44.4 | 51.4 | 53.7 | 56.1 | 3.0 | 4.8 | 7.7 | 53 53.72 | + 0.29 | - 7.28 | - 7.38 | 6 53 46.63 | - 0.15 |
| | 22 | Melete | P. | . | . | . | 14.2 | 16.2 | . | . | . | . | 2 16.24 | + 0.29 | . | - 7.38 | 7 2 9.15 | . |
| | 23 | Hygeia | P. | 1.4 | 3.8 | 5.5 | 12.0 | 14.3 | 16.7 | 23.1 | 24.9 | 27.4 | 12 14.34 | + 0.30 | . | - 7.38 | 7 12 7.26 | . |
| | 24 | α^1 Geminorum | P. | 35.5 | 38.4 | 40.0 | . | . | . | 59.6 | 1.4 | 4.3 | 26 49.87 | + 0.33 | . | - 7.38 | 7 26 42.82 | - 1.98 |
| | 25 | α^2 Geminorum | P. | . | . | 45.5 | 47.8 | 50.3 | 52.7 | 55.2 | . | . | 26 50.30 | + 0.33 | - 7.52 | - 7.38 | 7 26 43.25 | + 0.38 |
| | 26 | B. A. C. 2561 . . . | P. | 33.2 | 36.4 | 38.3 | 45.7 | 48.5 | 50.9 | 58.5 | 0.5 | 3.5 | 38 48.39 | + 0.30 | . | - 7.38 | 7 38 41.31 | - 1.62 |
| | 27 | B. A. C. 2572 . . . | P. | 31.4 | 34.5 | 36.4 | 43.9 | 46.6 | 49.0 | 56.7 | 58.4 | 1.8 | 39 40.52 | + 0.30 | . | - 7.38 | 7 39 39.44 | - 1.62 |
| | 28 | B. A. C. 2604 . . . | P. | . | . | . | . | . | 8.3 | 13.5 | 15.6 | 19.0 | 41 2.88 | + 0.31 | . | - 7.38 | 7 43 55.81 | - 1.67 |
| | 29 | B. A. C. 2614 . . . | P. | . | . | . | . | 11.2 | 14.0 | 19.4 | 21.4 | 24.8 | 45 8.65 | + 0.31 | . | - 7.38 | 7 45 1.58 | - 1.67 |
| | 30 | B. A. C. 2634 . . . | P. | 50.0 | 53.2 | 55.4 | 3.3 | 6.0 | 8.7 | 16.7 | 18.7 | 22.2 | 48 6.02 | + 0.31 | . | - 7.38 | 7 47 58.95 | - 1.67 |
| | 31 | B. A. C. 2685 . . . | P. | . | . | 8.9 | 11.6 | 14.0 | 16.6 | 19.2 | . | . | 57 14.06 | + 0.31 | . | - 7.38 | 7 57 6.99 | - 1.62 |
| | 32 | B. A. C. 2717 . . . | P. | . | . | 20.4 | 22.8 | 25.3 | 27.8 | 30.3 | . | . | 0 25.32 | + 0.30 | . | - 7.38 | 8 0 18.24 | - 1.58 |
| | 33 | B. A. C. 2719 . . . | P. | . | . | 1.6 | 3.9 | 6.4 | 8.8 | 11.4 | . | . | 1 6.42 | + 0.30 | . | - 7.38 | 8 0 59.34 | - 1.58 |
| | 34 | Ariadne | P. | 50.6 | 53.3 | 54.8 | 1.0 | 3.4 | 5.4 | 11.8 | 13.5 | 16.0 | 4 3.31 | + 0.30 | . | - 7.38 | 8 3 56.23 | . |
| | 35 | B. A. C. 2794 . . . | P. | 26.9 | 30.3 | 32.2 | 39.5 | 41.9 | 44.6 | 52.0 | 53.9 | 57.2 | 13 42.06 | + 0.30 | . | - 7.38 | 8 13 34.95 | - 1.58 |
| | 36 | B. A. C. 2805 . . . | P. | 33.5 | 36.8 | 38.6 | 46.4 | . | 51.5 | 58.9 | 0.8 | 4.0 | 16 48.81 | + 0.30 | . | - 7.38 | 8 16 41.73 | - 1.58 |
| | 37 | Lacaille 3373 . . . | P. | . | . | 34.7 | 37.5 | 39.9 | 42.6 | 45.5 | . | . | 26 40.04 | + 0.31 | . | - 7.38 | 8 26 32.97 | - 1.59 |
| | 38 | B. A. C. 2877 . . . | P. | . | . | 53.5 | 56.3 | 58.7 | 1.5 | 4.2 | . | . | 28 58.84 | + 0.31 | . | - 7.38 | 8 26 51.77 | - 1.59 |
| | 39 | B. A. C. 2933 . . . | P. | 30.8 | 33.8 | 35.9 | 43.5 | . | 48.5 | 56.2 | 58.0 | 1.4 | 34 46.01 | + 0.30 | . | - 7.38 | 8 34 38.93 | - 1.56 |
| | 40 | Hydræ | P. | 8.8 | 11.4 | 12.9 | 19.3 | 21.3 | 23.3 | 29.3 | 31.0 | 33.6 | 40 21.21 | + 0.29 | - 7.34 | - 7.38 | 8 40 14.12 | - 0.08 |
| | 41 | B. A. C. 3009 . . . | P. | 54.8 | 57.8 | 0.0 | 8.1 | 10.7 | 13.5 | 21.4 | 23.4 | 26.6 | 45 10.70 | + 0.31 | . | - 7.38 | 8 45 3.63 | - 1.57 |
| | 42 | Aegina | P. | 55.4 | 58.0 | 59.8 | 6.3 | 8.5 | 10.7 | 17.4 | 19.0 | 21.4 | 58 8.50 | + 0.30 | . | - 7.38 | 8 58 1.42 | . |
| | 43 | Harmonia | P. | 51.9 | 54.6 | 56.1 | 2.8 | 5.0 | 7.3 | 13.6 | 15.3 | 18.2 | 9 4.98 | + 0.30 | . | - 7.37 | 9 8 57.91 | . |
| | 44 | Parthenope | P. | 20.5 | 23.3 | 25.0 | 31.4 | 33.5 | 35.6 | 41.9 | 43.6 | 46.3 | 18 33.46 | + 0.30 | . | - 7.37 | 9 18 26.39 | . |
| | 45 | Uranus | P. | 28.1 | 30.8 | 32.4 | 38.9 | 41.0 | 43.1 | 49.4 | 51.0 | 53.7 | 24 40.93 | + 0.30 | . | - 7.37 | 0 24 33.86 | . |
| | 46 | Io | P. | . | . | 50.8 | 52.9 | . | . | . | . | . | 33 54.91 | + 0.29 | . | - 7.37 | 9 33 47.83 | . |
| | 47 | Durch. 21°, 2106 . | P. | . | . | 26.6 | 28.6 | 30.9 | 23.1 | 35.2 | . | . | 40 30.88 | + 0.31 | . | - 7.37 | 9 40 23.82 | - 1.80 |
| | 48 | Nemausa | P. | 30.2 | 31.7 | 35.7 | 37.9 | 39.1 | 41.9 | 44.0 | 48.0 | 49.7 | 44 39.89 | + 0.29 | . | - 7.37 | 9 44 32.81 | . |
| | 49 | Leonis | P. | 42.1 | 44.8 | 46.4 | 52.5 | 54.6 | 56.7 | 3.0 | 4.6 | 7.2 | 1 54.66 | + 0.29 | - 7.35 | - 7.37 | 10 1 47.58 | - 0.06 |
| | 50 | Weisse (2) 28 . . . | P. | 39.8 | 42.8 | 48.6 | 50.8 | 53.0 | 55.2 | 57.3 | 3.3 | 6.0 | 3 52.98 | + 0.30 | . | - 7.37 | 10 3 45.91 | - 1.71 |

6, 15, 16, 29. Thread B used.

7, 20, 22, 23, 30, 42, 43, 44, 47, 48. Thread A used.

12, 32. Bisections at wires IV and V.

18, 31, 33. Bisections at wires V and VI.

35. Bisections at wires II and III.

41. Bisections at wires III and V.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom't. | Refraction. | Apparent North-Polar Distance. | Miscellan'us Corrections. | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|---------------------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | | | | | |
| 1 | 349 32 | 10 4.5 | 5.2 | 27.7 | 6.3 | 32 | .. | 230 | .. | 170 | .. | 68.1 | 10 23 14.1 | .. + | 11.0 | 61 29 46.3 | 0.0 |
| 2 | 238 34 | 8.0 | 9.0 | 3.3 | 10.7 | 34 | 770 | 755 | .. | .. | .. | 68.1 | 71 21 56.6 | .. + 2 | 57.0 | 122 31 14.8 | - 2.1 |
| 3 | 320 40 | 2.3 | 3.2 | 25.8 | 6.0 | 36 | .. | 525 | .. | 420 | .. | 68.1 | 39 16 17.7 | .. + | 49.3 | 90 23 28.2 | - 1.2 |
| 4 | 319 46 | 7.3 | 8.1 | 2.1 | 9.0 | 33 | 880 | 815 | .. | .. | .. | 68.1 | 40 9 41.1 | .. + | 50.8 | 91 16 53.1 | - 0.7 |
| 5 | 319 2 | 3.6 | 5.0 | 29.5 | 6.0 | 32 | .. | 515 | .. | 360 | .. | 68.1 | 40 53 17.6 | .. + | 52.0 | 92 0 30.8 | + 3.9 |
| 6 | 281 42 | 8.0 | 9.6 | 4.8 | 10.0 | 35 | .. | 825 | .. | 585 | .. | 68.1 | 78 16 44.4 | .. + 4 | 43.2 | 129 27 48.8 | - 2.4 |
| 7 | 281 42 | 8.0 | 9.6 | 4.8 | 10.0 | 32 | .. | .. | .. | 540 | 490 | 68.1 | 78 10 50.8 | .. + 4 | 40.9 | 120 21 52.9 | - 2.4 |
| 8 | 290 26 | 7.3 | 8.7 | 3.0 | 10.6 | 36 | .. | 880 | .. | 830 | .. | 68.1 | 69 30 29.0 | .. + 2 | 40.0 | 120 39 30.2 | - 1.1 |
| 9 | 349 58 | 6.7 | 7.8 | 1.0 | 7.4 | 35 | 390 | 335 | .. | .. | .. | 68.1 | 9 58 3.7 | .. + | 10.6 | 61 4 35.5 | + 10.6 |
| 10 | 285 48 | 6.9 | 9.1 | 3.6 | 9.6 | 35 | 090 | 095 | .. | .. | .. | 68.1 | 74 8 0.5 | .. + 3 | 29.1 | 125 17 50.8 | - 1.4 |
| 11 | 338 58 | 6.9 | 8.0 | 1.3 | 8.0 | 31 | .. | .. | .. | 710 | 690 | 68.1 | 20 57 10.2 | .. + | 23.1 | 72 3 54.5 | + 7.9 |
| 12 | 149 28 | 3.6 | 7.2 | 29.8 | 5.3 | 33 | .. | .. | 760 | .. | 730 | 68.1 | 210 27 38.3 | .. + | 35.4 | 20 38 7.5 | - 0.4 |
| 13 | 30 24 | 6.7 | 7.5 | 1.2 | 8.1 | 36 | .. | .. | .. | 320 | 300 | 68.1 | 329 32 21.9 | .. - | 35.4 | 20 38 7.7 | - 0.2 |
| 14 | 54 24 | 6.4 | 7.7 | 0.4 | 6.9 | 32 | 065 | 035 | 020 | 980 | 010 | 68.1 | 305 31 13.0 | 31.5 - 1 | 28.2 | 356 36 6.0 | - 3.4 |
| 15 | 288 36 | 8.5 | 9.6 | 5.0 | 11.2 | 28 | 400 | 410 | .. | .. | .. | 68.1 | 71 20 51.8 | .. + 2 | 56.8 | 122 30 9.8 | - 0.2 |
| 16 | 285 56 | 8.6 | 10.9 | 5.2 | 12.6 | 26 | 980 | 985 | .. | .. | .. | 68.1 | 74 0 30.9 | .. + 3 | 27.5 | 125 10 19.6 | - 0.3 |
| 17 | 350 8 | 9.0 | 10.0 | 4.3 | 10.7 | 35 | .. | 970 | .. | 900 | .. | 68.1 | 9 48 1.8 | .. + | 10.4 | 60 54 33.4 | + 8.7 |
| 18 | 283 14 | 9.2 | 11.5 | 5.5 | 12.2 | 37 | .. | .. | .. | 180 | 120 | 68.1 | 76 42 36.4 | .. + 4 | 10.1 | 127 53 7.7 | - 0.2 |
| 19 | 282 50 | 3.0 | 4.5 | 29.0 | 6.4 | 35 | .. | 425 | .. | 260 | .. | 68.1 | 77 6 1.6 | .. + 4 | 17.8 | 128 16 40.6 | - 0.1 |
| 20 | 330 46 | 3.6 | 5.2 | 28.0 | 6.5 | 33 | 970 | 920 | .. | 685 | 690 | 68.1 | 29 7 5.2 | .. + | 33.6 | 80 14 0.0 | - 2.8 |
| 21 | 292 16 | 8.2 | 9.8 | 3.4 | 11.5 | 32 | 870 | 890 | .. | 660 | 640 | 68.1 | 67 39 27.1 | .. + 2 | 25.7 | 118 48 14.0 | - 1.4 |
| 22 | 332 22 | 3.8 | 5.2 | 28.8 | 6.0 | 33 | 035 | 760 | .. | .. | .. | 68.1 | 27 30 49.9 | .. + | 31.4 | 78 37 42.5 | - 1.8 |
| 23 | 342 48 | 7.7 | 10.3 | 2.5 | 10.1 | 28 | .. | 975 | .. | 810 | .. | 68.1 | 17 3 54.1 | .. + | 18.6 | 68 10 33.9 | - 1.1 |
| 24 | 353 12 | 7.8 | 8.6 | 1.6 | 9.2 | 35 | 005 | .. | .. | .. | 755 | 68.1 | 6 43 58.8 | .. + | 7.1 | 57 50 27.1 | + 5.9 |
| 25 | 353 12 | 7.8 | 8.6 | 1.6 | 9.2 | 34 | .. | 750 | .. | 550 | .. | 68.1 | 6 43 55.0 | .. + | 7.1 | 57 50 23.3 | - 0.5 |
| 26 | 285 20 | 0.7 | 1.5 | 26.5 | 3.4 | 33 | 260 | 170 | .. | .. | .. | 68.1 | 74 35 25.0 | .. + 3 | 35.8 | 125 45 22.0 | + 1.8 |
| 27 | 285 20 | 0.7 | 1.5 | 26.5 | 3.4 | 35 | .. | 880 | .. | 770 | .. | 68.1 | 74 36 6.3 | .. + 3 | 36.0 | 125 46 3.5 | + 1.9 |
| 28 | 280 48 | 8.3 | 9.5 | 4.6 | 11.4 | 39 | .. | .. | .. | 225 | 170 | 68.1 | 79 9 6.8 | .. + 5 | 6.1 | 130 20 34.1 | + 2.1 |
| 29 | 280 48 | 8.3 | 9.5 | 4.6 | 11.4 | 40 | .. | .. | .. | 270 | 285 | 68.1 | 79 11 55.8 | .. + 5 | 7.3 | 130 23 24.3 | + 2.1 |
| 30 | 280 48 | 8.3 | 9.5 | 4.6 | 11.4 | 29 | 310 | 295 | .. | .. | .. | 68.1 | 79 4 2.0 | .. + 5 | 3.8 | 130 15 27.0 | + 2.2 |
| 31 | 284 10 | 3.3 | 4.0 | 29.0 | 7.5 | 35 | .. | .. | .. | 500 | 550 | 68.1 | 75 46 5.4 | .. + 3 | 54.9 | 126 56 21.5 | + 2.4 |
| 32 | 287 50 | 9 29.4 | 0.5 | 25.2 | 4.4 | 31 | .. | .. | 145 | .. | 075 | 68.1 | 72 4 53.9 | .. + 3 | 4.7 | 123 14 19.8 | + 2.3 |
| 33 | 287 50 | 29.4 | 0.5 | 25.2 | 4.4 | 25 | .. | .. | .. | 520 | 515 | 68.1 | 72 3 28.6 | .. + 3 | 4.5 | 123 12 54.3 | + 2.3 |
| 34 | 337 54 | 10 3.9 | 4.9 | 28.0 | 7.0 | 24 | .. | .. | .. | 440 | 360 | 68.1 | 21 59 15.9 | .. + | 24.4 | 73 6 1.5 | - 2.1 |
| 35 | 286 2 | 11.1 | 12.3 | 7.7 | 13.7 | 35 | 250 | 205 | .. | .. | .. | 68.1 | 73 54 7.2 | .. + 3 | 26.5 | 125 3 54.9 | + 2.7 |
| 36 | 285 0 | 3.7 | 4.3 | 0.1 | 6.8 | 32 | .. | 860 | .. | 670 | .. | 68.1 | 74 55 22.6 | .. + 3 | 40.8 | 126 5 24.6 | + 2.8 |
| 37 | 282 28 | 9.4 | 11.0 | 6.2 | 12.4 | 33 | .. | .. | .. | 915 | 805 | 68.1 | 77 27 46.4 | .. + 4 | 25.8 | 128 38 33.4 | + 3.2 |
| 38 | 282 28 | 9.4 | 11.0 | 6.2 | 12.4 | 34 | .. | .. | .. | 640 | 565 | 68.1 | 77 27 57.8 | .. + 4 | 25.7 | 128 38 44.7 | + 3.2 |
| 39 | 284 56 | 10.5 | 12.0 | 7.0 | 14.2 | 35 | .. | 530 | .. | 440 | .. | 68.1 | 75 0 11.5 | .. + 3 | 42.1 | 126 10 14.8 | + 3.2 |
| 40 | 327 56 | 5.0 | 6.8 | 29.6 | 7.7 | 37 | .. | 645 | .. | 570 | .. | 68.1 | 32 0 38.1 | .. + | 37.8 | 83 7 37.1 | - 0.2 |
| 41 | 281 16 | 8.2 | 9.7 | 6.2 | 11.4 | 35 | 655 | .. | .. | .. | 540 | 68.1 | 78 40 11.3 | 30.3 + 4 | 53.6 | 129 51 26.1 | + 3.7 |
| 42 | 341 32 | 6.3 | 7.5 | 0.6 | 7.3 | 32 | 355 | 325 | .. | .. | .. | 68.1 | 18 20 58.8 | 30.3 + | 20.0 | 69 27 40.0 | - 2.0 |
| 43 | 342 0 | 1.8 | 3.2 | 26.4 | 5.2 | 36 | .. | 630 | .. | 480 | .. | 68.1 | 17 53 45.5 | .. + | 19.5 | 69 0 26.2 | - 2.0 |
| 44 | 337 42 | 7.5 | 9.6 | 3.5 | 10.0 | 31 | .. | 390 | .. | 235 | .. | 68.1 | 22 10 31.2 | .. + | 24.6 | 73 17 17.0 | - 1.9 |
| 45 | 337 2 | 6.0 | 7.4 | 1.0 | 8.2 | 31 | 250 | 245 | .. | 130 | 135 | 68.1 | 22 53 0.8 | .. + | 26.1 | 73 59 48.1 | .. |
| 46 | 319 30 | 1.1 | 3.0 | 27.7 | 4.4 | 29 | 615 | 560 | .. | .. | .. | 68.1 | 40 21 30.8 | .. + | 51.5 | 91 31 43.5 | - 2.5 |
| 47 | 342 26 | 8.0 | 9.3 | 1.9 | 10.5 | 37 | .. | .. | .. | 025 | 035 | 68.1 | 17 27 59.9 | .. + | 19.0 | 68 34 40.1 | - 3.4 |
| 48 | 323 24 | 6.3 | 8.1 | 1.8 | 10.0 | 36 | .. | 765 | .. | 505 | .. | 68.1 | 36 29 51.5 | .. + | 44.8 | 87 36 57.5 | - 4.0 |
| 49 | 333 38 | 6.0 | 8.0 | 0.6 | 8.1 | 38 | 460 | 435 | .. | .. | .. | 68.1 | 26 18 50.8 | .. + | 30.0 | 77 25 42.0 | + 0.4 |
| 50 | 340 34 | 6.2 | 8.5 | 0.5 | 8.0 | 36 | 940 | 945 | .. | .. | .. | 68.1 | 19 22 27.9 | .. + | 21.3 | 70 29 10.4 | - 4.6 |

| No. | Barom. | At. Ther. | No | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|----|-----------|------------|-------------------------|-------|
| | in. | ° | | " " | " " | " " | " " |
| 14 | 29.85 | 33.7 | 45 | - 0.2 | .. | .. | - 0.2 |
| 41 | 29.85 | 32.4 | | | | | |
| 42 | 29.85 | 32.4 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. | | |
|---------|---------|-----------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|-----------------|----------------|---------------------------|----|----------------------------|-------|--------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar'nt. | Clock adopted. | h. | m. | | s. | |
| 1876. | | | | | | | | | | | | | m. | s. | s. | s. | s. | s. | s. | | |
| Jan. 25 | 1 | Dutch. 19, 2312 . . . | P. | 5.5 | 8.3 | 10.0 | 14.3 | 18.6 | 23.0 | 27.3 | 28.9 | 31.7 | 5 | 18.62 | + 0.30 | . | - 7.37 | 10 | 5 | 11.55 | - 1.70 |
| | 2 | B. A. C. 3507 . . . | P. | . | . | 44.5 | 46.8 | 49.0 | 51.4 | 53.4 | . | . | 9 | 49.02 | + 0.31 | . | - 7.37 | 10 | 9 | 41.96 | - 1.78 |
| | 3 | B. A. C. 3508 . . . | P. | . | . | . | . | 58.6 | 0.7 | 5.3 | 7.0 | 9.7 | 9 | 56.32 | + 0.31 | . | - 7.37 | 10 | 9 | 49.26 | - 1.78 |
| | 4 | Leonis | P. | 3.7 | 6.4 | 8.0 | . | . | . | 25.6 | 27.2 | . | 13 | 16.80 | + 0.30 | - 7.39 | - 7.37 | 10 | 13 | 9.73 | 0.00 |
| | 5 | Leonis | P. | . | . | 12.7 | 14.8 | . | 19.3 | 21.4 | . | . | 13 | 17.05 | + 0.30 | . | - 7.37 | 10 | 13 | 9.98 | - 1.70 |
| | 6 | B. A. C. 3606 . . . | P. | 30.5 | 33.1 | 34.7 | 41.0 | 43.2 | 45.4 | 51.5 | 53.1 | 55.8 | 25 | 43.14 | + 0.30 | . | - 7.37 | 10 | 25 | 36.07 | - 1.56 |
| | 7 | B. A. C. 3666 . . . | P. | 8.2 | 11.1 | 12.8 | 19.9 | 22.1 | 24.4 | 31.0 | 32.9 | 35.8 | 36 | 22.02 | + 0.31 | . | - 7.37 | 10 | 36 | 14.96 | - 1.77 |
| | 8 | Leonis (R) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 9 | Leonis | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 10 | Ursæ Majoris (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 11 | Ursæ Majoris. . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 12 | Leonis | P. | 26.1 | 28.0 | 30.6 | 37.0 | 39.3 | 41.5 | 48.0 | 49.7 | 52.5 | 7 | 39.29 | + 0.30 | - 7.36 | - 7.37 | 11 | 7 | 32.22 | - 0.07 |
| | 13 | Crateris | P. | 4.0 | 6.6 | 8.4 | 14.7 | 16.8 | 18.9 | 25.0 | 26.6 | 29.4 | 13 | 16.71 | + 0.29 | - 7.39 | - 7.37 | 11 | 13 | 9.63 | 0.00 |
| | 14 | Draconis | E. | 23.5 | 27.7 | 30.2 | 40.3 | 43.5 | 46.8 | 57.0 | 59.4 | 3.6 | 27 | 43.56 | + 0.33 | . | - 7.41 | 17 | 27 | 36.48 | + 0.06 |
| | 15 | Ophiuchi | E. | 7.3 | 8.8 | 12.8 | 15.0 | 17.1 | 19.2 | 21.3 | 25.4 | 27.0 | 29 | 17.10 | + 0.18 | - 7.32 | - 7.41 | 17 | 29 | 9.87 | - 0.06 |
| | 16 | Herculis | E. | 28.0 | 31.0 | 33.3 | 40.3 | 42.6 | 44.8 | 51.8 | 53.5 | 56.5 | 41 | 42.56 | + 0.21 | - 7.36 | - 7.41 | 17 | 41 | 35.36 | - 0.05 |
| | 17 | Draconis | E. | 29.4 | 33.6 | 36.0 | 45.8 | 49.1 | 52.3 | 2.3 | 4.7 | 8.8 | 53 | 49.11 | + 0.31 | . | - 7.41 | 17 | 53 | 42.01 | - 0.15 |
| | 18 | Ursæ Minoris . . . | E. | 35.0 | 39.5 | 44.3 | . | . | . | 20.5 | 46.5 | . | 12 | 2.60 | + 3.23 | . | - 7.41 | 18 | 11 | 58.42 | - 0.01 |
| | 19 | Lyre | E. | 34.4 | 37.0 | 39.6 | 47.5 | 50.1 | 52.8 | 0.5 | 2.6 | 5.9 | 32 | 50.11 | + 0.25 | - 7.37 | - 7.40 | 18 | 32 | 42.96 | - 0.01 |
| | 20 | Lyre | E. | 21.2 | 24.2 | 26.0 | 33.6 | 35.9 | 38.4 | 45 | 7.47 | 5.50 | 45 | 35.92 | + 0.23 | - 7.37 | - 7.40 | 18 | 45 | 28.75 | 0.00 |
| | 21 | B. A. C. 6491 . . . | E. | 9.5 | 12.6 | 14.2 | 21.6 | 24.0 | 26.4 | 33.5 | 35.6 | 38.8 | 54 | 24.02 | + 0.23 | . | - 7.40 | 18 | 54 | 16.85 | + 1.38 |
| | 22 | Aquila | E. | 36.1 | 38.9 | 40.4 | 46.7 | 49.0 | 51.1 | 57.1 | 58.8 | 1.4 | 59 | 48.83 | + 0.18 | - 7.47 | - 7.40 | 18 | 59 | 41.61 | + 0.15 |
| | 23 | Draconis | E. | 2.0 | 9.1 | 13.4 | 29.2 | 34.8 | 40.1 | 55.9 | 0.2 | 6.6 | 12 | 34.66 | + 0.52 | . | - 7.40 | 19 | 12 | 27.78 | + 0.25 |
| 26 | 24 | Sun I, S. | E. | 57.1 | 59.8 | 1.4 | 8.0 | 10.1 | 12.3 | 18.7 | 20.4 | 23.0 | 33 | 10.09 | + 0.14 | . | - 7.39 | 20 | 33 | 2.84 | . |
| | 25 | Sun II, N. | E. | 15.1 | 17.0 | 19.4 | 25.9 | 28.1 | 30.3 | 36.6 | 38.2 | 41.0 | 35 | 28.06 | + 0.14 | . | - 7.39 | 20 | 35 | 20.81 | . |
| | 26 | Mercury I, C. . . . | E. | 6.6 | 9.5 | 11.1 | 17.5 | 19.5 | 21.7 | 27.9 | 29.4 | 32.2 | 47 | 19.49 | + 0.14 | . | - 7.38 | 21 | 47 | 12.25 | + 0.23 |
| | 27 | Venus I, S. | E. | 55.6 | 58.0 | 59.9 | 6.2 | 8.2 | 10.4 | 16.5 | 18.2 | 20.7 | 35 | 8.19 | + 0.14 | . | - 7.38 | 22 | 35 | 0.95 | + 0.42 |
| | 28 | B. A. C. 1368 . . . | E. | 28.1 | 31.2 | 33.2 | 40.8 | 43.3 | 45.8 | 53.5 | 55.4 | 58.4 | 18 | 43.30 | + 0.19 | . | - 7.36 | 4 | 18 | 36.13 | - 1.20 |
| | 29 | B. A. C. 1389 . . . | E. | 19.4 | 22.8 | 24.6 | 32.7 | 35.5 | 38.0 | 46.1 | 48.3 | 51.5 | 22 | 35.43 | + 0.19 | . | - 7.36 | 4 | 22 | 28.26 | - 1.30 |
| | 30 | B. A. C. 1440 . . . | E. | 12.8 | 14.8 | 19.4 | 21.9 | 24.2 | 26.6 | 29.0 | 33.6 | 35.4 | 32 | 24.19 | + 0.19 | . | - 7.36 | 4 | 32 | 17.02 | - 1.19 |
| | 31 | B. A. C. 1407 . . . | E. | 15.9 | 18.0 | 20.7 | 27.9 | 30.3 | 32.7 | 39.8 | 41.6 | 44.5 | 38 | 30.26 | + 0.19 | . | - 7.35 | 4 | 38 | 23.10 | - 1.22 |
| | 32 | B. A. C. 1480 . . . | E. | 7.9 | 11.0 | 13.0 | 20.4 | 23.0 | 25.4 | 32.8 | 34.6 | 37.9 | 41 | 22.89 | + 0.19 | . | - 7.35 | 4 | 41 | 15.73 | - 1.27 |
| | 33 | Aurige | E. | 48.7 | 51.8 | 53.8 | 1.0 | 3.5 | 6.0 | 13.2 | 15.0 | 18.0 | 49 | 3.44 | + 0.27 | - 7.36 | - 7.35 | 4 | 48 | 56.36 | - 0.03 |
| | 34 | Orionis (R.) . . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 35 | B. A. C. 1588 . . . | E. | . | . | . | 51.6 | 53.6 | 55.6 | 1.8 | 3.3 | 5.9 | 1 | 53.59 | + 0.19 | . | - 7.35 | 5 | 1 | 46.43 | - 1.14 |
| | 36 | Orionis | E. | 30.6 | 33.3 | 34.9 | 41.0 | 43.0 | 45.1 | 51.3 | 52.9 | 55.5 | 8 | 43.07 | + 0.19 | - 7.34 | - 7.35 | 5 | 8 | 35.93 | + 0.01 |
| | 37 | B. A. C. 1614 . . . | E. | 44.6 | 47.7 | 49.7 | 56.9 | 59.4 | 2.0 | 9.3 | 11.0 | 14.2 | 11 | 59.42 | + 0.19 | . | - 7.35 | 5 | 11 | 52.26 | - 1.37 |
| | 38 | B. A. C. 1666 . . . | E. | 46.3 | 49.6 | 51.5 | 59.0 | 1.3 | 3.9 | 11.3 | 13.0 | 16.4 | 16 | 1.37 | + 0.19 | . | - 7.35 | 5 | 15 | 54.23 | - 1.41 |
| | 39 | Orionis | E. | 36.4 | 39.0 | 40.6 | 46.6 | 48.7 | 50.7 | 56.8 | 58.4 | 1.0 | 25 | 48.69 | + 0.20 | - 7.33 | - 7.35 | 5 | 25 | 41.54 | - 0.05 |
| | 40 | Orionis | E. | 51.4 | 54.0 | 55.6 | 1.7 | 3.7 | 5.8 | 11.9 | 13.5 | 16.0 | 30 | 3.73 | + 0.20 | - 7.38 | - 7.35 | 5 | 29 | 56.58 | + 0.02 |
| | 41 | Orionis (R.) . . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 42 | Orionis | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 43 | Camelopardalis (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 44 | Camelopardalis . . | E. | . | . | . | 21.4 | 27.0 | 33.0 | 44.5 | 49.0 | 56.2 | 5 | 21.38 | + 0.66 | . | - 7.34 | 6 | 5 | 14.70 | + 0.40 |
| | 45 | Ursæ Minoris, S. P. | E. | . | . | 19.5 | 42.5 | 10.0 | 35.0 | 1.0 | . | . | 12 | 9.64 | - 3.66 | . | - 7.34 | 18 | 11 | 58.64 | + 0.13 |
| | 46 | Geminorum (R.) . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 47 | Cephei (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 48 | Cephei | E. | . | . | 53.5 | 37.0 | 16.5 | 0.5 | 41.5 | . | . | 42 | 17.74 | + 4.61 | . | - 7.34 | 6 | 42 | 15.01 | + 0.31 |
| | 49 | Melete | E. | . | . | . | . | . | . | . | 47.7 | 59.8 | 1 | 47.62 | + 0.21 | . | - 7.34 | 7 | 1 | 40.49 | . |
| | 50 | Hygeia | E. | 14.4 | 17.0 | 18.9 | 25.5 | 27.5 | 29.7 | 36.2 | 37.7 | 40.7 | 11 | 27.51 | + 0.24 | . | - 7.34 | 7 | 11 | 20.41 | . |

1, 2, 50. Thread A used.
 3, 6, 7, 9, 11, 12, 13. Thread B used.
 8, 10. Bisections at wires I to III.
 17, 18. Bisections at sets B and D.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermomet. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | | r. | " | " | " | | | | | | | | | | | | | |
| 1 | 340 34 | 6.2 | 8.5 | 0.5 | 8.0 | 38 | .. | 395 | .. | 225 | .. | 68.1 | 19 20 16.5 | .. | + | 21.3 | 70 26 59.0 | - 4.8 |
| 2 | 345 6 | 8.0 | 9.4 | 2.2 | 10.5 | 30 | .. | 690 | .. | 515 | .. | 68.1 | 14 46 20.2 | .. | + | 16.0 | 65 52 57.4 | - 5.6 |
| 3 | 345 6 | 8.0 | 9.4 | 2.2 | 10.5 | 30 | .. | 505 | .. | 405 | .. | 68.1 | 14 51 23.8 | .. | + | 16.1 | 65 58 1.1 | - 5.6 |
| 4 | 341 30 | 3.6 | 4.5 | 26.7 | 5.0 | 32 | .. | .. | .. | .. | 405 | 68.1 | 18 25 17.8 | .. | + | 20.2 | 69 31 59.2 | - 0.1 |
| 5 | 341 30 | 3.6 | 4.5 | 26.7 | 5.0 | 32 | .. | .. | .. | .. | 490 | 68.1 | 18 25 19.1 | .. | + | 20.2 | 69 32 0.5 | - 5.4 |
| 6 | 335 50 | 3.8 | 4.4 | 27.3 | 5.9 | 28 | .. | .. | .. | 630 | 635 | 68.1 | 24 6 52.5 | .. | + | 27.2 | 75 13 40.9 | - 5.3 |
| 7 | 348 2 | 7.1 | 8.5 | 1.0 | 7.6 | 29 | 080 | 000 | .. | .. | .. | 68.1 | 11 54 59.6 | .. | + | 12.8 | 63 1 33.6 | - 7.8 |
| 8 | 207 36 | 9.5 | 12.8 | 6.0 | 9.8 | 30 | 320 | 240 | .. | .. | .. | 68.1 | 152 18 49.6 | .. | - | 31.9 | 78 48 3.5 | + 2.0 |
| 9 | 332 16 | 5.6 | 6.8 | 0.5 | 6.3 | 29 | .. | .. | .. | .. | 530 | 68.1 | 27 41 8.4 | .. | + | 31.9 | 78 48 1.5 | 0.0 |
| 10 | 156 24 | 5.5 | 8.7 | 2.7 | 5.8 | 30 | 985 | 950 | 875 | .. | .. | 68.1 | 203 30 55.2 | .. | + | 26.4 | 27 34 59.6 | - 1.9 |
| 11 | 23 28 | 8.6 | 10.3 | 4.1 | 9.9 | 29 | .. | .. | .. | 125 | 105 | 68.1 | 336 29 6.1 | .. | - | 26.4 | 27 35 0.9 | + 0.6 |
| 12 | 342 16 | 7.1 | 8.6 | 2.3 | 8.0 | 30 | .. | 215 | .. | 125 | .. | 68.1 | 17 41 18.4 | .. | + | 19.4 | 68 47 59.0 | + 0.9 |
| 13 | 306 58 | 9.4 | 11.7 | 6.3 | 12.0 | 27 | 940 | 930 | .. | 765 | 695 | 68.1 | 52 58 45.7 | 28.2 | + | 20.5 | 104 6 27.4 | - 0.8 |
| 14 | 13 26 | 8.4 | 9.8 | 4.7 | 11.3 | 37 | 410 | 405 | .. | .. | .. | 66.7 | 346 30 36.7 | 33.0 | - | 14.6 | 37 36 43.3 | - 1.7 |
| 15 | 333 42 | 4.3 | 5.7 | 1.5 | 10.2 | 36 | .. | .. | .. | 260 | 205 | 66.7 | 26 14 17.5 | .. | + | 29.9 | 77 21 8.6 | - 0.4 |
| 16 | 348 50 | 9 28.3 | 28.3 | 23.2 | 2.5 | 36 | 050 | 060 | .. | 940 | 895 | 66.7 | 11 6 5.4 | .. | + | 11.9 | 62 12 38.5 | + 0.7 |
| 17 | 12 32 | 10 3.8 | 5.8 | 0.0 | 8.0 | 35 | 135 | .. | .. | .. | 065 | 66.7 | 347 23 57.9 | .. | - | 13.6 | 38 30 5.5 | - 0.6 |
| 18 | 47 38 | 5.3 | 7.2 | 2.0 | 8.8 | 37 | 545 | .. | .. | .. | 140 | 66.7 | 312 18 34.9 | .. | - | 6.6 | 3 23 49.5 | - 1.2 |
| 19 | 359 42 | 4.4 | 6.5 | 1.5 | 9.0 | 34 | .. | 300 | .. | 215 | .. | 66.7 | 0 13 46.2 | .. | + | 0.2 | 51 20 7.6 | - 0.3 |
| 20 | 354 16 | 6.1 | 9.0 | 3.5 | 10.6 | 37 | .. | 400 | .. | 370 | .. | 66.7 | 5 40 35.9 | .. | + | 6.0 | 56 47 3.1 | - 1.9 |
| 21 | 353 34 | 4.3 | 6.0 | 1.3 | 9.0 | 37 | .. | 435 | .. | 295 | .. | 66.7 | 6 22 33.4 | .. | + | 6.6 | 57 29 1.2 | - 16.0 |
| 22 | 334 44 | 2.7 | 4.5 | 0.0 | 8.1 | 37 | .. | 460 | .. | 400 | .. | 66.7 | 25 12 33.0 | .. | + | 28.5 | 76 19 22.7 | - 0.5 |
| 23 | 28 28 | 6.7 | 8.5 | 3.7 | 10.0 | 34 | .. | 345 | .. | 260 | .. | 66.7 | 331 27 49.2 | .. | - | 32.9 | 22 33 37.5 | - 1.7 |
| 24 | 302 4 | 7.1 | 8.6 | 4.0 | 14.1 | 39 | 730 | 710 | .. | .. | .. | 66.7 | 57 53 11.0 | .. | + | 36.0 | 109 1 8.2 | .. |
| 25 | 302 36 | 3.1 | 4.3 | 28.8 | 9.6 | 37 | .. | .. | .. | 780 | 670 | 66.7 | 57 20 38.9 | 36.0 | + | 34.0 | 108 28 34.1 | .. |
| 26 | 307 24 | 6.0 | 8.3 | 4.0 | 12.5 | 33 | .. | 910 | .. | 635 | .. | 66.7 | 52 31 40.7 | .. | + | 18.6 | 103 39 20.5 | .. |
| 27 | 310 32 | 2.8 | 5.9 | 1.0 | 9.5 | 36 | .. | 280 | .. | 160 | .. | 66.7 | 49 24 15.3 | .. | + | 10.4 | 100 31 46.9 | .. |
| 28 | 285 16 | 10.0 | 12.7 | 8.2 | 14.0 | 35 | .. | 390 | .. | 180 | .. | 68.3 | 74 40 8.9 | .. | + | 39.2 | 125 50 9.3 | - 5.1 |
| 29 | 280 18 | 12.7 | 14.3 | 10.3 | 16.7 | 30 | .. | .. | .. | 560 | 490 | 68.3 | 79 36 59.3 | 32.0 | + | 5 23.9 | 130 48 44.4 | - 5.9 |
| 30 | 290 24 | 8.2 | 9.0 | 5.5 | 10.8 | 34 | .. | .. | .. | 360 | 350 | 68.3 | 69 31 52.9 | .. | + | 2 42.0 | 120 40 56.1 | - 3.4 |
| 31 | 290 6 | 5.5 | 6.8 | 2.5 | 9.5 | 38 | .. | 200 | .. | 135 | .. | 68.3 | 69 50 47.9 | .. | + | 2 44.7 | 120 59 53.8 | - 3.5 |
| 32 | 286 52 | 6.3 | 7.5 | 3.0 | 8.3 | 36 | .. | 540 | .. | 510 | .. | 68.3 | 73 4 23.0 | .. | + | 3 18.5 | 124 14 2.7 | - 4.0 |
| 33 | 354 0 | 9 27.2 | 27.8 | 22.2 | 29.8 | 32 | .. | 800 | .. | 630 | .. | 68.3 | 5 55 15.5 | .. | + | 6.0 | 57 1 42.7 | + 0.4 |
| 34 | 203 36 | 10 10.0 | 12.5 | 6.2 | 9.6 | 37 | .. | .. | 570 | .. | .. | 68.3 | 156 20 42.5 | .. | - | 26.7 | 75 46 5.4 | + 1.0 |
| 35 | 315 48 | 9 3 | 10.4 | 5.5 | 11.7 | 32 | .. | .. | .. | 725 | 705 | 68.3 | 44 7 28.9 | .. | + | 59.1 | 95 14 49.2 | + 2.9 |
| 36 | 312 42 | 2.7 | 4.0 | 29.3 | 7.0 | 32 | .. | 500 | .. | 400 | .. | 68.3 | 47 13 17.7 | .. | + | 5.8 | 98 20 44.7 | + 0.2 |
| 37 | 287 24 | 7.0 | 8.5 | 4.0 | 11.3 | 31 | .. | 120 | .. | 975 | .. | 68.3 | 72 31 0.5 | .. | + | 3 11.5 | 123 40 33.2 | - 2.9 |
| 38 | 286 16 | 8.2 | 10.3 | 6.2 | 10.8 | 33 | .. | 980 | .. | 800 | .. | 68.3 | 73 39 45.2 | .. | + | 3 25.4 | 124 49 31.8 | - 2.9 |
| 39 | 320 40 | 0.4 | 0.5 | 25.5 | 4.0 | 36 | .. | 665 | .. | 555 | .. | 68.3 | 39 16 18.3 | .. | + | 49.9 | 89 23 29.4 | - 0.1 |
| 40 | 319 46 | 10.0 | 11.2 | 6.0 | 12.2 | 33 | .. | 545 | .. | 430 | .. | 68.3 | 40 9 40.2 | .. | + | 51.4 | 91 16 52.8 | - 0.9 |
| 41 | 211 26 | 9.2 | 12.7 | 6.2 | 9.5 | 34 | 850 | 740 | .. | .. | .. | 68.3 | 148 29 58.6 | .. | - | 37.4 | 82 37 0.0 | + 1.7 |
| 42 | 328 26 | 4.6 | 6.3 | 29.3 | 7.5 | 35 | .. | .. | .. | 055 | 970 | 68.3 | 31 29 59.4 | .. | + | 37.4 | 82 37 58.0 | - 0.3 |
| 43 | 149 28 | 7.0 | 10.5 | 3.5 | 9.8 | 33 | 790 | 660 | .. | .. | .. | 68.3 | 210 27 39.1 | .. | + | 35.9 | 20 38 6.2 | - 1.5 |
| 44 | 30 24 | 8.7 | 9.4 | 3.1 | 10.5 | 36 | .. | .. | .. | 250 | 160 | 68.3 | 329 32 22.5 | .. | - | 35.9 | 20 38 7.8 | + 0.1 |
| 45 | 54 24 | 6.6 | 7.1 | 0.3 | 7.1 | 32 | 040 | .. | 020 | .. | 910 | 68.3 | 305 31 12.6 | .. | - | 25.3 | 356 36 8.5 | - 0.7 |
| 46 | 202 18 | 13.9 | 16.0 | 10.0 | 12.5 | 31 | 095 | 970 | .. | .. | .. | 68.3 | 157 37 4.5 | .. | - | 25.1 | 73 29 41.8 | + 0.7 |
| 47 | 131 36 | 5.7 | 8.8 | 0.2 | 6.7 | 33 | 235 | 190 | 235 | .. | .. | 68.3 | 228 19 30.1 | .. | + | 8.5 | 2 45 42.6 | - 0.3 |
| 48 | 48 16 | 10.0 | 9.0 | 4.8 | 9.3 | 36 | 810 | .. | 715 | .. | 785 | 68.3 | 311 40 29.0 | .. | - | 8.5 | 2 45 41.7 | - 1.2 |
| 49 | 332 26 | 7.6 | 9.0 | 6 5 | 11.5 | 37 | .. | 715 | .. | 530 | .. | 68.3 | 27 30 42.4 | .. | + | 31.8 | 78 37 35.4 | - 1.8 |
| 50 | 342 50 | 2.5 | 2.8 | 27.0 | 4.3 | 35 | .. | 090 | .. | 950 | .. | 68.3 | 17 3 22.2 | .. | + | 18.7 | 68 10 2.1 | - 1.1 |

| No. | Barom. | At Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " | " | " | " |
| 13 | 29.92 | 30.6 | 24 | - 7.6 | - 16 17.0 | . | - 16 24.6 |
| 14 | 30.175 | 33.5 | 25 | - 7.5 | + 16 17.0 | . | + 16 9.5 |
| 25 | 30.20 | 38.0 | 26 | - 6.9 | .. | 0.2 | 7.1 |
| 29 | 30.23 | 34.0 | 27 | - 4.8 | - 6.2 | . | 11.0 |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. | |
|---------|---------|-------------------------------------|-----------|--------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------|------------|--------------|-------------------|-----------------|---------------------------|-------------|----------------------------|----|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock, appar. nt. | Clock, adopted. | h. m. | s. | | |
| | | | | | | | | | | | | | | | | | | | | |
| 1876. | | | | | | | | | | | | | m. | s. | s. | | | | | s. |
| Jan. 26 | 1 | B. A. C. 2446 . . . | E. | | | | 0.3 | 2.9 | 5.3 | 10.0 | 11.8 | 14.9 | 18 | 0.43 | + 0.19 | . . . | - 7.34 | 7 17 53.28 | - 1.58 | |
| | 2 | B. A. C. 2449 . . . | E. | | 22.5 | 24.9 | 27.4 | 29.8 | 34.4 | 36.3 | 39.4 | | 18 | 24.92 | + 0.19 | . . . | - 7.34 | 7 18 17.77 | - 1.58 | |
| | 3 | B. A. C. 2477 ¹ , S. . . | E. | 59.8 | 2.7 | 4.4 | | | | 23.7 | 25.4 | 28.5 | 24 | 14.08 | + 0.19 | . . . | - 7.34 | 7 24 6.93 | - 1.58 | |
| | 4 | B. A. C. 2477 ² , N. . . | E. | | 9.8 | 12.4 | 14.8 | 17.1 | 19.5 | | | | 24 | 14.72 | + 0.19 | . . . | - 7.34 | 7 24 7.57 | - 1.58 | |
| | 5 | B. A. C. 2561 . . . | E. | 33.5 | 36.5 | 38.4 | 46.0 | 48.5 | 51.2 | 58.5 | 0.5 | 3.5 | 38 | 48.51 | + 0.19 | . . . | - 7.34 | 7 38 41.36 | - 1.62 | |
| | 6 | B. A. C. 2572 . . . | E. | 31.7 | 34.6 | 36.5 | 44.4 | 46.7 | 49.2 | 56.7 | 58.6 | 1.7 | 39 | 46.68 | + 0.19 | . . . | - 7.34 | 7 39 39.53 | - 1.62 | |
| | 7 | B. A. C. 2629 . . . | E. | 31.9 | 34.8 | 36.8 | 44.3 | 46.7 | 49.2 | 56.5 | 58.3 | 1.6 | 47 | 46.68 | + 0.19 | . . . | - 7.34 | 7 47 39.53 | - 1.60 | |
| | 8 | B. A. C. 2646 . . . | E. | 57.3 | 59.0 | 4.0 | 6.5 | 9.0 | 11.6 | 14.0 | 18.9 | 20.8 | 50 | 9.01 | + 0.19 | . . . | - 7.34 | 7 50 1.86 | - 1.60 | |
| | 9 | B. A. C. 2671 . . . | E. | 58.7 | 2.0 | 4.1 | 9.4 | 11.9 | 14.4 | | | | 55 | 14.52 | + 0.19 | . . . | - 7.34 | 7 55 7.37 | - 1.64 | |
| | 28 | Sun S. | S. | 14.7 | 17.3 | 18.9 | 25.6 | 27.7 | 29.7 | 36.2 | 37.8 | 40.5 | 41 | 27.60 | . . . | . . . | . . . | | . . . | |
| | 11 | Sun N. | S. | | 40.6 | 42.9 | 45.0 | 47.2 | 49.3 | | | | 43 | 45.00 | . . . | . . . | . . . | | . . . | |
| | 30 | 12 Moon I, S. . . . | E. | 41.9 | 44.5 | 46.0 | 52.3 | 54.5 | 56.6 | 2.7 | 4.2 | 6.9 | 59 | 51.40 | + 0.31 | . . . | - 6.55 | 23 59 48.16 | + 64.24 | |
| | | 13 Pegasi | E. | 44.0 | 46.6 | 48.4 | 52.3 | 56.6 | 1.0 | 5.1 | 6.7 | 9.4 | 6 | 50.68 | + 0.27 | - 6.49 | - 6.55 | 0 6 50.40 | - 0.06 | |
| | | 14 B. A. C. 166 . . . | E. | 33 336.4 | 38.2 | 45.2 | 47.6 | 50.0 | 57.0 | 58.7 | 1.7 | 32 | 47.57 | + 0.25 | . . . | - 6.55 | 0 32 41.27 | + 0.79 | | |
| | | 15 β Ceti | E. | 15.0 | 17.7 | 19.3 | 25.8 | 27.9 | 30.0 | 36.5 | 38.3 | 41.0 | 37 | 27.94 | + 0.37 | - 6.61 | - 6.55 | 9 37 21.76 | + 0.11 | |
| | | 16 B. A. C. 259 . . . | E. | 42.5 | 45.7 | 47.7 | 55.5 | 58.0 | 0.5 | 8.5 | 10.4 | 13.5 | 49 | 58.03 | + 0.23 | . . . | - 6.55 | 0 49 51.71 | + 0.85 | |
| | 17 | δ Piscium | E. | 24.0 | 26.6 | 28.3 | 34.5 | 36.5 | 38.5 | 44.8 | 46.4 | 48.8 | 56 | 36.49 | + 0.29 | - 6.53 | - 6.55 | 0 56 30.23 | 0.00 | |
| | 18 | B. A. C. 334 . . . | E. | 41.4 | 43.4 | 48.2 | 50.9 | 53.2 | 55.7 | 58.3 | 3.2 | 5.0 | 2 | 53.26 | + 0.24 | . . . | - 6.55 | 1 2 46.95 | + 0.67 | |
| | 19 | Polaris | E. | | 50.0 | 48.0 | 45.0 | 43.0 | 39.0 | | | | 12 | 44.92 | + 0.55 | . . . | - 6.55 | 1 12 38.92 | - 0.74 | |
| | 20 | θ Ceti | E. | 43.3 | 45.9 | 47.5 | 51.6 | 55.7 | 57.8 | 4.0 | | 8.0 | 17 | 55.71 | + 0.34 | - 6.54 | - 6.55 | 1 17 49.50 | + 0.01 | |
| | 21 | γ Piscium | E. | 44.4 | 47.0 | 48.6 | 54.9 | 57.1 | 59.2 | 5.5 | 7.0 | 9.7 | 24 | 57.04 | + 0.27 | - 6.56 | - 6.55 | 1 24 50.76 | + 0.06 | |
| | 22 | α Piscium | E. | 44.6 | 47.2 | 48.8 | 55.0 | 57.0 | 59.1 | 5.3 | 6.9 | 9.5 | 38 | 57.04 | + 0.29 | - 6.55 | - 6.55 | 1 38 50.78 | - 0.03 | |
| | 23 | B. A. C. 569 . . . | E. | 53.0 | 55.9 | 57.6 | 1.7 | 7.0 | 9.3 | 16.3 | 18.1 | 21.0 | 46 | 6.99 | + 0.25 | . . . | - 6.55 | 1 46 0.69 | + 0.26 | |
| | 24 | β Arietis | E. | 40.6 | 43.4 | 45.0 | 51.6 | 53.7 | 55.9 | 2.4 | 4.0 | 6.7 | 47 | 53.70 | + 0.27 | - 6.55 | - 6.55 | 1 47 47.42 | + 0.02 | |
| | 25 | B. A. C. 625 ¹ . . . | E. | 31.8 | 34.5 | 36.0 | | | | 53.9 | 56.4 | | 55 | 44.15 | + 0.31 | . . . | - 6.55 | 1 55 37.91 | - 0.07 | |
| | 26 | B. A. C. 625 ² . . . | E. | | 40.1 | 42.3 | 44.3 | 46.3 | 48.3 | | | | 55 | 44.26 | + 0.31 | . . . | - 6.55 | 1 55 38.02 | - 0.07 | |
| | 27 | α Arietis | E. | 4.1 | 6.7 | 8.4 | 15.2 | 17.3 | 19.6 | 26.3 | 28.1 | 30.7 | 0 | 17.38 | + 0.26 | - 6.56 | - 6.55 | 2 0 11.09 | + 0.02 | |
| | 31 | 28 ω Piscium | F. | 49.7 | 52.2 | 53.8 | 0.0 | 2.0 | 4.1 | 10.1 | 11.7 | 14.3 | 53 | 1.99 | + 0.23 | - 6.15 | - 6.20 | 23 52 56.02 | - 0.04 | |
| | | 29 α Andromedæ . . . | F. | 49.8 | 52.7 | 54.6 | 1.4 | 3.8 | 6.2 | 13.2 | 14.8 | 17.8 | 2 | 3.81 | + 0.27 | - 6.18 | - 6.19 | 0 1 57.89 | + 0.01 | |
| | | 30 β Ceti | F. | 14.7 | 17.6 | 19.0 | 25.5 | 27.6 | 29.8 | 36.3 | 37.8 | 40.6 | 37 | 27.66 | + 0.22 | - 6.18 | - 6.18 | 0 37 21.70 | + 0.06 | |
| | | 31 Moon I, S. | F. | 46.3 | 49.0 | 50.6 | 57.0 | 59.0 | 1.2 | 7.4 | 8.8 | 11.5 | 47 | 58.98 | + 0.23 | . . . | - 6.17 | 0 47 53.04 | + 65.37 | |
| | | 32 ε Piscium | F. | 23.8 | 26.5 | 27.9 | 34.0 | 36.2 | 38.3 | 44.4 | 45.9 | 48.5 | 56 | 36.17 | + 0.24 | - 6.17 | - 6.17 | 0 56 30.24 | + 0.02 | |
| | 33 | Polaris | F. | | 42.0 | 10.0 | 37.0 | 6.0 | 30.0 | | | | 12 | 36.92 | + 8.39 | . . . | - 6.16 | 1 12 39.15 | + 0.33 | |
| | 34 | β Orionis | F. | | 37.6 | 39.7 | 41.7 | 43.7 | 45.7 | 50.0 | 51.6 | 54.0 | 8 | 41.69 | + 0.21 | - 6.03 | - 6.03 | 5 8 35.87 | 0.00 | |
| | 35 | B. A. C. 1666 . . . | F. | 44.9 | 48.2 | 50.0 | 57.6 | 59.9 | 2.5 | 10.0 | 11.8 | 14.8 | 15 | 59.97 | + 0.24 | . . . | - 6.04 | 5 15 54.17 | - 1.33 | |
| | 36 | δ Orionis | F. | 35.1 | 37.7 | 39.2 | 45.4 | 47.4 | 49.4 | 55.5 | 57.0 | 59.5 | 25 | 47.36 | + 0.20 | - 6.04 | - 6.04 | 5 25 41.52 | - 0.03 | |
| | 37 | B. A. C. 2446 . . . | F. | | | | | 1.5 | 4.0 | 8.8 | 10.6 | 13.5 | 17 | 59.15 | + 0.23 | . . . | - 6.06 | 7 17 53.32 | - 1.56 | |
| | 38 | B. A. C. 2449 . . . | F. | | | | | | | 33.1 | 34.8 | 38.2 | 18 | 23.56 | + 0.23 | . . . | - 6.06 | 7 18 17.73 | - 1.56 | |
| | 39 | Durch. 26°, 1602 . . | F. | | 54.7 | 56.8 | 59.3 | 1.6 | 3.9 | | | | 27 | 59.26 | + 0.23 | . . . | - 6.07 | 7 27 53.42 | - 1.89 | |
| | 40 | Anonymous | F. | | | 8.7 | 10.9 | 13.2 | 17.9 | 19.6 | 22.2 | | 28 | 8.68 | + 0.23 | . . . | - 6.07 | 7 28 2.84 | - 1.89 | |
| | 41 | 2 Ursæ Minoris, S.P. | F. | | 42.0 | | | | | | | | 47 | 3.30 | - 9.67 | . . . | - 6.07 | 19 47 47.56 | + 0.26 | |
| | 42 | Ariadne | F. | 6.9 | 4.7 | 11.4 | 17.6 | 19.7 | 22.0 | 28.3 | 30.0 | 32.7 | 57 | 19.81 | + 0.22 | . . . | - 6.07 | 7 57 13.96 | . . . | |
| | 43 | B. A. C. 2778 . . . | F. | 42.7 | 45.2 | 46.7 | 50.8 | 55.0 | 59.0 | 3.4 | 4.7 | 7.4 | 9 | 54.99 | + 0.21 | . . . | - 6.08 | 8 9 49.12 | - 1.71 | |
| | 44 | VIII (2) | F. | | | | | | | 22.0 | 24.4 | 27.3 | 13 | 12.21 | + 0.24 | . . . | - 6.08 | 8 13 6.37 | - 1.60 | |
| | 45 | B. A. C. 2911 . . . | F. | 11.7 | 14.4 | 15.9 | 22.0 | 24.0 | 26.0 | 32.2 | 33.7 | 36.4 | 32 | 24.03 | + 0.20 | . . . | - 6.08 | 8 32 18.15 | - 1.66 | |
| | 46 | B. A. C. 2945 . . . | F. | 40.0 | 42.4 | 44.0 | 50.2 | 52.3 | 54.3 | 0.5 | 2.0 | 4.4 | 36 | 52.23 | + 0.20 | . . . | - 6.08 | 8 36 46.35 | - 1.66 | |
| | 47 | B. A. C. 2999 . . . | F. | 48.1 | 51.3 | 53.2 | 0.4 | 2.7 | 5.2 | 12.5 | 14.3 | 17.4 | 45 | 2.79 | + 0.24 | . . . | - 6.09 | 8 44 56.94 | - 2.20 | |
| | 48 | B. A. C. 3056 . . . | F. | 49 152.0 | 54.0 | 1.3 | 3.6 | 6.1 | 13.4 | 15.2 | 18.1 | | 52 | 3.64 | + 0.24 | . . . | - 6.09 | 8 51 57.79 | - 2.21 | |
| | 49 | Parthenope | F. | 38.6 | 41.0 | 42.8 | 47.0 | 51.3 | 57.7 | 0.0 | 1.4 | 4.1 | 12 | 51.32 | + 0.22 | . . . | - 6.09 | 9 12 45.45 | . . . | |
| | 50 | Nemausa | F. | 48.6 | 51.3 | 52.9 | 59.2 | 1.1 | 3.0 | 9.3 | 10.7 | 13.3 | 40 | 1.04 | + 0.21 | . . . | - 6.10 | 9 39 55.15 | . . . | |

1, 25, 26, 37, 45, 48. Thread B used.
 2, 7, 38, 39, 40, 42, 46, 49, 50. Thread A used.
 12. Bisections at wires II-VI.
 33. Telescope micrometer reading decreased two revolutions in reduction.
 39, 40. Observed for Cyrene.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom ^r . | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------------------|-------------|--------------------------------|----------------------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. |
| | ° " | 1. " | " " | " " | " " | | | | | | | " " | ° ' " | ° " | ' " | ' " | " " |
| 1 | 289 20 | 9 29.3 | 29.5 | 23.5 | 1.3 | 38 | .. | .. | .. | 460 | 450 | 68.3 | 70 39 18.1 | .. | + 2 52.5 | 121 48 31.8 | + 1.1 |
| 2 | 289 20 | 29.3 | 29.5 | 23.5 | 1.3 | 29 | .. | .. | .. | 530 | 480 | 68.3 | 70 31 55.3 | .. | + 2 51.3 | 121 41 7.8 | + 1.1 |
| 3 | 289 30 | 10 2.9 | 3.0 | 29.5 | 5.7 | 37 | .. | 000 | .. | 910 | .. | 68.3 | 70 26 26.0 | .. | + 2 46.9 | 121 35 34.1 | + 1.2 |
| 4 | 289 30 | 2.9 | 3.0 | 29.5 | 5.7 | 36 | .. | 575 | .. | 510 | .. | 68.3 | 70 26 19.7 | 30.5 | + 2 46.9 | 121 35 27.8 | + 1.2 |
| 5 | 285 20 | 1.7 | 1.5 | 29.5 | 5.2 | 32 | 890 | 850 | .. | .. | .. | 68.3 | 74 35 21.3 | .. | + 3 37.9 | 125 45 20.4 | + 1.6 |
| 6 | 285 20 | 1.7 | 1.5 | 29.5 | 5.2 | 35 | .. | 660 | .. | 595 | .. | 68.3 | 74 36 4.9 | .. | + 3 38.1 | 125 46 4.2 | + 1.6 |
| 7 | 286 38 | 9.2 | 10.3 | 6.2 | 12.6 | 29 | .. | .. | .. | 010 | 990 | 68.3 | 73 13 58.7 | .. | + 3 19.8 | 124 23 39.7 | + 1.8 |
| 8 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 9 | 282 10 | 1.6 | 2.3 | 29.3 | 6.2 | 37 | .. | 300 | .. | 160 | .. | 68.3 | 77 46 29.8 | 32.0 | + 4 34.5 | 128 57 25.5 | + 2.0 |
| 10 | 302 34 | 2.8 | 9.0 | 1.2 | 7.0 | 36 | 638 | 788 | .. | .. | .. | 68.9 | 57 22 23.6 | .. | + 1 28.4 | 108 30 13.2 | .. |
| 11 | 303 6 | 1.6 | 7.5 | 0.7 | 7.6 | 34 | .. | .. | .. | 580 | 538 | 68.9 | 56 49 53.1 | 62.2 | + 1 26.7 | 107 57 41.0 | .. |
| 12 | 320 18 | 11.3 | 10.3 | 7.3 | 12.0 | 32 | 010 | 740 | 370 | 220 | 200 | 65.6 | 39 37 22.9 | .. | + 50.8 | 90 44 34.9 | .. |
| 13 | 335 32 | 2.2 | 1.5 | 26.3 | 4.9 | 33 | .. | 625 | .. | 560 | .. | 65.6 | 24 23 30.6 | 31.5 | + 27.9 | 75 30 19.7 | + 0.4 |
| 14 | 351 14 | 8.9 | 10.5 | 4.3 | 10.3 | 36 | .. | 760 | .. | 740 | .. | 65.6 | 8 42 26.3 | .. | + 9.4 | 59 48 56.9 | + 7.3 |
| 15 | 302 24 | 4.7 | 4.8 | 2.0 | 8.3 | 36 | .. | 140 | .. | 970 | .. | 65.6 | 57 32 11.8 | .. | + 1 36.5 | 108 40 9.5 | - 0.4 |
| 16 | 358 52 | 3.0 | 2.7 | 28.7 | 4.3 | 35 | .. | 080 | .. | 890 | .. | 65.6 | 1 3 53.0 | .. | + 1.1 | 52 10 15.3 | + 10.7 |
| 17 | 328 16 | 9.0 | 11.3 | 6.5 | 12.7 | 33 | .. | 610 | .. | 550 | .. | 65.6 | 31 39 39.0 | .. | + 38.0 | 82 46 38.2 | - 0.7 |
| 18 | 356 0 | 2.7 | 4.4 | 29.0 | 5.1 | 34 | .. | 070 | .. | 900 | .. | 65.6 | 3 55 38.3 | .. | + 4.2 | 55 2 3.7 | + 10.5 |
| 19 | 49 40 | 2.0 | 2.3 | 26.3 | 1.3 | 33 | 845 | .. | 860 | .. | 760 | 65.6 | 310 15 33.5 | .. | - 1 12.7 | 1 20 42.0 | - 2.0 |
| 20 | 312 14 | 5.3 | 7.0 | 1.3 | 9.7 | 35 | .. | 210 | .. | 050 | .. | 65.6 | 47 41 58.6 | .. | + 1 7.7 | 98 49 27.5 | 0.0 |
| 21 | 335 46 | 6.6 | 7.6 | 2.7 | 8.0 | 38 | .. | 210 | .. | 040 | .. | 65.6 | 24 10 45.0 | .. | + 27.7 | 75 17 33.9 | + 1.2 |
| 22 | 329 36 | 6.7 | 8.2 | 4.5 | 9.1 | 39 | .. | 090 | .. | 985 | .. | 65.6 | 30 20 59.8 | .. | + 36.1 | 81 27 57.1 | - 1.0 |
| 23 | 350 2 | 5.1 | 5.2 | 0.0 | 6.5 | 38 | 645 | 620 | .. | .. | .. | 65.6 | 9 54 49.7 | .. | + 10.8 | 61 1 21.7 | + 10.6 |
| 24 | 341 14 | 7.3 | 8.3 | 2.8 | 9.5 | 31 | .. | 620 | .. | 400 | .. | 65.6 | 18 41 4.5 | .. | + 20.9 | 69 47 46.6 | - 1.0 |
| 25 | 323 14 | 5.6 | 5.3 | 1.2 | 7.8 | 29 | .. | 030 | .. | 950 | .. | 65.6 | 36 42 56.0 | .. | + 46.1 | 87 50 3.3 | + 1.6 |
| 26 | 323 14 | 5.6 | 5.3 | 1.2 | 7.8 | 29 | .. | 240 | .. | 110 | .. | 65.6 | 36 42 58.8 | .. | + 46.1 | 87 50 6.1 | + 1.6 |
| 27 | 343 56 | 11.5 | 13.8 | 7.2 | 13.4 | 37 | .. | .. | .. | 400 | 295 | 65.6 | 16 0 39.6 | 29.0 | + 17.7 | 67 7 18.5 | - 1.3 |
| 28 | 327 14 | 6.2 | 8.4 | 1.3 | 9.4 | 36 | .. | .. | .. | 518 | 510 | 66.6 | 32 42 22.6 | .. | + 38.9 | 83 49 22.7 | - 2.0 |
| 29 | 349 28 | 5.8 | 6.8 | 2.2 | 10.2 | 39 | .. | .. | .. | 048 | 016 | 66.6 | 10 29 1.3 | 35.6 | + 11.2 | 61 35 33.7 | + 0.1 |
| 30 | 302 24 | 4.7 | 6.4 | 2.8 | 10.6 | 36 | 090 | .. | .. | .. | 960 | 66.6 | 57 32 13.4 | .. | + 1 34.8 | 108 40 9.4 | - 0.5 |
| 31 | 326 52 | 5.4 | 6.4 | 0.0 | 8.5 | 36 | .. | 904 | 468 | 004 | .. | 66.6 | 33 4 19.3 | .. | + 39.4 | 84 11 19.9 | .. |
| 32 | 328 16 | 8.4 | 9.6 | 3.1 | 11.2 | 33 | 750 | 760 | .. | .. | .. | 66.6 | 31 59 39.7 | .. | + 37.3 | 82 46 38.2 | - 0.8 |
| 33 | 49 40 | 9 26.1 | 26.2 | 19.9 | 27.7 | 36 | 090 | 084 | 130 | 084 | 064 | 66.6 | 310 15 33.0 | 36.0 | - 1 11.3 | 1 20 42.9 | - 1.2 |
| 34 | 312 42 | 10 2.6 | 4.1 | 27.9 | 7.5 | 32 | .. | .. | .. | 410 | 392 | 68.2 | 47 13 17.8 | .. | + 1 6.4 | 98 20 45.4 | 0.0 |
| 35 | 286 16 | 12.1 | 14.1 | 8.5 | 16.7 | 33 | 602 | 564 | .. | 436 | 418 | 68.2 | 73 39 43.1 | .. | + 3 27.1 | 124 49 31.4 | - 3.8 |
| 36 | 320 40 | 9 28.9 | 28.5 | 22.2 | 3.7 | 36 | .. | 704 | .. | 582 | .. | 68.2 | 39 16 17.0 | 29.2 | + 50.2 | 90 23 28.4 | - 1.5 |
| 37 | 289 20 | 10 1.6 | 2.2 | 26.9 | 6.3 | 38 | .. | .. | .. | 282 | 236 | 68.2 | 70 39 18.4 | .. | + 2 53.9 | 121 48 33.5 | - 0.2 |
| 38 | 289 20 | 1.6 | 2.2 | 26.9 | 6.3 | 29 | .. | .. | .. | 312 | 290 | 68.2 | 70 31 55.5 | .. | + 2 52.7 | 121 41 9.4 | - 0.2 |
| 39 | 347 16 | 4.6 | 4.4 | 29.2 | 8.0 | 40 | .. | .. | .. | 402 | 330 | 68.2 | 12 38 47.8 | .. | + 13.8 | 63 45 22.8 | + 5.4 |
| 40 | 347 16 | 4.6 | 4.4 | 29.2 | 8.0 | 40 | .. | .. | .. | 364 | 376 | 68.2 | 12 38 47.8 | .. | + 13.8 | 63 45 22.8 | + 5.4 |
| 41 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 42 | 338 10 | 13.8 | 13.1 | 6.7 | 15.9 | 38 | .. | 724 | .. | 696 | .. | 68.2 | 21 44 29.6 | .. | + 24.6 | 72 51 15.4 | - 2.1 |
| 43 | 330 36 | 5.0 | 5.2 | 28.9 | 8.0 | 31 | .. | 460 | .. | 360 | .. | 68.2 | 29 19 2.9 | 26.2 | + 33.8 | 80 25 57.9 | + 1.6 |
| 44 | 285 24 | 7.6 | 7.7 | 3.5 | 11.2 | 30 | .. | .. | .. | 836 | .. | 68.2 | 74 30 58.0 | .. | + 3 39.4 | 125 40 58.6 | + 0.9 |
| 45 | 324 52 | 9 28.6 | 26.1 | 20.0 | 2.4 | 34 | 975 | 020 | .. | 092 | 220 | 68.2 | 35 6 23.8 | .. | + 43.3 | 86 13 28.3 | + 0.5 |
| 46 | 324 52 | 28.6 | 26.1 | 20.0 | 2.4 | 39 | .. | 286 | .. | 156 | .. | 68.2 | 35 2 21.4 | .. | + 43.2 | 86 9 25.8 | + 0.3 |
| 47 | 353 58 | 10 2.3 | 0.5 | 25.5 | 3.6 | 32 | .. | 548 | .. | 490 | .. | 68.2 | 5 57 16.2 | 26.5 | + 6.4 | 57 3 43.8 | + 0.6 |
| 48 | 353 58 | 2.3 | 0.5 | 25.5 | 3.6 | 31 | .. | 730 | .. | 575 | .. | 68.2 | 5 59 35.3 | .. | + 6.5 | 57 6 3.0 | 0.0 |
| 49 | 338 20 | 1.4 | 0.2 | 24.5 | 3.2 | 39 | .. | 768 | .. | 740 | .. | 68.2 | 21 34 32.7 | .. | + 24.2 | 72 41 18.1 | - 1.9 |
| 50 | 324 4 | 5.4 | 5.2 | 29.4 | 8.9 | 38 | .. | .. | .. | 745 | .. | 68.2 | 35 50 23.1 | .. | + 43.9 | 86 57 28.2 | - 4.0 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " " | " " | " " | " " |
| 4 | 30.20 | 33.5 | 10 | — 7.5 | — 16 16.1 | .. | — 16 23.6 |
| 9 | 30.15 | 33.0 | 11 | — 7.5 | + 16 16.1 | .. | + 16 8.6 |
| 11 | 29.94 | 56.8 | 12 | — 36 8.3 | — 15 32.8 | .. | — 51 41.1 |
| 13 | 30.45 | 34.5 | 31 | — 31 11.6 | — 15 42.0 | .. | — 46 53.5 |
| 27 | 30.46 | 32.5 | | | | | |
| 29 | 30.24 | 37.5 | | | | | |
| 33 | 30.24 | 38.0 | | | | | |
| 36 | 30.31 | 33.0 | | | | | |
| 43 | 30.20 | 30.5 | | | | | |
| 47 | 30.17 | 31.0 | | | | | |

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|------------------|---------|----------------------------------|-----------|--------------------------------|------|------|------|------|------------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | |
| | | | | m. | s. | | | | | | | | | s. | s. | s. | h. m. s. | s. |
| 1876. Jan. 31 | 1 | ^a Leonis | F. | 36.7 | 39.5 | 41.3 | 48.0 | 50.2 | 52.7 | 59.4 | 1.0 | 3.9 | 45 50.30 | + 0.23 | - 6.08 | - 6.10 | 9 45 44.43 | - 0.05 |
| | 2 | ^a Leonis | F. | 41.1 | 43.7 | 45.4 | 51.6 | 53.5 | 55.7 | 1.8 | 3.5 | 6.1 | 1 53.60 | + 0.21 | - 6.09 | - 6.10 | 10 1 47.71 | - 0.05 |
| | 3 | Euterpe | F. | 12.0 | 14.7 | 16.3 | ... | ... | ... | 33.0 | 34.6 | 37.2 | 5 24.63 | + 0.21 | ... | - 6.10 | 10 5 18.74 | ... |
| | 4 | ^p Leonis | F. | 2.8 | 5.5 | 7.0 | ... | ... | ... | 24.3 | 25.9 | 28.9 | 13 15.73 | + 0.22 | - 6.12 | - 6.11 | 10 13 9.84 | - 0.01 |
| | 5 | ^p Leonis | F. | ... | ... | 11.8 | 13.9 | ... | 18.1 | 20.3 | ... | ... | 13 16.02 | + 0.22 | ... | - 6.11 | 10 13 10.13 | - 1.82 |
| Feb. 2 | 6 | Moon I, S. . . . | P. | 1.4 | 4.0 | 5.8 | 12.3 | 14.5 | 16.7 | 23.2 | 24.8 | 27.8 | 32 14.50 | + 0.20 | ... | - 6.34 | 2 32 8.36 | + 70.28 |
| | 7 | ^p Ceti | P. | 46.7 | 49.3 | 50.9 | 57.0 | 59.0 | 1.1 | 7.3 | 8.7 | 11.3 | 36 59.03 | + 0.16 | - 6.32 | - 6.35 | 2 36 52.84 | - 0.03 |
| | 8 | ^a Arietis | P. | 34.0 | 46.8 | 48.4 | 54.7 | 57.0 | 59.0 | 5.5 | 7.1 | 9.8 | 48 56.92 | + 0.20 | ... | - 6.35 | 2 48 50.77 | - 0.24 |
| | 9 | ^a Ceti | P. | 42.0 | 46.4 | 50.4 | 52.5 | 54.6 | 56.7 | 58.6 | 2.7 | 6.8 | 55 54.52 | + 0.16 | - 6.37 | - 6.35 | 2 55 48.33 | + 0.04 |
| | 10 | B. A. C. 984 . . . | P. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | 11 | B. A. C. 1003 . . | P. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | 12 | B. A. C. 1015 . . | P. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | 13 | B. A. C. 1042 . . | P. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | 14 | B. A. C. 1060 . . | P. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | 15 | ^u Tauri | P. | 0.3 | 3.0 | 4.6 | 11.4 | 13.6 | 15.9 | 22.4 | 24.0 | 26.9 | 40 13.57 | + 0.22 | - 6.29 | - 6.36 | 3 40 7.43 | - 0.07 |
| | 16 | ^z Persei | P. | 12.5 | 15.6 | 17.4 | 24.7 | 27.0 | 29.5 | 36.6 | 38.4 | 41.4 | 46 27.01 | + 0.25 | - 6.25 | - 6.37 | 3 46 20.89 | - 0.13 |
| | 17 | ^u Eridani | P. | 9.0 | 11.6 | 13.2 | 19.5 | 21.7 | 23.9 | 30.1 | 31.7 | 34.3 | 52 21.67 | + 0.13 | - 6.32 | - 6.37 | 3 52 15.43 | - 0.01 |
| | 18 | ^u Ursæ Minoris, S. P. | P. | ... | ... | 21.4 | 45.6 | 12.3 | 30.0 | 4.2 | ... | ... | 12 12.54 | - 6.05 | ... | - 6.42 | 18 12 0.07 | + 0.14 |
| | 19 | ^u Geminorum . . . | P. | 21.9 | 24.7 | 26.4 | 33.0 | 35.2 | 37.4 | 44.0 | 45.6 | 48.5 | 15 35.19 | + 0.28 | - 6.41 | - 6.42 | 6 15 29.05 | - 0.05 |
| | 20 | Durch. +68°, 446. | P. | 47.9 | 54.8 | 59.3 | 16.3 | 21.9 | 27.6 | 44.3 | 48.7 | 55.9 | 25 21.86 | + 0.94 | ... | - 6.42 | 6 25 16.38 | - 3.86 |
| | 21 | Durch. +68°, 447. | P. | ... | ... | 6.2 | 11.9 | 17.5 | 23.3 | 28.4 | ... | ... | 28 17.45 | + 0.94 | ... | - 6.42 | 6 28 11.97 | - 3.89 |
| | 22 | ^u Geminorum . . . | P. | 27.8 | 30.5 | 32.0 | 38.5 | 40.6 | 42.7 | 49.0 | 50.7 | 53.3 | 30 40.57 | + 0.25 | - 6.38 | - 6.42 | 6 30 34.40 | - 0.07 |
| | 23 | ^a Canis Majoris . . | P. | 35.8 | 38.5 | 40.0 | 46.4 | 48.6 | 50.7 | 57.0 | 58.6 | 1.5 | 30 48.57 | + 0.17 | - 6.47 | - 6.42 | 6 39 42.32 | - 0.03 |
| | 24 | ^u Cephei | P. | ... | ... | 30.6 | 14.3 | 35.4 | 7. | ... | ... | ... | 42 13.03 | + 7.35 | ... | - 6.42 | 6 42 13.06 | + 0.55 |
| | 25 | B. A. C. 2288 . . | P. | 44.3 | 47.4 | 49.4 | 56.9 | 59.4 | 1.8 | 0.4 | 11.3 | 14.4 | 52 59.37 | + 0.15 | ... | - 6.42 | 6 52 53.10 | - 1.55 |
| | 26 | B. A. C. 2315 . . | P. | 13.2 | 16.4 | 18.3 | 25.7 | 28.2 | 30.8 | 38.3 | 40.2 | 43.4 | 57 28.28 | + 0.15 | ... | - 6.42 | 6 57 22.01 | - 1.56 |
| | 27 | B. A. C. 2412 . . | P. | 6.9 | 10.2 | 12.2 | 20.1 | 22.6 | 25.1 | 32.8 | 34.7 | 38.2 | 12 22.53 | + 0.15 | ... | - 6.41 | 7 12 16.27 | - 1.61 |
| | 28 | B. A. C. 2427 . . | P. | 12.0 | 15.3 | 17.3 | 25.2 | 27.7 | 30.5 | 38.4 | 40.2 | 43.6 | 14 27.80 | + 0.15 | ... | - 6.41 | 7 14 21.54 | - 1.62 |
| | 29 | Cyrene | P. | ... | ... | 11.5 | 13.3 | ... | ... | ... | ... | ... | 26 22.35 | + 0.29 | ... | - 6.41 | 7 20 16.23 | ... |
| | 30 | B. A. C. 2547 . . | P. | 24.9 | 28.2 | 30.3 | 37.8 | 40.3 | 43.0 | 50.7 | 52.6 | 55.8 | 35 40.40 | + 0.15 | ... | - 6.41 | 7 35 34.14 | - 1.62 |
| | 31 | B. A. C. 2591 . . | P. | 0.1 | 3.2 | 5.3 | 13.0 | 15.5 | 18.2 | 25.8 | 27.7 | 31.0 | 42 15.53 | + 0.15 | ... | - 6.41 | 7 42 9.27 | - 1.62 |
| | 32 | Ariadne | P. | 58.8 | 1.4 | 3.0 | 9.5 | 11.7 | 13.8 | 20.2 | 21.8 | 24.3 | 55 11.61 | + 0.25 | ... | - 6.41 | 7 55 5.45 | ... |
| | 33 | B. A. C. 2735 . . | P. | 11.4 | 14.3 | 16.2 | 23.5 | 26.2 | 28.7 | 36.2 | 38.0 | 41.1 | 3 20.21 | + 0.15 | ... | - 6.41 | 8 3 10.95 | - 1.60 |
| | 34 | B. A. C. 2758 . . | P. | 19.5 | 22.6 | 24.5 | 32.3 | 34.8 | 37.4 | 44.9 | 46.9 | 50.2 | 6 34.79 | + 0.15 | ... | - 6.41 | 8 6 28.53 | - 1.62 |
| | 35 | B. A. C. 2774 . . | P. | 41.4 | 44.7 | 46.5 | 54.0 | 56.6 | 59.3 | 6.7 | 8.5 | 11.8 | 8 56.61 | + 0.15 | ... | - 6.41 | 8 8 50.35 | - 1.60 |
| | 36 | B. A. C. 2809 . . | P. | 47.2 | 50.4 | 52.5 | 0.3 | 2.9 | 5.4 | 13.4 | 15.5 | 18.8 | 17 2.93 | + 0.15 | ... | - 6.41 | 8 16 56.67 | - 1.64 |
| | 37 | (VIII) 6 | P. | 40.6 | 43.5 | 45.4 | 52.6 | 55.0 | 57.2 | 4.5 | 6.3 | 9.3 | 25 54.93 | + 0.15 | ... | - 6.41 | 8 25 48.67 | - 1.57 |
| | 38 | B. A. C. 2911 . . | P. | 12.0 | 14.6 | 16.2 | 22.3 | 24.4 | 26.4 | 32.5 | 34.0 | 36.6 | 32 24.33 | + 0.21 | ... | - 6.40 | 8 32 18.14 | - 1.68 |
| | 39 | B. A. C. 2945 . . | P. | 40.2 | 42.7 | 44.2 | 50.4 | 52.3 | 54.5 | 0.5 | 2.0 | 4.7 | 36 52.39 | + 0.21 | ... | - 6.40 | 8 36 46.20 | - 1.98 |
| | 40 | Aegina | P. | 54.1 | 56.9 | 58.5 | 5.1 | 7.2 | 9.5 | 15.9 | 17.5 | 20.2 | 50 7.21 | + 0.27 | ... | - 6.40 | 8 50 1.08 | ... |
| | 41 | B. A. C. 3068 ¹ . . | P. | 41.4 | 44.5 | 46.2 | 53.6 | 56.0 | 58.5 | 5.7 | 7.6 | 10.6 | 53 56.01 | + 0.33 | ... | - 6.40 | 8 53 49.94 | - 2.23 |
| | 42 | Harmonia | P. | 17.7 | 20.5 | 22.3 | 28.8 | 30.9 | 33.1 | 39.8 | 41.4 | 44.0 | 0 30.94 | + 0.27 | ... | - 6.40 | 9 0 24.81 | ... |
| | 43 | Parthenope . . . | P. | 41.9 | 44.7 | 46.2 | 52.7 | 54.9 | 57.2 | 3.4 | 5.0 | 7.6 | 10 54.84 | + 0.26 | ... | - 6.40 | 9 10 48.70 | ... |
| | 44 | Uranus | P. | 5.6 | 8.2 | 10.0 | 16.3 | 18.4 | 20.5 | 26.8 | 28.5 | 31.1 | 23 18.38 | + 0.25 | ... | - 6.40 | 9 23 12.23 | ... |
| | 45 | Io | P. | 18.4 | 20.4 | 22.3 | ... | ... | ... | ... | ... | ... | 27 30.39 | + 0.20 | ... | - 6.40 | 9 27 24.19 | ... |
| | 46 | Nemausa | P. | 9.0 | 11.6 | 13.0 | 19.3 | 21.3 | 23.3 | 29.5 | 31.1 | 33.5 | 38 21.29 | + 0.21 | ... | - 6.40 | 9 38 15.10 | ... |
| | 47 | Beatrix | P. | 29.5 | 31.9 | 33.7 | 40.6 | 42.5 | 44.7 | 51.4 | 53.9 | 55.7 | 59 42.56 | + 0.27 | ... | - 6.39 | 9 59 36.44 | ... |
| | 48 | Euterpe | P. | 26.3 | 28.8 | 30.5 | 36.9 | 39.0 | 41.2 | 47.4 | 48.9 | 51.6 | 3 38.96 | + 0.24 | ... | - 6.39 | 10 3 32.81 | ... |
| | 49 | ^p Leonis | P. | 2.9 | 5.7 | 7.4 | 13.8 | 16.0 | 18.2 | 24.6 | 26.4 | 29.0 | 13 16.00 | + 0.27 | - 6.40 | - 6.39 | 10 13 9.88 | - 0.01 |
| | 50 | Dione | P. | ... | ... | ... | ... | ... | ... | 9.4 | 21.6 | ... | 27 43.66 | + 0.25 | ... | - 6.39 | 10 27 37.52 | ... |
| | 51 | ^a Leonis | P. | 25.5 | 28.0 | 29.7 | 36.4 | 38.5 | 40.6 | 47.3 | 49.0 | 51.7 | 7 38.52 | + 0.27 | - 6.36 | - 6.39 | 11 7 32.40 | - 0.09 |

3, 20, 29, 32, 39, 40, 42, 43, 45, 46, 47, 48, 50. Thread A used.
6. Bisections at thread II-VI.
20. Bisections at sets B and D.
21. Bisections at set C.
21, 22, 38, 51. Thread B used.
50. Transits at threads VI and VII.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermomet'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|-----------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | |
| | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " |
| 1 | 347 38 | 10 6.7 | 6.8 | 1.3 | 9.3 | 35 | .. | 352 | .. | 284 | .. | 68.2 | 12 18 4.6 | .. | + 13.2 | 63 24 39.0 |
| 2 | 333 38 | 10.5 | 9.0 | 2.5 | 11.5 | 38 | .. | 110 | .. | 096 | .. | 68.2 | 26 18 49.5 | .. | + 29.9 | 77 25 40.6 |
| 3 | 335 6 | 7.1 | 7.4 | 0.8 | 8.4 | 39 | .. | 010 | .. | .. | .. | 68.2 | 24 48 26.4 | .. | + 28.0 | 75 55 15.6 |
| 4 | 341 31 | 8 1.6 | 0.8 | 23.4 | 5.9 | 36 | 602 | .. | .. | .. | 548 | 68.2 | 18 25 18.3 | .. | + 20.1 | 69 31 59.6 |
| 5 | 341 31 | 12 1.0 | 2.2 | 24.3 | 4.2 | 36 | .. | 742 | .. | 726 | .. | 68.2 | 18 25 20.6 | 35.2 | + 20.1 | 69 32 1.9 |
| 6 | 339 6 | 10 2.5 | 2.5 | 26.5 | 4.7 | 31 | 130 | 915 | 655 | 400 | 235 | 68.4 | 20 49 9.2 | 22.9 | + 23.6 | 71 55 54.0 |
| 7 | 323 46 | 0.8 | 1.1 | 23.7 | 4.6 | 35 | .. | .. | .. | 725 | 670 | 68.4 | 36 10 5.6 | .. | + 45.3 | 87 17 12.1 |
| 8 | 338 52 | 3.4 | 4.2 | 20.0 | 5.6 | 33 | .. | 060 | .. | 905 | .. | 68.4 | 21 3 25.1 | .. | + 23.9 | 72 10 10.2 |
| 9 | 324 40 | 1.5 | 2.2 | 25.1 | 5.3 | 38 | 265 | 290 | .. | 170 | 155 | 68.4 | 35 16 44.0 | .. | + 44.0 | 86 23 49.2 |
| 10 | 285 12 | 5.4 | 5.5 | 1.1 | 8.6 | 36 | 495 | 490 | .. | .. | .. | 68.4 | 74 44 20.0 | .. | + 3 44.8 | 125 54 26.0 |
| 11 | 284 42 | 2.0 | 1.9 | 27.6 | 4.1 | 37 | 280 | 315 | .. | .. | .. | 68.4 | 75 14 28.6 | .. | + 3 52.6 | 126 24 42.4 |
| 12 | 285 4 | 4.4 | 5.0 | 0.4 | 8.9 | 32 | .. | 150 | .. | 115 | .. | 68.4 | 74 51 14.1 | .. | + 3 46.6 | 126 1 21.9 |
| 13 | 285 38 | 3.1 | 4.8 | 29.2 | 6.7 | 32 | .. | .. | .. | 960 | 865 | 68.4 | 74 17 25.9 | .. | + 3 38.3 | 125 27 25.4 |
| 14 | 287 56 | 3.0 | 3.9 | 28.5 | 6.7 | 33 | .. | 305 | .. | 225 | .. | 68.4 | 71 59 29.9 | 21.7 | + 3 9.5 | 123 9 0.6 |
| 15 | 344 46 | 1.0 | 2.7 | 24.2 | 3.7 | 35 | .. | .. | .. | 290 | 145 | 68.4 | 15 9 58.8 | 21.7 | + 16.9 | 66 16 36.9 |
| 16 | 352 34 | 5.0 | 5.0 | 28.4 | 6.7 | 36 | .. | .. | .. | 985 | 850 | 68.4 | 7 22 28.3 | .. | + 8.1 | 58 28 57.6 |
| 17 | 307 12 | 3.1 | 4.8 | 28.2 | 6.2 | 35 | .. | 452 | .. | 360 | .. | 68.4 | 52 44 2.8 | .. | + 1 21.7 | 103 51 45.7 |
| 18 | 54 24 | 2.1 | 3.0 | 26.0 | 1.9 | 32 | .. | 365 | 325 | 315 | .. | 68.4 | 305 31 13.5 | 18.0 | + 1 28.0 | 356 36 6.7 |
| 19 | 343 38 | 8.2 | 8.5 | 0.9 | 8.9 | 37 | .. | 695 | .. | 550 | .. | 68.4 | 16 18 40.5 | .. | + 18.4 | 67 25 20.1 |
| 20 | 29 48 | 3.0 | 2.8 | 27.2 | 3.5 | 30 | 500 | .. | 500 | .. | 495 | 68.4 | 330 4 13.0 | .. | + 36.3 | 21 9 57.9 |
| 21 | 29 48 | 3.0 | 2.8 | 27.2 | 3.5 | 28 | 430 | .. | 435 | .. | 430 | 68.4 | 330 8 47.1 | .. | + 36.2 | 21 14 32.1 |
| 22 | 337 34 | 0.7 | 0.8 | 23.8 | 1.8 | 29 | .. | 115 | .. | 990 | .. | 68.4 | 22 22 54.3 | .. | + 26.0 | 73 29 41.5 |
| 23 | 304 30 | 2.2 | 2.3 | 27.2 | 4.8 | 31 | .. | 435 | .. | 250 | .. | 68.4 | 55 24 59.1 | .. | + 1 31.2 | 106 32 51.5 |
| 24 | 48 16 | 2.8 | 2.7 | 26.8 | 3.5 | 37 | .. | 280 | 250 | 235 | .. | 68.4 | 311 40 29.6 | .. | + 1 10.8 | 2 45 40.0 |
| 25 | 285 44 | 3.9 | 4.0 | 29.7 | 7.3 | 29 | .. | .. | .. | 615 | .. | 68.4 | 74 10 35.6 | .. | + 3 39.7 | 125 20 36.5 |
| 26 | 285 44 | 3.9 | 4.0 | 29.7 | 7.3 | 35 | .. | .. | .. | 805 | 905 | 68.4 | 74 12 11.2 | .. | + 3 40.1 | 125 22 12.5 |
| 27 | 283 0 | 3.7 | 3.5 | 29.0 | 7.2 | 32 | .. | 005 | .. | 995 | .. | 68.4 | 76 55 10.8 | .. | + 4 26.7 | 128 5 58.7 |
| 28 | 282 8 | 2.7 | 2.9 | 29.8 | 6.4 | 35 | .. | 290 | .. | 175 | .. | 68.4 | 77 47 59.8 | .. | + 4 45.7 | 128 59 6.7 |
| 29 | 347 14 | 3.0 | 2.5 | 25.9 | 4.7 | 34 | .. | 615 | .. | 445 | .. | 68.4 | 12 39 14.6 | .. | + 14.2 | 63 45 50.0 |
| 30 | 283 48 | 5.3 | 4.9 | 0.6 | 7.4 | 31 | .. | .. | .. | 460 | 415 | 68.4 | 76 7 4.4 | .. | + 4 11.4 | 127 17 37.0 |
| 31 | 283 38 | 2.5 | 2.9 | 27.8 | 5.0 | 33 | .. | 280 | .. | 125 | .. | 68.4 | 76 17 27.9 | .. | + 4 14.7 | 127 28 3.8 |
| 32 | 338 14 | 4.4 | 3.8 | 26.7 | 5.5 | 36 | .. | 225 | .. | 015 | .. | 68.4 | 21 39 40.0 | 16.8 | + 25.1 | 72 46 26.3 |
| 33 | 286 14 | 3.0 | 3.4 | 29.2 | 6.5 | 31 | 750 | 695 | .. | .. | .. | 68.4 | 73 41 4.9 | .. | + 3 33.5 | 124 50 59.6 |
| 34 | 284 10 | 9 28.9 | 28.7 | 25.0 | 3.0 | 31 | .. | 815 | .. | 735 | .. | 68.4 | 75 45 2.9 | .. | + 4 5.2 | 126 55 29.3 |
| 35 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 36 | 281 54 | 10 4.4 | 4.3 | 0.3 | 7.0 | 36 | .. | 615 | .. | 395 | .. | 70.5 | 78 2 22.5 | .. | + 4 52.0 | 129 13 35.7 |
| 37 | 290 22 | 5.5 | 5.5 | 0.5 | 8.4 | 34 | .. | 590 | .. | 415 | .. | 70.5 | 69 33 53.1 | .. | + 2 48.6 | 120 43 2.9 |
| 38 | 324 52 | 5.5 | 4.0 | 29.0 | 7.0 | 34 | .. | 470 | .. | 325 | .. | 70.5 | 35 6 22.8 | .. | + 44.5 | 86 13 28.5 |
| 39 | 324 52 | 5.5 | 4.0 | 29.0 | 7.0 | 38 | .. | 615 | .. | 520 | .. | 70.5 | 35 2 20.8 | .. | + 44.2 | 86 9 26.2 |
| 40 | 340 0 | 0.0 | 29.9 | 23.3 | 2.4 | 34 | .. | 520 | .. | 460 | .. | 70.5 | 17 53 13.5 | .. | + 20.4 | 68 59 55.1 |
| 41 | 353 46 | 3.2 | 2.6 | 26.8 | 3.2 | 32 | .. | 940 | .. | 805 | .. | 70.5 | 6 9 24.8 | .. | + 6.8 | 57 15 52.8 |
| 42 | 342 50 | 2.2 | 2.2 | 25.2 | 4.3 | 34 | .. | 130 | .. | 930 | .. | 70.5 | 17 3 8.5 | .. | + 19.4 | 68 9 49.1 |
| 43 | 338 30 | 0.5 | 1.1 | 23.9 | 2.7 | 31 | .. | 835 | .. | 650 | .. | 70.5 | 21 22 32.0 | .. | + 24.8 | 72 29 18.0 |
| 44 | 337 10 | 9 29.2 | 29.0 | 22.2 | 0.9 | 37 | .. | 525 | .. | 375 | .. | 70.5 | 22 46 31.2 | 15.8 | + 27.9 | 73 53 20.3 |
| 45 | 320 0 | 28.8 | 28.6 | 23.8 | 2.0 | 39 | .. | .. | .. | .. | 890 | 70.5 | 39 54 37.0 | .. | + 53.0 | 91 1 51.2 |
| 46 | 324 16 | 10 7.5 | 8.4 | 2.8 | 10.5 | 26 | .. | 435 | .. | 370 | .. | 70.5 | 35 35 17.0 | .. | + 45.4 | 86 42 24.5 |
| 47 | 341 50 | 7.8 | 8.0 | 2.8 | 10.0 | 34 | .. | 140 | .. | 935 | .. | 70.5 | 18 3 14.8 | .. | + 20.7 | 69 9 56.7 |
| 48 | 335 16 | 8.2 | 9.0 | 2.2 | 11.6 | 31 | .. | 850 | .. | 510 | .. | 70.5 | 24 36 39.2 | .. | + 29.1 | 75 43 29.5 |
| 49 | 341 30 | 1.0 | 0.5 | 24.6 | 4.4 | 32 | .. | 535 | .. | 430 | .. | 70.5 | 18 25 17.4 | .. | + 21.1 | 69 31 59.7 |
| 50 | 337 34 | 4.8 | 4.1 | 28.4 | 4.9 | 34 | .. | 975 | .. | .. | 685 | 70.5 | 22 19 23.1 | 15.4 | + 26.1 | 73 26 10.4 |
| 51 | 342 16 | 4.1 | 4.3 | 28.1 | 6.2 | 30 | .. | 215 | .. | 080 | .. | 70.5 | 17 41 17.1 | .. | + 20.3 | 68 47 58.6 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " " | " " | " " | ° ' " |
| 5 | 30.12 | 30.0 | 6 | — 20 39.4 | — 16 1.1 | .. | — 36 40.5 |
| 6 | 30.20 | 25.1 | 44 | — 0.2 | .. | .. | — 0.2 |
| 14 | 30.20 | 24.2 | | | | | |
| 15 | 30.20 | 24.2 | | | | | |
| 18 | 30.31 | 21.6 | | | | | |
| 32 | 30.36 | 20.1 | | | | | |
| 44 | 30.36 | 18.7 | | | | | |
| 50 | 30.39 | 18.3 | | | | | |

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. |
|-----------------|---------|--------------------------|-----------|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------------------|--------------|-------------------|-----------------|---------------------------|-------|-------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock. appar. nt. | Clock. adopted. | h. | m. | s. | |
| 1876. Feb. 2 | 1 | δ Crateris . . . | P. | 3.4 | 6.0 | 7.6 | 13.9 | 16.0 | 18.1 | 24.6 | 26.0 | 28.8 | m. s. 13 16.04 | s. + 0.17 | s. - 6.41 | s. - 6.40 | 11 | 13 | 9.81 | - 0.01 |
| | 2 | γ Moon I, S. . . | F. | 45.3 | 48.2 | 50.0 | 57.0 | 59.5 | 1.8 | 8.9 | 10.6 | 13.5 | 34 59.42 | + 0.19 | . . . | - 6.68 | 4 | 34 | 52.93 | + 76.57 |
| | 3 | β Orionis . . . | F. | 30.2 | 32.8 | 34.2 | 40.5 | 42.6 | 44.7 | 50.8 | 52.3 | 55.0 | 8 42.57 | - 0.07 | - 6.67 | - 6.67 | 5 | 8 | 35.83 | 0.00 |
| | 4 | β Tauri . . . | F. | 21.0 | 23.9 | 26.0 | 32.6 | 35.0 | 37.4 | 44.2 | 46.0 | 48.9 | 18 35.00 | + 0.21 | - 6.73 | - 6.67 | 5 | 18 | 28.54 | + 0.04 |
| | 5 | δ Orionis . . . | F. | . . . | 44.0 | 46.2 | 48.1 | 50.2 | 52.2 | . . . | . . . | . . . | 25 48.14 | - 0.03 | - 6.62 | - 6.67 | 5 | 25 | 41.44 | - 0.08 |
| | 6 | ε Orionis . . . | F. | 50.9 | 53.5 | 55.0 | 1.1 | 3.2 | 5.2 | 11.4 | 12.9 | 15.3 | 30 3.17 | - 0.03 | - 6.66 | - 6.67 | 5 | 29 | 56.47 | - 0.02 |
| | 7 | α Columbae . . . | F. | . . . | . . . | 12.7 | 15.3 | 17.8 | 20.3 | 22.7 | . . . | . . . | 35 17.76 | - 0.23 | - 6.64 | - 6.67 | 5 | 35 | 10.86 | - 0.07 |
| | 8 | α Orionis (R) . . . | F. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . |
| | 9 | α Orionis . . . | F. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . |
| | 10 | Durch. + 18°, 1111 | F. | 20.5 | 23.0 | 24.7 | 31.1 | 33.3 | 35.5 | 42.0 | 43.5 | 46.3 | 3 33.32 | + 0.11 | . . . | - 6.67 | 6 | 3 | 26.76 | - 1.43 |
| | 11 | δ Ursæ Minoris, S. P. | F. | . . . | . . . | 26.0 | 51.0 | 17.0 | 42.0 | 8.5 | . . . | . . . | 12 16.94 | - 9.97 | . . . | - 6.66 | 18 | 12 | 0.31 | 0.00 |
| | 12 | μ Geminorum . . . | F. | 22.4 | 25.1 | 26.9 | 33.4 | 35.5 | 37.8 | 44.4 | 46.0 | 48.7 | 15 35.58 | + 0.15 | - 6.69 | - 6.66 | 6 | 15 | 29.07 | - 0.01 |
| | 13 | Durch. 68°, 446 | F. | . . . | . . . | 10.0 | 16.2 | 22.0 | 27.3 | 33.0 | . . . | . . . | 25 21.69 | + 1.29 | . . . | - 6.66 | 6 | 25 | 16.32 | - 3.81 |
| | 14 | Durch. 68°, 447 | F. | 43.4 | 50.7 | 54.9 | 12.3 | 18.0 | 23.3 | 40.0 | 44.2 | 50.7 | 28 17.50 | + 1.29 | . . . | - 6.66 | 6 | 28 | 12.13 | - 3.85 |
| | 15 | Lalande 12661 | F. | . . . | . . . | 34.5 | 37.1 | 39.3 | 41.7 | 44.1 | . . . | . . . | 30 39.34 | + 0.21 | . . . | - 6.66 | 6 | 30 | 32.89 | - 1.70 |
| | 16 | 51 Cephei . . . | F. | . . . | . . . | 43.0 | 26.5 | 8.0 | 51.5 | 33.0 | . . . | . . . | 42 8.34 | + 11.77 | . . . | . . . | . . . | . . . | . . . | . . . |
| | 17 | Ariadne . . . | F. | . . . | . . . | 3.1 | 5.3 | 7.4 | 9.5 | 11.7 | . . . | . . . | 53 7.40 | + 0.10 | . . . | - 6.65 | 7 | 53 | 0.85 | . . . |
| | 18 | Aegina . . . | F. | 55.7 | 58.3 | 0.1 | 6.7 | 9.0 | 11.3 | 17.6 | 19.3 | 22.1 | 48 8.90 | + 0.13 | . . . | - 6.65 | 8 | 48 | 2.38 | . . . |
| | 19 | Virginia . . . | F. | . . . | . . . | 9.9 | 12.0 | 14.2 | 16.1 | 18.3 | . . . | . . . | 50 14.10 | + 0.08 | . . . | - 6.65 | 8 | 50 | 7.53 | . . . |
| | 20 | Parthenope . . . | F. | 45.5 | 47.9 | 49.0 | 56.2 | 58.4 | 0.6 | 7.0 | 8.7 | 11.4 | 8 58.40 | + 0.10 | . . . | - 6.65 | 9 | 8 | 51.85 | . . . |
| | 21 | Leonis . . . | F. | 43.6 | 46.4 | 48.1 | 54.9 | 57.0 | 59.2 | 6.0 | 7.7 | 10.5 | 38 57.04 | + 0.16 | - 6.60 | - 6.64 | 9 | 38 | 50.56 | - 0.10 |
| | 22 | Beatrix . . . | F. | 35.3 | 37.8 | 39.5 | 46.3 | 48.3 | 50.6 | 57.0 | 58.7 | 1.4 | 57 48.32 | + 0.13 | . . . | - 6.64 | 9 | 57 | 41.81 | . . . |
| | 23 | μ Leonis . . . | F. | . . . | . . . | . . . | 27.3 | 29.2 | 33.5 | 35.0 | 37.6 | . . . | 26 25.16 | + 0.05 | - 6.68 | - 6.64 | 10 | 26 | 18.57 | - 0.03 |
| | 24 | α Lyrae . . . | S. | 33.8 | 37.0 | 39.0 | 46.0 | 49.6 | 52.0 | 59.8 | 1.8 | 5.3 | 32 49.47 | + 0.29 | - 6.53 | - 6.54 | 18 | 32 | 43.22 | + 0.01 |
| | 25 | α Aquilæ . . . | S. | 37.3 | 39.9 | 41.3 | 47.6 | 49.7 | 51.0 | 57.9 | 59.4 | 2.0 | 44 49.63 | - 0.03 | - 6.56 | - 6.54 | 19 | 44 | 43.06 | + 0.06 |
| | 26 | α Cygni . . . | S. | 50.0 | 2.8 | 5.0 | 13.7 | 16.6 | 19.3 | 28.0 | 30.0 | 33.8 | 37 16.47 | + 0.40 | - 6.55 | - 6.54 | 20 | 37 | 10.33 | + 0.03 |
| | 27 | • Sun I, S. . . | S. | 52.9 | 55.7 | 56.8 | 3.4 | 5.6 | 7.8 | 14.0 | 15.6 | 18.4 | 14 5.58 | - 0.26 | . . . | - 6.54 | 21 | 13 | 58.78 | . . . |
| | 28 | Sun II, N. . . | S. | 8.3 | 10.8 | 12.4 | 18.8 | 20.9 | 23.1 | 29.6 | 31.2 | 33.8 | 16 20.99 | - 0.26 | . . . | - 6.54 | 21 | 16 | 11.19 | . . . |
| | 29 | Mercury I, S. . . | S. | 47.7 | 50.0 | 52.0 | 58.0 | 0.1 | 2.2 | 8.3 | 10.0 | 12.5 | 5 0.09 | - 0.22 | . . . | - 6.54 | 22 | 4 | 53.33 | + 0.31 |
| | 30 | • Pegasi . . . | S. | . . . | . . . | . . . | 22.3 | 24.6 | 26.5 | 30.0 | . . . | 34.7 | 35 22.40 | - 0.08 | - 6.62 | - 6.54 | 22 | 35 | 15.78 | + 0.14 |
| | 31 | α Piscis Australis . . . | S. | . . . | 49.2 | 51.6 | . . . | . . . | 59.0 | 3.6 | . . . | 8.3 | 50 54.08 | - 0.37 | - 6.57 | - 6.54 | 22 | 50 | 47.17 | + 0.07 |
| | 32 | α Pegasi . . . | S. | 27.9 | 30.6 | 33.2 | 38.6 | 40.5 | 42.8 | 49.2 | 50.6 | 53.4 | 58 40.64 | - 0.05 | - 6.44 | - 6.54 | 22 | 58 | 34.05 | - 0.07 |
| | 33 | Venus I, S. . . | S. | 22.0 | 24.5 | 25.9 | 32.4 | 34.4 | 36.4 | 42.6 | 44.1 | 46.6 | 20 34.32 | - 0.10 | . . . | - 6.54 | 23 | 20 | 27.59 | + 0.43 |
| | 34 | β Orionis . . . | S. | 30.0 | 32.7 | 34.3 | 40.4 | 42.4 | 44.6 | 50.7 | 52.1 | 54.7 | 8 42.43 | - 0.12 | - 6.49 | - 6.54 | 5 | 8 | 35.77 | - 0.05 |
| | 35 | β Tauri . . . | S. | 20.5 | 23.7 | 25.6 | 32.7 | 34.8 | 37.2 | 43.9 | 45.6 | 48.5 | 18 34.76 | + 0.22 | - 6.51 | - 6.54 | 5 | 18 | 28.44 | - 0.05 |
| | 36 | δ Orionis . . . | S. | 35.7 | 38.3 | 39.7 | 46.2 | 48.0 | 50.0 | 56.0 | 57.6 | 0.2 | 25 47.97 | - 0.06 | - 6.44 | - 6.54 | 5 | 25 | 41.37 | - 0.13 |
| | 37 | B. A. C. 1794 . . . | S. | 25.7 | 28.2 | 29.8 | 33.8 | 35.8 | 38.0 | 40.0 | . . . | . . . | 34 37.93 | - 0.07 | . . . | - 6.54 | 5 | 34 | 31.32 | - 1.19 |
| | 38 | Moon I, N. . . | S. | 55.0 | 58.0 | 0.1 | 7.0 | 9.5 | 12.0 | 19.0 | 20.9 | 23.8 | 43 9.48 | + 0.22 | . . . | - 6.54 | 5 | 43 | 3.16 | + 78.33 |
| | 39 | B. A. C. 1996 . . . | S. | 59.5 | 2.4 | 4.1 | 11.9 | 14.5 | 17.0 | 24.3 | 26.0 | 29.1 | 6 14.34 | - 0.32 | . . . | - 6.54 | 6 | 6 | 7.48 | - 1.41 |
| | 40 | δ Ursæ Minoris, S. P. | S. | . . . | 27.0 | 52.0 | 18.0 | 43.5 | 9.0 | 1.5 | 35.0 | . . . | 12 18.20 | - 11.79 | . . . | - 6.54 | 18 | 11 | 59.87 | - 0.62 |
| | 41 | μ Geminorum . . . | S. | 22.2 | 25.0 | 26.8 | 33.4 | 35.5 | 37.6 | 44.2 | 46.0 | 48.8 | 15 35.50 | + 0.16 | - 6.62 | - 6.54 | 6 | 15 | 29.12 | + 0.04 |
| | 42 | γ Geminorum . . . | S. | 28.0 | 30.7 | 32.4 | 38.7 | 40.8 | 43.0 | 49.4 | 51.0 | 53.7 | 30 40.86 | + 0.10 | - 6.54 | - 6.54 | 6 | 34 | 34.42 | - 0.03 |
| | 43 | 51 Cephei . . . | S. | 51.0 | 44.5 | 18.0 | 41.0 | 20.5 | 6.0 | 49.0 | 29.0 | . . . | 42 5.52 | + 13.92 | . . . | - 6.54 | 6 | 42 | 12.90 | - 0.07 |
| | 44 | B. A. C. 2288 . . . | S. | 44.8 | 48.0 | 49.9 | 57.7 | 59.9 | 2.3 | 9.8 | 11.7 | 15.0 | 52 59.90 | - 0.32 | . . . | - 6.54 | 6 | 52 | 53.04 | - 1.52 |
| | 45 | B. A. C. 2315 . . . | S. | 13.8 | 16.8 | 18.9 | 26.4 | 28.9 | 31.5 | 38.7 | 40.7 | 43.7 | 57 28.82 | - 0.32 | . . . | - 6.54 | 6 | 57 | 21.96 | - 1.53 |
| | 46 | B. A. C. 2502 . . . | S. | 15.3 | 18.5 | 20.5 | 27.8 | 30.4 | 32.0 | 40.5 | 42.4 | 45.6 | 29 30.43 | - 0.32 | . . . | - 6.54 | 7 | 29 | 23.57 | - 1.58 |
| | 47 | B. A. C. 2536 . . . | S. | 7.6 | 10.5 | 12.6 | 20.2 | 22.7 | 25.3 | 33.0 | 34.9 | 38.0 | 34 22.76 | - 0.32 | . . . | - 6.54 | 7 | 34 | 15.90 | - 1.59 |
| | 48 | Ariadne . . . | S. | 53.7 | 56.5 | 58.0 | 4.7 | 6.7 | 8.7 | 15.1 | 16.8 | 19.3 | 52 6.61 | + 0.11 | . . . | - 6.54 | 7 | 52 | 0.18 | . . . |
| | 6 49 | α Lyrae . . . | E. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . |

1, 14, 15, 47. Thread B used.
 13, 17, 18, 19, 20, 22, 46, 48. Thread A used.
 38. Bisections at sets B and D.
 44. Telescope micrometer reading decreased five revolutions in reduction.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom't. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. |
| | | ° " | " " | " " | " " | | | | | | | | | | | | |
| 1 | 306 58 | 10 0.5 | 1.0 | 25.3 | 3.3 | 28 | .. | 310 | .. | 265 | .. | 70.5 | 52 58 45.5 | 15.3 | + 1 24.1 | 104 6 30.8 | + 0.8 |
| 2 | 347 32 | 9 24.9 | 24.0 | 14.7 | 28.7 | 33 | 000 | 920 | 646 | 410 | 315 | 69.9 | 12 23 12.6 | .. | + 13.9 | 63 29 47.7 | .. |
| 3 | 312 42 | 27.7 | 28.0 | 21.2 | 2.4 | 32 | .. | 608 | .. | 596 | .. | 69.9 | 47 13 15.7 | .. | + 1 8.1 | 98 20 45.0 | - 0.8 |
| 4 | 349 32 | 10 1.7 | 29.7 | 22.4 | 4.7 | 32 | .. | 252 | .. | 186 | .. | 69.9 | 10 23 12.4 | .. | + 11.6 | 61 29 45.2 | - 0.8 |
| 5 | 320 40 | 1.0 | 28.7 | 21.5 | 5.1 | 36 | .. | .. | .. | 340 | 352 | 69.9 | 39 16 16.0 | .. | + 51.5 | 90 23 28.7 | - 1.5 |
| 6 | 319 46 | 4.6 | 2.2 | 26.1 | 7.3 | 33 | .. | .. | .. | 710 | 704 | 69.9 | 40 9 39.1 | 19.7 | + 53.1 | 91 16 53.4 | - 1.3 |
| 7 | 286 58 | 9 27.4 | 26.0 | 22.6 | 1.4 | 38 | .. | .. | .. | 458 | 440 | 69.9 | 72 58 45.6 | .. | + 3 23.4 | 124 8 30.2 | - 1.7 |
| 8 | 211 26 | 10 3.3 | 3.8 | 27.1 | 5.3 | 35 | 304 | 240 | .. | .. | .. | 69.9 | 148 30 0.4 | .. | - 38.6 | 82 36 59.4 | + 0.6 |
| 9 | 328 26 | 8.7 | 8.0 | 29.9 | 11.7 | 34 | .. | .. | .. | .. | 578 | 69.9 | 31 29 57.3 | .. | + 38.6 | 82 36 57.1 | - 2.7 |
| 10 | 339 46 | 3.3 | 2.3 | 24.9 | 6.3 | 33 | .. | .. | .. | 780 | 784 | 69.9 | 20 9 39.6 | .. | + 23.1 | 71 16 23.9 | + 7.8 |
| 11 | 54 24 | 0.1 | 28.6 | 21.0 | 1.7 | 32 | 352 | 348 | 346 | 368 | 358 | 69.9 | 305 31 12.4 | .. | - 1 28.0 | 356 36 5.6 | - 1.0 |
| 12 | 343 38 | 9 27.4 | 25.3 | 17.1 | 0.9 | 38 | .. | .. | .. | 180 | 180 | 69.9 | 16 18 40.4 | .. | + 18.4 | 67 25 20.0 | - 0.3 |
| 13 | 29 48 | 28.1 | 25.2 | 19.1 | 28.7 | 30 | .. | 630 | .. | 620 | .. | 69.9 | 330 4 10.8 | .. | - 36.2 | 21 9 55.8 | + 17.7 |
| 14 | 29 48 | 28.1 | 25.2 | 19.1 | 28.7 | 28 | .. | 810 | .. | .. | .. | 69.9 | 330 8 47.9 | .. | - 36.1 | 21 14 33.0 | + 17.5 |
| 15 | 350 8 | 10 4.8 | 2.6 | 26.0 | 7.2 | 24 | .. | .. | .. | .. | 986 | 69.9 | 9 47 58.4 | .. | + 10.9 | 60 54 30.5 | + 9.2 |
| 16 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 20.9 | .. | .. | .. |
| 17 | 338 20 | 0.5 | 28.5 | 19.5 | 3.1 | 41 | .. | 562 | .. | 564 | .. | 69.9 | 21 35 0.2 | .. | + 24.9 | 72 41 46.3 | - 2.1 |
| 18 | 342 6 | 5.5 | 3.7 | 27.2 | 9.0 | 33 | .. | .. | .. | 885 | .. | 69.9 | 17 47 9.6 | .. | + 20.2 | 68 53 51.0 | - 1.9 |
| 19 | 335 52 | 0.5 | 28.9 | 22.9 | 3.6 | 40 | .. | .. | .. | .. | 715 | 69.9 | 24 2 49.9 | .. | + 28.2 | 75 9 39.3 | - 1.9 |
| 20 | 338 42 | 9 29.8 | 29.3 | 20.5 | 2.2 | 32 | .. | .. | .. | 302 | 286 | 69.9 | 21 10 39.7 | .. | + 24.5 | 72 17 25.4 | - 2.1 |
| 21 | 345 24 | 10 2.6 | 1.3 | 24.0 | 6.6 | 38 | 256 | 240 | .. | .. | .. | 69.9 | 14 32 45.1 | 19.8 | + 16.4 | 65 39 22.7 | - 1.0 |
| 22 | 342 0 | 9 25.1 | 24.2 | 14.9 | 28.8 | 35 | .. | 950 | .. | 940 | .. | 69.9 | 17 53 29.5 | .. | + 20.5 | 69 0 11.2 | - 2.0 |
| 23 | 331 0 | 10 4.3 | 2.9 | 26.5 | 7.7 | 37 | .. | 190 | .. | 120 | .. | 69.9 | 28 56 31.0 | 18.0 | + 35.1 | 80 3 27.3 | + 0.7 |
| 24 | 359 42 | 9 22.8 | 23.2 | 19.8 | 26.6 | 34 | .. | 892 | .. | 094 | .. | 71.6 | 0 13 50.1 | 16.5 | + 0.3 | 51 20 11.6 | + 1.0 |
| 25 | 329 36 | 26.5 | 26.5 | 20.5 | 28.5 | 38 | .. | 446 | .. | 246 | .. | 71.6 | 30 20 43.6 | .. | + 37.3 | 81 27 42.1 | + 1.0 |
| 26 | 5 52 | 22.5 | 22.4 | 19.2 | 24.8 | 34 | .. | .. | .. | 290 | 228 | 71.6 | 354 3 39.4 | .. | - 6.6 | 45 9 54.0 | 0.0 |
| 27 | 304 50 | 24.6 | 25.1 | 22.2 | 1.7 | 35 | 536 | 528 | .. | .. | .. | 71.6 | 55 5 59.2 | 24.8 | + 1 30.3 | 106 13 50.7 | .. |
| 28 | 305 22 | 29.8 | 0.6 | 27.5 | 5.0 | 33 | .. | .. | .. | 240 | 198 | 71.6 | 54 33 31.7 | .. | + 1 28.6 | 105 41 21.5 | .. |
| 29 | 311 48 | 28.5 | 29.4 | 24.2 | 5.0 | 34 | .. | 690 | .. | 554 | .. | 71.6 | 48 7 50.3 | .. | + 1 10.2 | 99 15 21.7 | .. |
| 30 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 31 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 32 | 335 36 | 10 3.6 | 4.5 | 0.1 | 8.5 | 38 | .. | 646 | .. | 498 | .. | 71.6 | 24 20 55.8 | 27.6 | + 28.4 | 75 27 45.4 | + 1.7 |
| 33 | 315 30 | 13.0 | 14.0 | 9.0 | 17.2 | 34 | 230 | 120 | .. | 850 | 780 | 71.6 | 44 25 54.7 | .. | + 1 1.4 | 95 33 17.3 | .. |
| 34 | 312 42 | 8.0 | 9.0 | 2.5 | 10.2 | 31 | .. | 810 | .. | 720 | .. | 72.7 | 47 13 15.7 | 17.4 | + 1 9.2 | 98 20 46.1 | + 0.2 |
| 35 | 349 32 | 7.5 | 7.0 | 29.7 | 8.3 | 31 | .. | 900 | .. | 716 | .. | 72.7 | 10 23 14.8 | .. | + 11.8 | 61 29 47.8 | + 1.8 |
| 36 | 320 40 | 7.5 | 7.6 | 29.6 | 9.8 | 35 | .. | 882 | .. | 762 | .. | 72.7 | 39 16 16.6 | .. | + 52.5 | 90 23 30.3 | - 0.1 |
| 37 | 319 2 | 9.8 | 9.0 | 3.0 | 10.8 | 31 | .. | 770 | .. | 700 | .. | 72.7 | 40 53 16.0 | .. | + 55.6 | 92 0 32.8 | + 2.9 |
| 38 | 349 42 | 9.3 | 7.4 | 1.8 | 10.0 | 38 | 008 | .. | 990 | .. | 990 | 72.7 | 10 14 50.9 | .. | + 11.6 | 61 21 23.7 | .. |
| 39 | 286 18 | 13.2 | 12.2 | 8.2 | 15.5 | 32 | 710 | 762 | .. | .. | .. | 72.7 | 73 37 34.0 | .. | + 3 37.0 | 124 47 32.2 | - 3.3 |
| 40 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 41 | 343 38 | 16.8 | 14.5 | 8.0 | 16.3 | 36 | .. | .. | .. | 810 | 720 | 72.7 | 16 18 40.2 | 13.9 | + 18.9 | 67 25 20.3 | 0.0 |
| 42 | 337 34 | 9.0 | 8.5 | 3.0 | 9.6 | 38 | .. | 300 | .. | 115 | .. | 72.7 | 22 22 54.6 | .. | + 26.6 | 73 29 42.4 | + 1.2 |
| 43 | 48 16 | 11.4 | 9.8 | 4.2 | 10.3 | 36 | 698 | .. | .. | .. | 642 | 72.7 | 311 40 32.6 | .. | - 1 12.6 | 2 45 41.2 | + 1.0 |
| 44 | 285 44 | 8.4 | 8.0 | 3.5 | 10.6 | 34 | 054 | 842 | .. | .. | .. | 72.7 | 74 10 31.3 | .. | + 3 44.0 | 125 20 36.5 | - 2.3 |
| 45 | 285 44 | 8.4 | 8.0 | 3.5 | 10.6 | 35 | 388 | 352 | .. | .. | .. | 72.7 | 74 12 9.6 | .. | + 3 46.0 | 125 22 16.8 | - 2.2 |
| 46 | 284 58 | 18.6 | 17.6 | 12.6 | 20.0 | 28 | .. | 100 | .. | 850 | .. | 72.7 | 74 53 53.8 | .. | + 3 57.2 | 126 4 12.2 | - 1.5 |
| 47 | 284 58 | 18.6 | 17.6 | 12.6 | 20.0 | 41 | .. | .. | .. | 825 | 562 | 72.7 | 75 2 30.8 | .. | + 3 59.5 | 126 12 51.5 | - 1.4 |
| 48 | 338 22 | 2.6 | 3.0 | 24.9 | 5.2 | 39 | .. | 890 | .. | 624 | .. | 72.7 | 21 32 38.8 | 11.1 | + 25.6 | 72 39 25.6 | - 2.0 |
| 49 | 359 42 | 9 23.5 | 26.0 | 19.2 | 23.8 | 35 | .. | 045 | .. | 970 | .. | 69.1 | 0 13 48.7 | 35.5 | + 0.2 | 51 20 10.1 | - 1.0 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| 1 | 30.40 | 18.8 | 2 | -12 36.8 | - 16 18.6 | .. | - 28 55.3 |
| 6 | 30.44 | 25.6 | 27 | - 7.3 | - 16 14.6 | .. | - 16 21.9 |
| 16 | 30.46 | 25.2 | 28 | - 7.3 | + 16 14.6 | .. | + 16 7.3 |
| 21 | 30.52 | 23.0 | 29 | - 8.7 | - 4.5 | .. | - 13.2 |
| 23 | 30.54 | 23.0 | 33 | - 4.7 | - 6.4 | .. | - 11.1 |
| 24 | 30.80 | 17.2 | 38 | -10 29.4 | + 16 24.6 | .. | + 5 55.2 |
| 27 | 30.84 | 26.6 | | | | | |
| 32 | 30.82 | .. | | | | | |
| 34 | 30.82 | 21.6 | | | | | |
| 41 | 30.80 | 19.0 | | | | | |
| 48 | 30.81 | 16.8 | | | | | |
| 49 | 30.30 | 34.8 | | | | | |

For summary of the elements of reduction see page 3.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. |
|-----------------|---------|--------------------|---------------------------|--------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|--------------|----------------|----------------|---------------------------|-------------|-----------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | m. | s. | s. |
| | | | | | | | | | | | | | | | | | | | | |
| 1876. Feb. 7 | 1 | Sun S. | E. | | | | | | | | | | | | | | | | | |
| | 2 | Sun N. | E. | | | | | | | | | | | | | | | | | |
| | 3 | Venus N. | E. | | | | | | | | | | | | | | | | | |
| | 4 | Venus S. | E. | | | | | | | | | | | | | | | | | |
| | 5 | a Aquilæ | F. | 38.1 | 40.7 | 42.2 | 48.6 | 50.5 | 52.7 | 58.9 | 0.4 | 2.9 | 44 50.56 | — 0.25 | — 7.22 | — 7.22 | 19 44 43.09 | + 0.04 | | |
| | 8 | 6 | Sun I, N. | F. | 54.1 | 56.7 | 58.4 | 4.9 | 7.0 | 9.0 | 15.3 | 16.9 | 19.5 | 26 6.87 | — 0.44 | . . . | — 7.22 | 21 25 59.21 | . . . | |
| | | 7 | Sun II, S. | F. | 9.2 | 11.6 | 13.2 | 19.6 | 21.8 | 24.0 | 30.2 | 31.6 | 34.5 | 28 21.78 | — 0.44 | . . . | — 7.22 | 21 28 14.12 | . . . | |
| | | 8 | γ Pegasi | F. | | 19.3 | 21.2 | 23.2 | 25.3 | 27.5 | | | 35 23.30 | — 0.28 | — 7.31 | — 7.22 | 22 35 15.80 | + 0.15 | | |
| | | 9 | ε Cephei | F. | 49.7 | 55.6 | 59.2 | 9.1 | 18.9 | 29.1 | 38.6 | 42.5 | 48.9 | 45 19.07 | + 0.62 | . . . | — 7.22 | 22 45 12.47 | + 0.23 | |
| | | 10 | a Pegasi | F. | 29.0 | 31.5 | 33.1 | 39.6 | 41.6 | 43.7 | 49.9 | 51.5 | 54.3 | 58 41.58 | — 0.24 | — 7.19 | — 7.22 | 22 58 34.12 | 0.00 | |
| | | 11 | Venus I, S. | F. | 45.0 | 47.6 | 49.2 | 55.3 | 57.2 | 59.3 | 5.7 | 7.1 | 9.7 | 33 57.34 | — 0.37 | . . . | — 7.22 | 23 33 49.75 | + 0.44 | |
| | | 12 | a Andromedæ | F. | 51.2 | 54.2 | 55.9 | 2.9 | 5.1 | 7.5 | 14.5 | 16.2 | 19.2 | 2 51.19 | — 0.13 | — 7.23 | — 7.22 | 0 1 37.84 | + 0.03 | |
| | | 13 | γ Pegasi | F. | 45.1 | 47.9 | 49.4 | 55.6 | 57.9 | 59.9 | 6.3 | 7.9 | 10.5 | 6 57.83 | — 0.24 | — 7.20 | — 7.22 | 0 6 50.37 | — 0.02 | |
| | | 14 | γ Eridani | F. | 10.2 | 12.9 | 14.5 | 20.9 | 22.9 | 25.0 | 31.4 | 32.9 | 35.7 | 52 22.93 | — 0.44 | — 7.10 | — 7.26 | 3 52 15.23 | — 0.12 | |
| | | 15 | γ Tauri | F. | 39.8 | 42.4 | 44.0 | 50.3 | 52.5 | 54.6 | 0.9 | 2.5 | 5.6 | 12 52.44 | — 0.24 | — 7.19 | — 7.26 | 4 12 44.94 | — 0.06 | |
| | | 16 | ε Tauri | F. | 17.9 | 20.7 | 22.2 | 28.7 | 30.9 | 33.0 | 39.5 | 41.0 | 43.8 | 21 30.86 | — 0.21 | — 7.26 | — 7.26 | 4 21 23.39 | — 0.01 | |
| | | 17 | a Tauri | F. | 43.9 | 46.6 | 48.2 | 54.6 | 56.7 | 58.8 | 5.2 | 6.8 | 9.3 | 28 56.68 | — 0.23 | — 7.24 | — 7.26 | 4 28 49.19 | — 0.04 | |
| | | 18 | ε Aurigæ | F. | 49.0 | 52.0 | 53.9 | 1.2 | 3.7 | 6.0 | 13.3 | 15.2 | 18.3 | 49 3.62 | — 0.07 | — 7.37 | — 7.27 | 4 48 56.28 | + 0.06 | |
| | | 19 | ε Ursæ Minoris, S. P. | F. | | 22.2 | 6.8 | 51.9 | 36.8 | | | | 58 51.90 | — 4.67 | . . . | — 7.27 | 16 58 39.96 | — 0.51 | | |
| | 10 | 20 | γ Tauri | P. | 39.1 | 41.8 | 43.4 | 49.9 | 52.0 | 54.0 | 0.3 | 1.9 | 4.6 | 12 51.89 | — 0.03 | — 6.87 | — 6.92 | 4 12 44.94 | — 0.04 | |
| | | 21 | ε Tauri | P. | 17.4 | 20.0 | 21.7 | 28.2 | 30.3 | 32.5 | 39.0 | 40.6 | 43.3 | 21 30.33 | — 0.03 | — 6.93 | — 6.91 | 4 21 23.39 | + 0.01 | |
| | | 22 | B. A. C. 1407 | P. | 1.9 | 5.2 | 7.1 | 14.8 | 17.2 | 19.6 | 27.3 | 29.1 | 32.4 | 26 17.18 | + 0.03 | . . . | — 6.91 | 4 26 10.30 | — 0.94 | |
| | | 23 | a Tauri | P. | 43.3 | 46.0 | 47.6 | 54.1 | 56.2 | 58.2 | 4.5 | 6.2 | 8.8 | 28 56.10 | — 0.03 | — 6.88 | — 6.91 | 4 28 49.16 | — 0.05 | |
| | | 24 | ε Aurigæ | P. | 48.4 | 51.6 | 53.4 | 0.7 | 3.2 | 5.6 | 12.8 | 14.7 | 17.8 | 49 3.13 | — 0.03 | — 6.95 | — 6.90 | 4 48 56.20 | + 0.01 | |
| | | 25 | B. A. C. 1533 | P. | 37.6 | 40.8 | 43.0 | 51.0 | 53.7 | 56.4 | 4.3 | 6.1 | 9.6 | 50 53.61 | + 0.04 | . . . | — 6.90 | 4 50 46.75 | — 1.09 | |
| | | 26 | ε Ursæ Minoris, S. P. | P. | 19.0 | 59.6 | 48.7 | 2.5 | 47.5 | 32.4 | 47.6 | 36.3 | 17.6 | 58 47.91 | — 1.19 | . . . | — 6.89 | 16 58 39.83 | — 0.90 | |
| | | 27 | β Orionis (R.) | P. | | | | | | | 50.9 | 52.4 | 55.0 | 8 42.62 | — 0.01 | — 6.85 | — 6.89 | 5 8 35.72 | — 0.04 | |
| | | 28 | β Orionis | P. | | | | | | | 50.9 | 52.4 | 55.0 | 8 42.62 | — 0.01 | — 6.85 | — 6.89 | 5 8 35.72 | — 0.04 | |
| | | 29 | B. A. C. 1825 | P. | 16.6 | 19.9 | 21.9 | 29.8 | 32.4 | 35.2 | 43.2 | 45.1 | 48.5 | 39 32.51 | + 0.03 | . . . | — 6.87 | 5 39 25.67 | — 1.28 | |
| | | 30 | B. A. C. 1842 | P. | 10.7 | 14.0 | 16.0 | 23.9 | 26.6 | 29.0 | 36.9 | 38.9 | 42.6 | 41 26.51 | + 0.03 | . . . | — 6.87 | 5 41 19.67 | — 1.29 | |
| | | 31 | a Orionis (R.) | P. | | | | | | | | | | | | | | | | |
| | | 32 | a Orionis | P. | | | | | | | | | | | | | | | | |
| | | 33 | δ Ursæ Minoris, S. P. | P. | | 19.8 | 44.2 | 10.3 | 34.0 | 1.4 | | | 12 9.94 | — 1.43 | . . . | — 6.85 | 18 12 1.70 | + 0.12 | | |
| | | 34 | B. A. C. 2089 | P. | 35.2 | 38.6 | 40.5 | 48.6 | 51.3 | 54.0 | 1.9 | 4.0 | 7.4 | 20 51.28 | + 0.08 | . . . | — 6.85 | 6 20 44.51 | — 1.43 | |
| | | 35 | Durch. 68°, 446 | P. | | 11.5 | 17.3 | 22.8 | 28.6 | 34.1 | | | 25 22.85 | + 0.12 | . . . | — 6.84 | 6 25 16.13 | — 3.66 | | |
| | | 36 | Durch. 68°, 447 | P. | | 7.4 | 13.1 | 18.4 | 24.4 | 29.8 | | | 28 18.61 | + 0.12 | . . . | — 6.84 | 6 28 11.89 | — 3.70 | | |
| | | 37 | Lalande 12661 | P. | 25.7 | 28.6 | 30.4 | 37.4 | 39.8 | 42.2 | 49.0 | 50.7 | 53.8 | 30 39.73 | 0.00 | . . . | — 6.84 | 6 30 32.89 | — 1.66 | |
| | | 38 | a Canis Majoris | P. | 36.3 | 39.0 | 40.6 | 47.0 | 49.0 | 51.3 | 57.6 | 59.2 | 1.8 | 39 49.09 | + 0.02 | — 6.89 | — 6.84 | 6 39 42.27 | — 0.03 | |
| | | 39 | 51 Cephei | P. | | | | | | 7.7 | 38.3 | 33.3 | 42 18.03 | + 1.52 | . . . | — 6.84 | 6 42 12.71 | — 0.68 | | |
| | | 40 | B. A. C. 2288 | P. | 44.6 | 47.8 | 49.6 | 57.2 | 59.7 | 2.2 | 9.8 | 11.6 | 14.7 | 52 59.69 | + 0.07 | . . . | — 6.83 | 6 52 52.93 | — 1.47 | |
| | | 41 | B. A. C. 2315 | P. | 13.7 | 16.9 | 18.6 | 26.3 | 28.7 | 31.3 | 38.7 | 40.6 | 43.9 | 57 28.74 | + 0.07 | . . . | — 6.83 | 6 57 21.98 | — 1.48 | |
| | | 42 | 47 Geminorum | P. | 36.5 | 39.3 | 41.0 | 47.9 | 50.3 | 52.6 | 59.3 | 1.2 | 4.0 | 3 50.23 | 0.00 | . . . | — 6.82 | 7 3 43.41 | — 1.79 | |
| | | 43 | B. A. C. 2372 | P. | 2.4 | 5.8 | 7.9 | 15.8 | 18.4 | 21.0 | 28.8 | 30.8 | 23.4 | 7 18.34 | + 0.08 | . . . | — 6.82 | 7 7 11.60 | — 1.53 | |
| | | 44 | B. A. C. 2385 | P. | 55.0 | 57.9 | 59.9 | 7.0 | 9.4 | 11.8 | 18.9 | 20.5 | 23.6 | 9 9.33 | + 0.06 | . . . | — 6.82 | 7 9 2.57 | + 1.47 | |
| | | 45 | B. A. C. 2412 | P. | 7.3 | 10.6 | 12.4 | 20.4 | 22.9 | 25.4 | 33.4 | 35.4 | 38.6 | 12 22.93 | + 0.08 | . . . | — 6.82 | 7 12 16.19 | — 1.53 | |
| | | 46 | Anonymous | P. | 31.2 | 34.0 | 35.5 | 42.3 | 44.7 | 47.0 | 53.9 | 55.7 | 58.3 | 20 44.73 | 0.00 | . . . | — 6.81 | 7 20 37.92 | — 1.85 | |
| | | 47 | B. A. C. 2502 | P. | 15.0 | 18.2 | 20.0 | 27.7 | 30.2 | 32.7 | 40.3 | 42.2 | 45.3 | 29 30.18 | + 0.07 | . . . | — 6.81 | 7 29 23.44 | — 1.54 | |
| | | 48 | B. A. C. 2536 | P. | 7.5 | 10.5 | 12.6 | 19.9 | 22.4 | 25.0 | 32.6 | 34.5 | 37.8 | 34 22.53 | + 0.07 | . . . | — 6.81 | 7 34 15.79 | — 1.55 | |
| | | 49 | Ariadne | P. | 9.3 | 11.8 | 13.7 | 20.0 | 22.1 | 24.2 | 30.7 | 32.1 | 34.9 | 47 22.09 | 0.00 | . . . | — 6.80 | 7 47 15.29 | . . . | |
| | | 50 | ω Cancri | P. | 20.7 | 23.6 | 25.3 | 32.0 | 34.4 | 36.7 | 43.4 | 45.0 | 47.9 | 53 34.33 | 0.00 | . . . | — 6.80 | 7 53 27.53 | — 1.96 | |

26, 35, 36. Bisections at set C.

29, 48. Thread B used.

30, 35, 40, 47, 49. Thread A used.

31. Bisections at threads III and IV.

39. Bisections at threads D₁, D₂, and D₃.

43, 45. Bisections at sets B and D.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom't. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | |
| | | r. " | " " | " " | " " | | | | | | | | | | | |
| 1 | 305 26 | 10 1.4 | 4.9 | 28.2 | 3.8 | 32 | 030 | 070 | .. | .. | .. | 69.1 | 54 20 9.5 | .. + 1 | 22.9 | 105 36 53.6 |
| 2 | 305 58 | 9.5 | 13.0 | 7.0 | 9.5 | 29 | .. | .. | .. | 570 | 570 | 69.1 | 53 56 42.4 | .. + 1 | 21.3 | 105 4 24.9 |
| 3 | 316 32 | 9 28.4 | 0.5 | 26.6 | 0.5 | 35 | 440 | .. | .. | .. | 240 | 69.1 | 43 23 58.5 | .. + | 55.6 | 94 31 15.3 |
| 4 | 316 32 | 28.4 | 0.5 | 26.6 | 0.5 | 36 | .. | 250 | .. | 070 | .. | 69.1 | 43 24 11.1 | .. + | 55.6 | 94 31 27.9 |
| 5 | 329 36 | 10 2.1 | 2.7 | 26.4 | 7.8 | 38 | 236 | 204 | .. | 090 | 070 | 70.0 | 30 20 45.8 | 40.6 + | 35.3 | 81 27 42.3 |
| 6 | 306 18 | 4.5 | 7.0 | 2.7 | 8.9 | 34 | 550 | 492 | .. | .. | .. | 70.0 | 53 37 52.0 | .. + 1 | 20.8 | 104 45 34.0 |
| 7 | 305 46 | 6.3 | 8.3 | 3.8 | 12.5 | 36 | .. | .. | .. | 054 | 984 | 70.0 | 54 10 20.0 | 45.8 + 1 | 22.4 | 105 18 3.6 |
| 8 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 9 | 26 34 | 9 23.7 | 23.2 | 26.8 | 2.8 | 32 | 512 | 508 | .. | 444 | 440 | 70.0 | 333 21 12.9 | .. - | 29.7 | 24 27 4.4 |
| 10 | 335 36 | 10 7.9 | 9.9 | 4.2 | 13.1 | 38 | 686 | 672 | .. | 572 | 570 | 70.0 | 24 20 59.6 | 48.5 + | 26.8 | 75 27 47.6 |
| 11 | 317 4 | 2.0 | 3.0 | 27.2 | 7.0 | 39 | .. | 918 | .. | 768 | .. | 70.0 | 42 53 11.7 | 49.2 + | 54.9 | 94 0 27.8 |
| 12 | 349 28 | 5.1 | 5.8 | 3.4 | 12.1 | 39 | 174 | 158 | .. | 100 | 086 | 70.0 | 10 29 5.4 | .. + | 10.9 | 61 35 37.5 |
| 13 | 335 32 | 2.1 | 29.3 | 27.7 | 8.7 | 33 | 596 | 558 | .. | 460 | 446 | 70.0 | 24 23 34.6 | 49.5 + | 26.8 | 75 30 22.6 |
| 14 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 15 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 16 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 17 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 18 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 19 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 20 | 336 22 | 13.2 | 15.6 | 4.3 | 12.3 | 32 | 905 | 850 | .. | 680 | 625 | 66.6 | 23 33 20.1 | 52.8 + | 25.4 | 74 40 15.7 |
| 21 | 339 58 | 16.0 | 17.7 | 5.7 | 13.9 | 38 | .. | 210 | .. | 140 | .. | 66.6 | 19 58 53.9 | .. + | 21.2 | 71 5 36.3 |
| 22 | 285 10 | 7.5 | 9.9 | 0.0 | 8.1 | 33 | .. | 840 | .. | 595 | .. | 66.6 | 74 45 38.4 | .. + 3 | 30.5 | 125 55 30.1 |
| 23 | 337 18 | 16.4 | 10.6 | 8.6 | 14.7 | 33 | .. | 040 | .. | 895 | .. | 66.6 | 22 37 35.6 | .. + | 24.3 | 73 44 21.0 |
| 24 | 354 0 | 4.7 | 7.0 | 26.9 | 4.5 | 32 | 470 | 485 | .. | .. | .. | 66.6 | 5 55 15.7 | .. + | 6.0 | 57 1 42.9 |
| 25 | 281 18 | 23.2 | 23.3 | 13.9 | 21.6 | 37 | .. | .. | .. | 280 | 245 | 66.6 | 78 38 47.8 | .. + 4 | 42.6 | 129 49 51.6 |
| 26 | 58 46 | 7.2 | 9.6 | 28.9 | 6.2 | 31 | 565 | 565 | 535 | 510 | 525 | 66.6 | 301 9 4.4 | .. - 1 | 36.3 | 352 13 49.3 |
| 27 | 227 10 | 5.9 | 8.0 | 28.6 | 4.1 | 37 | 780 | 765 | .. | .. | .. | 66.6 | 132 46 37.3 | .. - 1 | 3.0 | 98 20 46.9 |
| 28 | 312 42 | 6.6 | 9.0 | 29.9 | 7.5 | 32 | .. | .. | .. | 490 | 475 | 66.6 | 47 13 20.2 | 51.0 + 1 | 3.0 | 98 20 44.4 |
| 29 | 281 42 | 6.6 | 9.1 | 28.2 | 6.0 | 36 | .. | 975 | .. | 635 | .. | 66.6 | 78 16 56.6 | 50.4 + 4 | 34.7 | 129 27 52.5 |
| 30 | 281 42 | 6.6 | 9.1 | 28.2 | 6.0 | 33 | .. | .. | .. | 455 | 540 | 66.6 | 78 11 3.2 | .. + 4 | 32.6 | 129 21 57.0 |
| 31 | 211 26 | 13.5 | 16.1 | 6.9 | 11.1 | 34 | 535 | .. | 485 | .. | .. | 66.6 | 148 29 56.0 | .. - | 35.8 | 82 37 1.0 |
| 32 | 328 26 | 12.4 | 13.8 | 2.8 | 12.0 | 34 | .. | .. | .. | .. | 850 | 66.6 | 31 30 1.3 | .. + | 35.8 | 82 36 58.3 |
| 33 | 54 24 | 7.9 | 9.3 | 28.4 | 6.1 | 31 | 635 | 625 | 650 | 630 | 620 | 66.6 | 305 31 5.6 | .. - 1 | 22.0 | 356 36 4.8 |
| 34 | 280 54 | 11.9 | 13.3 | 4.0 | 11.1 | 34 | .. | 045 | .. | 930 | .. | 66.6 | 79 1 46.2 | .. + 4 | 54.0 | 130 13 1.4 |
| 35 | 29 48 | 14.5 | 15.0 | 5.5 | 11.7 | 29 | 765 | .. | .. | .. | 770 | 66.6 | 330 4 10.0 | .. - | 33.8 | 21 9 57.4 |
| 36 | 29 48 | 14.5 | 15.0 | 5.5 | 11.7 | 27 | 740 | .. | .. | .. | 715 | 66.6 | 330 8 44.6 | .. - | 33.7 | 21 14 32.1 |
| 37 | 358 8 | 11.0 | 11.6 | 2.5 | 10.5 | 35 | .. | 060 | .. | 975 | .. | 66.5 | 9 48 1.1 | 48.1 + | 10.2 | 60 54 32.5 |
| 38 | 304 30 | 5.8 | 7.5 | 27.6 | 7.3 | 31 | 975 | 900 | .. | 750 | 700 | 66.5 | 55 25 7.6 | .. + 1 | 25.1 | 106 32 53.9 |
| 39 | 48 16 | 11.2 | 11.5 | 1.5 | 9.1 | 36 | .. | .. | 405 | 375 | 340 | 66.5 | 311 40 22.7 | .. - 1 | 6.0 | 2 45 37.9 |
| 40 | 285 44 | 5.2 | 7.0 | 28.0 | 6.0 | 31 | .. | 015 | .. | 815 | .. | 66.5 | 74 10 53.0 | .. + 3 | 24.9 | 125 20 39.1 |
| 41 | 285 44 | 5.2 | 7.0 | 28.0 | 6.0 | 37 | .. | 440 | .. | 255 | .. | 66.5 | 74 12 31.5 | .. + 3 | 25.4 | 125 22 13.1 |
| 42 | 348 6 | 11.0 | 11.3 | 1.8 | 8.6 | 34 | 345 | 320 | .. | .. | .. | 66.5 | 11 49 48.8 | .. + | 12.4 | 62 56 22.4 |
| 43 | 282 12 | 3.9 | 4.0 | 26.0 | 4.2 | 32 | 000 | .. | .. | .. | 880 | 66.5 | 77 43 6.9 | .. + 4 | 24.6 | 128 53 52.7 |
| 44 | 290 12 | 7.5 | 8.1 | 28 5 | 7.9 | 32 | 740 | 670 | .. | .. | .. | 66.5 | 69 43 20.6 | .. + 2 | 38.3 | 120 52 20.1 |
| 45 | 283 0 | 4.8 | 6.0 | 26.7 | 5.6 | 33 | 300 | .. | .. | .. | 150 | 66.5 | 76 55 27.8 | .. + 4 | 8.8 | 128 5 57.8 |
| 46 | 347 6 | 11.4 | 12.5 | 2.7 | 11.0 | 30 | .. | .. | .. | 600 | 530 | 66.5 | 12 46 21.4 | .. + | 13.4 | 63 52 56.0 |
| 47 | 284 58 | 1.2 | 18.0 | 8.5 | 17.1 | 30 | .. | 015 | .. | 830 | .. | 66.5 | 74 54 15.2 | .. + 3 | 35.8 | 51 6 21.2 |
| 48 | 284 58 | 16.2 | 18.0 | 8.5 | 17.1 | 44 | .. | 045 | .. | 740 | .. | 66.5 | 75 2 55.0 | .. + 3 | 37.9 | 126 12 54.1 |
| 49 | 338 32 | 5.0 | 6.0 | 24.6 | 4.8 | 36 | .. | 725 | .. | 565 | .. | 66.5 | 21 21 46.2 | .. + | 23.2 | 72 28 30.6 |
| 50 | 346 46 | 6.3 | 8.2 | 27.6 | 7.3 | 33 | .. | 335 | .. | 200 | .. | 66.5 | 13 9 30.3 | .. + | 13.9 | 64 16 5.4 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|----------|-----|-----------|------------|-------------------------|-----------|
| | in. | | | " " | " " | " " | " " |
| 5 | 30.44 | 38.0 | 1 | — 7.3 | — 16 14.3 | .. | — 16 21.6 |
| 7 | 30.42 | 43.0 | 2 | — 7.2 | + 16 14.3 | .. | + 16 7.1 |
| 10 | 30.38 | 48.5 | 3 | — 4.6 | + 6.5 | — 0.4 | + 1.5 |
| 11 | 30.37 | 50.5 | 4 | — 4.6 | + 6.5 | .. | + 11.1 |
| 13 | 30.30 | 50.0 | 6 | — 7.2 | + 16 14.8 | .. | + 16 7.6 |
| 20 | 30.13 | 54.4 | 7 | — 7.2 | — 16 14.8 | .. | — 16 22.0 |
| 23 | 30.12 | 53.1 | 11 | — 4.6 | + 6.5 | .. | + 11.1 |
| 29 | 30.12 | 52.6 | | | | | |
| 36 | 30.13 | 50.7 | | | | | |
| 37 | 30.13 | 50.7 | | | | | |

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. |
|---------|---------|----------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|---------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. m. | s. | |
| 1876. | | | | | | | | | | | | | m. s. | s. | s. | | | | |
| Feb. 10 | 1 | B. A. C. 2685 . . . | P. | | | 8 5 | 11.2 | 13.7 | 16.3 | 18.8 | | | 57 13.70 | + 0.08 | . | - 6.79 | 7 57 6.99 | - 1.56 | |
| | 2 | B. A. C. 2717 . . . | P. | 10.3 | 13.3 | 15.2 | 22.6 | 25.0 | 27.6 | 34.7 | 36.6 | 39.7 | 0 25.00 | + 0.06 | . | - 6.79 | 8 0 18.27 | - 1.56 | |
| | 3 | B. A. C. 2719 . . . | P. | 51.4 | 54.4 | 56.1 | 3.6 | 6.0 | 8.7 | 15.9 | 17.7 | 20.7 | 1 6.06 | + 0.06 | . | - 6.79 | 8 0 59.33 | - 1.57 | |
| | 4 | B. A. C. 2778 . . . | P. | 43.5 | 46.2 | 47.7 | 54.0 | 56.0 | 58.0 | 4.2 | 5.7 | 8.3 | 9 55.96 | 0.00 | . | - 6.79 | 8 9 49.18 | - 1.74 | |
| | 5 | B. A. C. 2817 ¹ . . . | P. | 12.0 | 14.9 | 16.8 | | | | 35.0 | 36.7 | 39.6 | 19 25.83 | 0.00 | . | - 6.78 | 8 19 49.05 | - 2.07 | |
| | 6 | B. A. C. 2817 ² . . . | P. | | | 21.5 | 23.8 | 26.1 | 28.4 | 30.6 | | | 19 26.08 | 0.00 | . | - 6.78 | 8 19 19.30 | - 2.07 | |
| | 7 | (VIII), 6 | P. | 41.1 | 44.0 | 45.9 | 53.0 | 55.4 | 57.9 | 4.8 | 6.7 | 9.8 | 25 55.40 | + 0.06 | . | - 6.78 | 8 25 48.68 | - 1.57 | |
| | 8 | Hydræ | P. | 8.7 | 11.3 | 12.8 | 19.0 | 21.0 | 23.0 | 29.3 | 30.8 | 33.4 | 40 21.03 | + 0.01 | - 6.76 | - 6.77 | 8 40 14.27 | - 0.05 | |
| | 9 | B. A. C. 2999 . . . | P. | 49.3 | 52.3 | 54.0 | 1.6 | 4.0 | 6.4 | 13.6 | 15.6 | 18.5 | 45 3.92 | + 0.01 | . | - 6.77 | 8 44 57.16 | - 2.28 | |
| | 10 | B. A. C. 3056 . . . | P. | 50.0 | 53.1 | 55.0 | 2.3 | 4.7 | 7.2 | 14.4 | 16.3 | 19.4 | 52 4.71 | + 0.01 | . | - 6.76 | 8 51 57.96 | - 2.30 | |
| | 11 | B. A. C. 3068 . . . | P. | | | 51.9 | 54.4 | 56.8 | 59.3 | 1.6 | | | 53 56.80 | + 0.01 | . | - 6.76 | 8 53 50.05 | - 2.29 | |
| | 12 | a Hydræ | P. | | | | | | | | 47.8 | 50.3 | 21 37.96 | + 0.02 | - 6.72 | - 6.75 | 9 21 31.23 | - 0.06 | |
| | 13 | Leonis | P. | 44.0 | 46.7 | 48.4 | 55.0 | 57.4 | 59.6 | 6.4 | 8.0 | 10.9 | 38 57.38 | 0.00 | - 6.71 | - 6.74 | 9 38 50.64 | - 0.09 | |
| | 14 | a Leonis | P. | 42.0 | 44.6 | 46.2 | 52.5 | 54.6 | 56.7 | 3.0 | 4.6 | 7.1 | 1 54.59 | 0.00 | - 6.73 | - 6.73 | 10 1 47.86 | - 0.04 | |
| | 15 | B. A. C. 3507 . . . | P. | 35.5 | 38.4 | 40.0 | 44.5 | 46.7 | 49.0 | 51.3 | | | 9 48.98 | 0.00 | . | - 6.72 | 10 9 42.26 | - 2.07 | |
| | 16 | B. A. C. 3508 . . . | P. | | | 54.0 | 56.3 | 58.6 | 0.7 | 5.2 | 6.9 | 9.8 | 9 56.29 | 0.00 | . | - 6.72 | 10 9 49.57 | - 2.07 | |
| | 17 | Leonis | P. | 6.3 | 8.0 | 12.4 | 14.7 | 16.8 | 18.9 | 21.1 | 25.4 | 27.0 | 13 16.73 | 0.00 | - 6.74 | - 6.72 | 10 13 10.01 | 0.00 | |
| | 18 | B. A. C. 3606 . . . | P. | 30.5 | 33.0 | 34.7 | 41.0 | 43.1 | 45.3 | 51.5 | 53.2 | 55.8 | 25 43.12 | + 0.01 | . | - 6.71 | 10 25 36.42 | - 1.86 | |
| | 19 | B. A. C. 3666 . . . | P. | 8.4 | 11.2 | 13.0 | 19.8 | 22.2 | 24.4 | 31.3 | 33.0 | 35.8 | 36 22.12 | 0.00 | . | - 6.71 | 10 36 15.41 | - 2.10 | |
| | 20 | Leonis | P. | | | | | | | 1.2 | 2.6 | 5.4 | 42 52.83 | 0.00 | - 6.77 | - 6.70 | 10 42 46.13 | + 0.07 | |
| | 21 | Moon, S. | P. | | | | | | | | | | | | | | | | |
| | 22 | δ Leonis | P. | | | 34.9 | 37.1 | 39.4 | 41.6 | 43.8 | | | 7 39.36 | 0.00 | - 6.76 | - 6.68 | 11 7 32.68 | + 0.02 | |
| | 23 | δ Crateris | P. | 4.0 | 6.6 | 8.3 | 14.6 | 16.7 | 18.8 | 25.1 | 26.7 | 29.2 | 13 16.67 | + 0.03 | - 6.74 | - 6.68 | 11 13 10.02 | + 0.04 | |
| 11 | 24 | γ Aquilæ | F. | 36.8 | 39.2 | 40.9 | 47.1 | 49.2 | 51.3 | 57.5 | 59.0 | 1.6 | 44 49.18 | + 0.07 | - 6.08 | . | . | . | |
| | 25 | B. A. C. 7149 . . . | F. | 45.0 | 47.6 | 49.2 | 55.7 | 57.7 | 59.8 | 6.1 | 7.8 | 10.4 | 33 57.70 | 0.00 | . | - 6.03 | 20 33 51.67 | + 1.03 | |
| | 26 | a Cygni | F. | | | | | | | | | | | | . | . | . | . | |
| 12 | 27 | Sun I, S. | F. | 41.6 | 44.6 | | 52.3 | 54.5 | 56.5 | | 4.5 | 7.0 | 41 54.43 | + 0.07 | . | - 5.97 | 21 41 48.53 | + 67.03 | |
| | 28 | Sun, N. | F. | | | | | | | | | | | . | . | . | . | . | |
| | 29 | a Piscis Australis . . . | F. | | | | | | | | | | | . | . | . | . | . | |
| | 30 | a Pegasi | F. | | | | | | | | | | | . | . | . | . | . | |
| | 31 | a Andromedæ | F. | | | | | | | | | | | . | . | . | . | . | |
| | 32 | γ Pegasi | F. | 43.6 | 46.2 | 47.8 | 54.1 | 56.2 | 58.4 | 4.7 | 6.2 | 8.9 | 6 56.23 | - 0.03 | - 5.84 | . | . | . | |
| | 33 | Polaris | F. | | | | 12.0 | 38.0 | 6.0 | 32.5 | | | 12 38.48 | - 6.17 | . | - 5.84 | 1 12 26.47 | - 2.51 | |
| | 34 | B. A. C. 2258 . . . | F. | 11.8 | 14.8 | 16.7 | 24.4 | 26.8 | 29.4 | 36.9 | 38.9 | 42.0 | 47 26.86 | + 0.29 | . | - 5.77 | 6 47 21.38 | - 1.43 | |
| | 35 | ε Canis Majoris . . . | F. | 38.0 | 41.0 | 42.9 | 47.5 | 52.0 | 56.8 | 1.4 | 3.1 | 6.1 | 53 52.09 | + 0.25 | - 5.74 | - 5.77 | 6 53 46.57 | - 0.08 | |
| | 36 | δ Canis Majoris . . . | F. | | | | | | | 31.7 | 38.7 | 41.5 | 3 27.85 | + 0.24 | - 5.68 | - 5.77 | 7 3 22.32 | - 0.14 | |
| | 37 | δ Geminorum | F. | 37.2 | 40.0 | 41.7 | 48.2 | 50.5 | 52.8 | 59.4 | 1.0 | 3.7 | 12 50.50 | + 0.08 | - 5.89 | - 5.77 | 7 12 44.81 | + 0.04 | |
| | 38 | ω ¹ Cancri | F. | 19.7 | 22.6 | 24.3 | 31.2 | 33.4 | 35.6 | 42.4 | 44.0 | 46.7 | 53 33.32 | + 0.07 | . | - 5.77 | 7 53 27.62 | - 1.96 | |
| | 39 | B. A. C. 2717 . . . | F. | 8.8 | 12.2 | 14.0 | 21.4 | 23.9 | 26.3 | 33.5 | 35.0 | 38.4 | 0 23.72 | + 0.27 | . | - 5.77 | 8 0 18.22 | - 1.55 | |
| | 40 | B. A. C. 2719 . . . | F. | 50.0 | 53.3 | 55.1 | 2.4 | 4.8 | 7.3 | 14.5 | 16.3 | 19.5 | 1 4.80 | + 0.27 | . | - 5.77 | 8 0 59.30 | - 1.55 | |
| | 41 | B. A. C. 2778 . . . | F. | 42.4 | 44.9 | 46.6 | 52.8 | 54.8 | 56.8 | 2.9 | 4.5 | 7.2 | 9 54.77 | + 0.11 | . | - 5.77 | 8 9 49.11 | - 1.75 | |
| | 42 | B. A. C. 2817 ¹ . . . | F. | 10.7 | 13.7 | 15.8 | | | | 34.0 | 35.7 | 38.8 | 19 24.78 | + 0.07 | . | - 5.77 | 8 19 19.08 | - 2.08 | |
| | 43 | B. A. C. 2817 ² . . . | F. | | | 20.4 | 22.7 | 25.0 | 27.3 | 29.6 | | | 19 25.00 | + 0.07 | . | - 5.77 | 8 19 19.30 | - 2.08 | |
| | 44 | Lalande 16596 . . . | F. | 55.1 | 57.8 | 59.3 | 5.7 | 7.9 | 9.9 | 16.4 | 17.9 | 20.6 | 21 7.84 | + 0.09 | . | - 5.77 | 8 21 2.16 | - 1.87 | |
| | 45 | Weisse (2) 477 . . . | F. | | | | | | | 4.5 | 6.0 | 8.8 | 21 55.94 | + 0.09 | . | - 5.77 | 8 21 50.26 | - 1.87 | |
| | 46 | B. A. C. 2933 . . . | F. | 28.9 | 32.3 | 34.0 | 42.0 | 44.4 | 46.9 | 54.5 | 56.4 | 59.6 | 34 44.33 | + 0.29 | . | - 5.77 | 8 34 38.85 | - 1.59 | |
| | 47 | Aegina | F. | 24.7 | 27.5 | 29.1 | 35.8 | 37.9 | 40.1 | 46.6 | 48.4 | 51.0 | 40 37.90 | + 0.08 | . | - 5.77 | 8 40 32.21 | . | |
| | 48 | Virginia | F. | | | | | | | 1.2 | 5.0 | 7.0 | 42 56.84 | + 0.10 | . | - 5.77 | 8 42 51.17 | . | |
| | 49 | Harmonia | F. | | | 55.5 | 57.9 | 0.1 | 2.2 | 4.4 | | | 50 0.02 | + 0.08 | . | - 5.77 | 8 49 54.33 | . | |
| | 50 | Parthenope | F. | | 4.6 | 6.1 | 12.9 | 14.8 | 16.9 | 23.5 | 25.2 | | 1 14.86 | + 0.09 | . | - 5.77 | 9 1 9.18 | . | |

1, 3, 11. Bisections at threads V and VI.

3, 15, 40, 47, 48, 49, 50. Thread A used.

10, 16. Thread B used.

21. Bisections at threads II, III, and IV.

47. Telescope micrometer reading decreased 5 revolutions in reduction.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | |
| | | r. " | " | " | " | | | | | | | | | | | |
| 1 | 284 10 | 10 4.6 | 6.4 | 28.7 | 6.5 | 36 | .. | .. | .. | 245 | 240 | 66.5 | 75 46 15.4 | .. | + 3 49.6 | 126 56 26.2 |
| 2 | 287 50 | 3.5 | 4.3 | 25.3 | 4.6 | 31 | 770 | 690 | .. | .. | .. | 66.5 | 72 5 2.1 | .. | + 3 1.3 | 123 14 24.6 |
| 3 | 287 50 | 3.5 | 4.3 | 25.3 | 4.6 | 35 | .. | .. | .. | 865 | 910 | 66.5 | 72 3 34.4 | .. | + 3 1.1 | 123 12 56.7 |
| 4 | 330 36 | 6.2 | 7.6 | 27.9 | 6.0 | 31 | 725 | 685 | .. | 535 | 490 | 66.5 | 29 19 4.4 | .. | + 33.3 | 80 25 58.9 |
| 5 | 348 22 | 6.1 | 7.5 | 27.2 | 6.8 | 31 | .. | 825 | .. | 650 | .. | 66.5 | 11 33 6.4 | 42.9 | + 12.1 | 62 39 39.7 |
| 6 | 348 22 | 6.1 | 7.5 | 27.2 | 6.8 | 31 | .. | 630 | .. | 380 | .. | 66.5 | 11 33 2.8 | .. | + 12.1 | 62 39 36.1 |
| 7 | 290 22 | 8.2 | 11.0 | 1.6 | 9.5 | 35 | .. | 615 | .. | 290 | .. | 66.5 | 69 34 6.1 | .. | + 2 38.1 | 120 43 5.4 |
| 8 | 327 56 | 8.4 | 10.0 | 0.3 | 8.4 | 37 | .. | 760 | .. | 605 | .. | 66.5 | 32 0 39.7 | .. | + 37.1 | 83 7 38.0 |
| 9 | 353 58 | 11.0 | 11.8 | 1.6 | 9.5 | 32 | 165 | 135 | .. | 005 | 980 | 66.5 | 5 57 15.8 | .. | + 6.2 | 57 3 43.2 |
| 10 | 353 58 | 11.0 | 11.8 | 1.6 | 9.5 | 31 | .. | 270 | .. | 210 | .. | 66.5 | 5 59 35.3 | .. | + 6.2 | 57 6 2.7 |
| 11 | 353 46 | 7.0 | 8.0 | 26.9 | 5.3 | 32 | .. | .. | .. | 890 | 775 | 66.5 | 6 9 23.7 | .. | + 6.4 | 57 15 51.3 |
| 12 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 13 | 345 24 | 4.6 | 6.9 | 26.0 | 5.2 | 38 | .. | 400 | .. | 280 | .. | 66.5 | 14 32 46.2 | 43.5 | + 15.4 | 65 39 22.8 |
| 14 | 333 38 | 9.4 | 11.3 | 1.7 | 9.3 | 38 | 465 | 440 | .. | 815 | 285 | 66.5 | 26 18 51.5 | .. | + 29.4 | 77 25 42.1 |
| 15 | 345 6 | 9.2 | 12.0 | 2.1 | 10.3 | 30 | .. | 715 | .. | 575 | .. | 66.5 | 14 46 20.0 | .. | + 15.7 | 65 52 57.1 |
| 16 | 345 6 | 9.2 | 12.0 | 2.1 | 10.3 | 30 | .. | 565 | .. | 435 | .. | 66.5 | 14 51 23.8 | .. | + 15.8 | 65 58 0.8 |
| 17 | 341 30 | 9 29.2 | 1.0 | 20.0 | 0.0 | 32 | .. | .. | .. | 945 | 950 | 66.5 | 18 25 19.3 | .. | + 19.8 | 69 32 0.3 |
| 18 | 335 50 | 10 4.5 | 7.0 | 26.3 | 5.2 | 38 | 970 | 960 | .. | 785 | 750 | 66.5 | 24 6 54.4 | .. | + 26.6 | 75 13 42.2 |
| 19 | 348 2 | 8.1 | 10.5 | 0.0 | 7.9 | 39 | .. | 030 | .. | 930 | .. | 66.5 | 11 54 59.5 | .. | + 12.6 | 63 1 33.3 |
| 20 | 332 16 | 10.1 | 12.9 | 3.6 | 9.5 | 39 | .. | .. | .. | 520 | .. | 66.5 | 27 41 11.0 | .. | + 31.2 | 78 48 3.4 |
| 21 | 328 42 | 7.9 | 10.6 | 0.9 | 8.5 | 35 | 905 | 135 | 345 | .. | .. | 66.5 | 31 14 18.8 | .. | + 36.1 | 82 21 16.1 |
| 22 | 342 16 | 9.5 | 12.0 | 1.9 | 8.6 | 40 | .. | .. | .. | 075 | .. | 66.5 | 17 41 18.6 | .. | + 19.0 | 68 47 58.8 |
| 23 | 306 58 | 12.6 | 15.9 | 6.2 | 14.0 | 38 | .. | 165 | .. | 090 | .. | 66.5 | 52 58 51.8 | 47.9 | + 1 18.8 | 104 6 31.8 |
| 24 | 329 36 | 3.9 | 6.6 | 26.2 | 7.6 | 38 | .. | .. | .. | 194 | 178 | 66.4 | 30 20 45.2 | 48.2 | + 34.4 | 81 27 40.8 |
| 25 | 336 32 | 2.7 | 3.7 | 25.8 | 4.3 | 38 | .. | 864 | .. | 064 | .. | 66.4 | 23 24 51.0 | .. | + 25.4 | 74 31 37.6 |
| 26 | 5 52 | 9 27.6 | 0.1 | 19.6 | 28.2 | 34 | .. | .. | .. | 358 | 320 | 66.4 | 354 3 39.6 | .. | - 6.1 | 45 9 54.7 |
| 27 | 307 4 | 10 0.4 | 4.3 | 22.4 | 3.2 | 37 | 612 | 548 | .. | .. | .. | 66.4 | 52 52 29.4 | .. | + 1 16.9 | 104 0 7.5 |
| 28 | 307 36 | 2.4 | 6.5 | 26.7 | 4.4 | 35 | .. | .. | .. | 558 | 516 | 66.4 | 52 20 3.8 | 52.0 | + 1 15.4 | 103 27 40.4 |
| 29 | 290 48 | 9 24.3 | 27.2 | 19.3 | 0.2 | 35 | .. | .. | .. | 900 | 876 | 66.4 | 69 8 1.3 | .. | + 2 30.9 | 120 16 53.4 |
| 30 | 335 36 | 28.6 | 1.3 | 23.7 | 3.0 | 39 | .. | .. | .. | 288 | 280 | 66.4 | 24 20 57.7 | 55.5 | + 26.2 | 75 27 45.1 |
| 31 | 349 26 | 26.9 | 1.7 | 22.6 | 1.7 | 31 | .. | .. | .. | .. | 910 | 66.4 | 10 29 4.3 | .. | + 10.7 | 61 35 36.2 |
| 32 | 335 32 | 25.9 | 0.6 | 21.3 | 2.9 | 34 | 104 | 076 | .. | .. | .. | 66.4 | 24 23 34.3 | .. | + 26.2 | 75 30 21.7 |
| 33 | 49 40 | 24.2 | 25.7 | 19.9 | 28.2 | 34 | .. | 078 | 024 | 986 | .. | 66.4 | 310 15 31.5 | 56.0 | - 1 8.2 | 1 20 44.5 |
| 34 | 285 2 | 10 7.1 | 9.1 | 0.7 | 9.7 | 33 | .. | 590 | .. | 512 | .. | 67.3 | 74 54 53.4 | .. | + 3 37.4 | 126 4 52.0 |
| 35 | 292 16 | 2.4 | 3.8 | 25.4 | 5.8 | 33 | 810 | 798 | .. | 618 | 608 | 67.3 | 67 39 34.3 | .. | + 2 24.0 | 118 48 19.5 |
| 36 | 294 16 | 8.0 | 10.3 | 0.8 | 10.0 | 32 | 990 | 936 | .. | 718 | 682 | 67.3 | 65 3 26.4 | 41.0 | + 2 7.4 | 116 11 55.0 |
| 37 | 343 16 | 3.4 | 8.6 | 28.3 | 8.5 | 38 | .. | .. | .. | 186 | 124 | 67.3 | 16 40 47.0 | .. | + 17.9 | 67 47 26.1 |
| 38 | 346 46 | 2.1 | 3.8 | 23.3 | 4.1 | 33 | .. | 494 | .. | 404 | .. | 67.3 | 13 9 29.8 | .. | + 14.0 | 64 16 5.0 |
| 39 | 287 50 | 9 28.9 | 29.5 | 20.8 | 0.7 | 31 | 740 | 696 | .. | .. | .. | 67.3 | 72 4 58.2 | .. | + 3 3.5 | 123 14 22.9 |
| 40 | 287 50 | 28.9 | 29.5 | 20.8 | 0.7 | 36 | .. | .. | .. | 146 | 108 | 67.3 | 72 3 34.8 | 38.0 | + 3 3.2 | 123 12 59.2 |
| 41 | 330 36 | 10 1.4 | 5.0 | 24.3 | 3.4 | 31 | .. | .. | .. | 736 | 710 | 67.3 | 29 19 4.7 | .. | + 33.7 | 80 25 59.6 |
| 42 | 348 22 | 5.2 | 7.1 | 26.4 | 6.9 | 31 | .. | .. | .. | 636 | 606 | 67.3 | 11 33 6.2 | .. | + 12.3 | 62 39 39.7 |
| 43 | 348 22 | 5.2 | 7.1 | 26.4 | 6.9 | 31 | 538 | 538 | .. | .. | .. | 67.3 | 11 33 2.5 | .. | + 12.3 | 62 39 36.0 |
| 44 | 337 46 | 3.4 | 4.9 | 23.3 | 4.7 | 36 | .. | .. | .. | 208 | 160 | 67.3 | 22 10 13.6 | .. | + 24.5 | 73 16 59.3 |
| 45 | 337 46 | 3.4 | 4.9 | 23.3 | 4.7 | 31 | .. | .. | .. | 874 | 850 | 67.3 | 22 9 7.4 | .. | + 24.4 | 73 15 53.0 |
| 46 | 284 56 | 9 27.0 | 28.2 | 20.2 | 0.2 | 36 | .. | 912 | .. | 818 | .. | 67.3 | 75 0 17.3 | .. | + 3 40.7 | 126 10 19.2 |
| 47 | 342 28 | 10 4.6 | 7.0 | 26.8 | 5.6 | 41 | .. | 506 | .. | 496 | .. | 67.3 | 17 26 1.0 | .. | + 18.9 | 68 32 41.1 |
| 48 | 336 28 | 9 23.3 | 23.6 | 13.8 | 22.7 | 40 | .. | .. | .. | 658 | 668 | 67.3 | 23 26 38.1 | .. | + 26.0 | 74 33 25.3 |
| 49 | 343 46 | 10 3.6 | 5.4 | 23.9 | 4.4 | 41 | .. | 200 | .. | 186 | .. | 67.3 | 16 8 55.9 | .. | + 17.4 | 67 15 34.5 |
| 50 | 339 30 | 9 26.7 | 26.9 | 18.8 | 28.2 | 32 | .. | 164 | .. | 138 | .. | 67.3 | 20 25 4.2 | .. | + 22.4 | 71 31 47.8 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " | " | " | " |
| 5 | 30.14 | 46.2 | 21 | -30 12.4 | - 16 0.2 | .. | - 46 12.6 |
| 13 | 30.15 | 46.0 | 27 | - 7.1 | - 16 13.5 | .. | - 16 20.6 |
| 23 | 30.14 | 41.7 | 28 | - 7.0 | + 16 13.5 | .. | + 16 6.5 |
| 24 | 30.15 | 48.0 | | | | | |
| 28 | 30.14 | 50.5 | | | | | |
| 30 | 30.14 | 53.4 | | | | | |
| 33 | 30.15 | 55.6 | | | | | |
| 36 | 30.13 | 46.0 | | | | | |
| 40 | 30.13 | 44.0 | | | | | |

For summary of the elements of reduction see page 3.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|------------------|---------|--------------------------------|-----------|--------------------------------|--------|--------|--------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | |
| | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| 1876. Feb. 12 | 1 | Leonis . . . | F. | 42.9 | 45.7 | 47.5 | 54.3 | 56.6 | 58.7 | 5.4 | 7.0 | 10.0 | 38 56.46 | + 0.08 | - 5.85 | - 5.77 | 9 38 50.77 | + 0.02 |
| | 2 | α Leonis . . . | F. | 40.0 | 43.6 | 45.2 | 51.5 | 53.5 | 55.6 | 1.9 | 3.4 | 6.2 | 1 53 53 | + 0.10 | - 5.75 | - 5.77 | 10 1 47.86 | - 0.06 |
| | 3 | γ^1 Leonis . . . | F. | 2.5 | 5.3 | 6.9 | ... | ... | ... | 24.4 | 26.0 | 38.8 | 13 15.65 | + 0.08 | - 5.71 | - 5.77 | 10 13 9.96 | - 0.08 |
| | 4 | γ^2 Leonis . . . | F. | ... | ... | 11.6 | 13.9 | 16.1 | 18.2 | 20.4 | ... | ... | 13 16.04 | + 0.08 | ... | - 5.77 | 10 13 10.35 | - 2.01 |
| | 5 | Hebe . . . | F. | 29.7 | 32.2 | 33.9 | 40.1 | 42.4 | 44.4 | 50.6 | 52.2 | 54.8 | 45 42.26 | + 0.10 | ... | - 5.77 | 10 45 36.59 | ... |
| | 6 | β Corvi . . . | F. | 45.6 | 48.5 | 50.2 | 56.7 | 58.9 | 1.3 | 8.0 | 9.6 | 12.5 | 27 59.03 | + 0.22 | - 5.55 | - 5.77 | 12 27 53.48 | - 0.26 |
| | 7 | γ Canum Venat. . . | F. | 5.4 | 8.7 | 10.6 | 18.5 | 21.2 | 23.8 | 31.8 | 33.6 | 37.0 | 50 21.18 | + 0.04 | - 5.79 | - 5.77 | 12 50 15.45 | + 0.02 |
| | 8 | B. A. C. 4355 . . . | F. | 37.2 | 40.4 | 42.2 | 49.5 | 51.8 | 54.4 | 1.7 | 3.4 | 6.3 | 53 51.88 | + 0.27 | ... | - 5.77 | 12 53 46.35 | - 1.01 |
| | 9 | Lacaille 5410 . . . | F. | 0.7 | 3.8 | 5.7 | 13.0 | 15.5 | 17.8 | 25.4 | 27.0 | 29.9 | 2 15.42 | + 0.27 | ... | - 5.77 | 13 2 9.92 | - 0.98 |
| | 10 | θ Virginis . . . | F. | ... | ... | 38.5 | 40.5 | 42.4 | 46.6 | 48.2 | 50.8 | ... | 3 38.44 | + 0.16 | - 5.62 | - 5.77 | 13 3 32 83 | - 0.19 |
| | 11 | Polaris, S. P. . . | F. | 11.0 | ... | 23.0 | 57.0 | ... | ... | ... | ... | ... | 12 29.27 | + 1.65 | ... | - 5.77 | 1 12 25.15 | - 3.43 |
| 15 | 12 | B. A. C. 6931 . . . | F. | 45.8 | 48.5 | 50.0 | 56.0 | 58.0 | 0.1 | 6.3 | 7.8 | 10.4 | 4 58.11 | + 0.35 | ... | - 4.71 | 20 4 53.75 | + 0.71 |
| | 13 | ϵ Pegasi . . . | F. | 56.9 | 59.4 | 1.0 | 7.1 | 9.2 | 11.3 | 17.4 | 19.0 | 21.5 | 38 9.20 | + 0.34 | - 4.71 | ... | ... | ... |
| 16 | 14 | Sun I, N. . . | F. | 17.9 | 20.6 | 22.0 | 28.6 | 30.6 | 32.7 | 38.8 | 40.4 | 43.0 | 57 30.51 | + 0.34 | ... | - 4.71 | 21 57 26.14 | ... |
| | 15 | Sun II, S. . . | F. | 31.0 | 33.6 | 35.4 | 41.6 | 43.7 | 45.8 | 52.0 | 53.7 | 59.2 | 59 43.67 | + 0.34 | ... | - 4.71 | 21 59 39.32 | ... |
| | 16 | Venus I, S. . . | F. | 56.2 | 58.8 | 0.5 | 6.6 | 8.6 | 10.6 | 16.7 | 18.2 | 20.9 | 9 8.57 | + 0.32 | ... | - 4.72 | 0 9 4.17 | + 0.45 |
| | 17 | B. A. C. 334 . . . | F. | 36.0 | 39.2 | 41.1 | 48.7 | 51.2 | 53.6 | 1.0 | 3.0 | 6.0 | 2 51.09 | + 0.32 | ... | - 4.72 | 1 2 46.69 | + 0.93 |
| | 18 | Polaris . . . | F. | ... | ... | 34.0 | 2.0 | 29.0 | 55.0 | 22.0 | ... | ... | 12 28.32 | + 4.36 | ... | - 4.72 | 1 12 27.96 | - 1.80 |
| | 19 | θ^1 Ceti . . . | F. | 41.3 | 43.9 | 45.5 | 51.7 | 53.7 | 55.8 | 2.0 | 3.5 | 6.2 | 17 53.73 | + 0.34 | - 4.74 | - 4.73 | 1 17 49.35 | + 0.04 |
| | 20 | η Piscium . . . | F. | 42.3 | 44.9 | 46.5 | 52.8 | 55.0 | 57.1 | 3.4 | 5.0 | 7.7 | 24 51.97 | + 0.31 | - 4.71 | - 4.73 | 1 24 50.55 | + 0.05 |
| | 21 | ω Cancri . . . | F. | 18.3 | 21.1 | 22.8 | 29.8 | 31.8 | 34.2 | 40.9 | 42.7 | 45.6 | 53 31.91 | + 0.28 | ... | - 4.78 | 7 53 27.41 | - 1.95 |
| | 22 | γ Argus . . . | F. | 8.1 | 12.7 | 17.2 | 19.4 | 21.6 | 23.8 | 26.1 | 30.5 | 35.0 | 2 21.60 | + 0.36 | - 4.63 | - 4.78 | 8 2 17.18 | - 0.21 |
| | 23 | Anonymous . . . | F. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | 24 | Aegina . . . | F. | 1.1 | 3.7 | 5.6 | 12.3 | 14.5 | 16.8 | 23.2 | 25.0 | 27.5 | 37 14.11 | + 0.28 | ... | - 4.76 | 8 37 9.93 | ... |
| | 25 | Harmonia . . . | F. | ... | ... | 2.9 | 5.1 | 7.3 | 9.6 | 11.7 | ... | ... | 46 7.32 | + 0.28 | ... | - 4.75 | 8 46 2.85 | ... |
| | 26 | B. A. C. 3068 . . . | F. | 39.8 | 42.9 | 44.7 | 49.6 | 54.5 | 59.3 | 4.0 | 6.0 | 8.9 | 53 54.41 | + 0.28 | ... | - 4.75 | 8 53 49.94 | - 2.32 |
| | 27 | Parthenope . . . | F. | 19.9 | 22.6 | 24.3 | 30.8 | 32.7 | 34.9 | 41.5 | 43.0 | 45.7 | 57 32.82 | + 0.28 | ... | - 4.75 | 8 57 28.35 | ... |
| | 28 | Io . . . | F. | 36.5 | 39.0 | 40.6 | 46.7 | 48.8 | 50.8 | 56.8 | 58.2 | 1.0 | 15 48.73 | + 0.30 | ... | - 4.73 | 9 15 44.30 | ... |
| | 29 | Anonymous . . . | F. | ... | ... | 54.9 | 57.0 | 59.4 | 1.6 | 3.8 | ... | ... | 17 59.34 | + 0.28 | ... | - 4.73 | 9 17 54.89 | - 2.23 |
| | 30 | Uranus . . . | F. | 39.1 | 41.7 | 43.3 | 49.7 | 51.8 | 54.0 | 0.4 | 2.0 | 4.6 | 20 51.51 | + 0.29 | ... | - 4.73 | 9 20 47.40 | ... |
| | 31 | B. A. C. 3417 . . . | F. | ... | ... | 34.0 | 36.5 | 39.0 | 41.5 | 43.7 | ... | ... | 53 38.94 | + 0.41 | ... | - 4.71 | 9 53 34.64 | - 1.58 |
| | 32 | α Leonis . . . | F. | 39.9 | 42.4 | 44.0 | 50.3 | 52.4 | 54.5 | 0.7 | 2.3 | 4.9 | 1 52.38 | + 0.29 | - 4.74 | - 4.71 | 10 1 47.96 | - 0.01 |
| | 33 | γ^1 Leonis . . . | F. | 1.4 | 4.0 | 5.8 | 12.4 | 14.4 | 16.6 | 23.2 | 24.7 | 27.6 | 13 14.46 | + 0.28 | - 4.67 | - 4.70 | 10 13 10.04 | - 0.05 |
| | 34 | Dione . . . | F. | 0.2 | 4.5 | 8.5 | 10.6 | 12.9 | 14.9 | 17.0 | 21.1 | 25.7 | 17 12.82 | + 0.28 | ... | - 4.70 | 10 17 8.40 | ... |
| | 35 | Hebe . . . | F. | ... | ... | ... | ... | ... | ... | ... | ... | 32.2 | 42 19.51 | + 0.29 | ... | - 4.68 | 10 42 15.15 | ... |
| | 36 | B. A. C. 4113 . . . | F. | 48.3 | 51.5 | 53.3 | 1.2 | 3.8 | 6.3 | 14.2 | 16.1 | 19.5 | 7 3.80 | + 0.43 | ... | - 4.63 | 12 6 59.60 | - 1.29 |
| | 37 | B. A. C. 4124 . . . | F. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | 38 | η Virginis . . . | F. | 27.3 | 30.0 | 31.4 | 37.5 | 39.5 | 41.6 | 47.7 | 49.2 | 51.8 | 13 39.56 | + 0.30 | - 4.65 | - 4.63 | 12 13 35.23 | 0.00 |
| | 39 | B. A. C. 4417 . . . | F. | 58.4 | 1.6 | 3.6 | 11.4 | 13.9 | 16.4 | 24.3 | 26.1 | 29.4 | 5 13.90 | + 0.43 | ... | - 4.59 | 13 5 9.74 | - 1.07 |
| | 40 | Polaris, S. P. . . | F. | ... | ... | 30.0 | 2 03.0 | 0.5 | 42.0 | ... | ... | ... | 12 35.78 | - 3.76 | ... | - 4.59 | 1 12 27.43 | + 1.58 |
| | 41 | α Virginis . . . | F. | 35.3 | 37.0 | 41.0 | 43.1 | 45.2 | 47.3 | 49.3 | 53.5 | 55.0 | 18 45.19 | + 0.34 | - 4.66 | - 4.59 | 13 18 40.94 | + 0.05 |
| | 42 | ζ Virginis . . . | F. | 15.7 | 8 42.0 | 0.26.0 | 28.1 | 30.1 | 32.1 | 36.2 | 37.7 | 40.4 | 28 28.07 | + 0.13 | - 4.48 | - 4.50 | 13 28 23.61 | - 0.01 |
| | 43 | η Bootis . . . | F. | 39.5 | 42.3 | 43.8 | 50.3 | 52.6 | 54.8 | 1.2 | 2.9 | 5.5 | 48 52.54 | + 0.10 | - 4.63 | - 4.58 | 13 48 48.15 | 0.00 |
| | 44 | α Coronæ Borealis . . . | F. | ... | ... | 26.7 | 29.0 | 31.3 | 33.6 | 35.9 | ... | ... | 29 31.30 | + 0.22 | - 4.56 | - 4.51 | 15 29 27.01 | + 0.05 |
| | 45 | α Serpentis . . . | F. | 2.2 | 4.8 | 6.3 | 12.6 | 14.6 | 16.6 | 22.8 | 24.3 | 26.8 | 38 14.56 | + 0.14 | - 4.52 | - 4.50 | 15 38 10.20 | + 0.04 |
| | 46 | ϵ Serpentis . . . | F. | 30.6 | 33.1 | 34.8 | 41.0 | 43.0 | 45.0 | 51.0 | 52.6 | 55.2 | 44 42.92 | + 0.14 | - 4.42 | - 4.49 | 15 44 38.57 | - 0.07 |
| | 47 | Moon II, S. . . | F. | 26.3 | 29.2 | 30.8 | 37.8 | 40.4 | 42.4 | 49.4 | 51.1 | 54.0 | 52 40 11 | + 0.08 | ... | - 4.49 | 15 52 35.70 | - 67.88 |
| | 48 | τ Herculis . . . | F. | 47.6 | 51.4 | 53.6 | 2.6 | 5.5 | 8.5 | 17.3 | 19.5 | 23.2 | 16 5.47 | + 0.36 | ... | - 4.48 | 16 16 1.35 | + 0.34 |
| | 49 | α Scorpii . . . | F. | ... | ... | 48.3 | 50.7 | 52.8 | 55.1 | 57.4 | ... | ... | 21 52.86 | + 0.38 | - 4.63 | - 4.48 | 16 21 48.76 | + 0.14 |
| | 50 | γ Aquilæ . . . | S. | 12.9 | 15.5 | 17.0 | 23.3 | 25.3 | 27.4 | 33.6 | 35.2 | 37.8 | 40 25.33 | + 0.30 | - 4.40 | - 4.49 | 19 40 21.14 | + 0.03 |

5, 8, 9, 24, 25, 27, 28, 29, 30, 34, 35, 37, 38. Thread A used.

36. Circle reading reduced for $282^\circ 54'$.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Corrections. | Apparent Zenith Distance, South. | External Thermom't. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|---------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | |
| | | r. " | " | " | " | | | | | | | " | " | " | " | " |
| 1 | 345 24 | 10 2.0 | 4.4 | 24.3 | 5.2 | 38 | 446 | 416 | .. | 322 | 306 | 67.3 | 14 32 45.9 | .. | 15.6 | 65 39 22.7 |
| 2 | 332 38 | 9 2.7 | 22.7 | 1.5 | .. | 38 | .. | 860 | .. | 830 | .. | 67.3 | 26 18 51.0 | .. | 29.7 | 77 25 41.9 |
| 3 | 341 30 | 9 27.2 | 27.5 | 18.2 | 28.6 | 33 | .. | .. | .. | 002 | .. | 67.3 | 18 25 18.4 | .. | 20.0 | 69 31 59.6 |
| 4 | 341 30 | 27.2 | 27.5 | 18.2 | 28.6 | 33 | .. | .. | .. | .. | 130 | 67.3 | 18 25 21.0 | .. | 20.0 | 69 32 2.2 |
| 5 | 334 58 | 28.8 | 29.8 | 20.2 | 0.5 | 35 | .. | 670 | .. | 490 | .. | 67.3 | 24 55 25.4 | 36.5 | 28.0 | 76 2 14.6 |
| 6 | 298 22 | 10 1.8 | 2.7 | 24.8 | 5.7 | 37 | .. | .. | .. | 530 | 516 | 67.3 | 61 34 33.4 | .. | 51.1 | 112 42 45.7 |
| 7 | 0 0 | 9 29.8 | 1.8 | 21.4 | 1.5 | 30 | .. | 392 | .. | 262 | .. | 67.3 | 359 54 39.9 | 35.0 | 0.1 | 51 1 1.0 |
| 8 | 288 12 | 10 4.4 | 5.6 | 27.0 | 6.8 | 32 | .. | 340 | .. | 300 | .. | 67.3 | 71 40 41.3 | .. | 3 0.2 | 122 50 2.7 |
| 9 | 288 12 | 4.4 | 5.6 | 27.0 | 6.8 | 33 | 678 | 672 | .. | .. | .. | 67.3 | 71 41 0.6 | .. | 3 0.3 | 122 50 22.1 |
| 10 | 316 10 | 7.7 | 10.0 | 1.4 | 10.0 | 32 | .. | .. | .. | 726 | 690 | 67.3 | 43 45 25.9 | .. | 57.6 | 94 52 44.7 |
| 11 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 35.5 | .. | .. |
| 12 | 319 52 | 9 17.5 | 17.6 | 9.4 | 24.0 | 37 | .. | .. | .. | 330 | 324 | 65.8 | 40 4 15.0 | 31.1 | 50.8 | 91 11 27.0 |
| 13 | 320 22 | 15.4 | 15.1 | 9.2 | 20.2 | 39 | .. | 586 | .. | 522 | .. | 65.8 | 29 34 45.8 | .. | 34.3 | 80 41 41.3 |
| 14 | 308 58 | 24.0 | 27.6 | 19.8 | 0.0 | 38 | 610 | 628 | .. | .. | .. | 65.8 | 50 58 40.1 | 31.0 | 14.4 | 102 6 15.7 |
| 15 | 308 26 | 10 0.3 | 2.1 | 24.8 | 5.2 | 39 | .. | .. | .. | 508 | 484 | 65.8 | 51 31 2.0 | .. | 15.9 | 102 38 39.1 |
| 16 | 321 14 | 4.0 | 3.7 | 25.9 | 2.8 | 35 | .. | 812 | .. | 684 | .. | 65.8 | 38 42 4.1 | .. | 48.0 | 89 49 13.3 |
| 17 | 356 0 | 8.1 | 10.2 | 3.0 | 10.2 | 33 | 698 | 690 | .. | 598 | 580 | 65.8 | 3 55 38.5 | .. | 4.1 | 55 2 3.8 |
| 18 | 49 40 | 9 27.2 | 28.7 | 21.5 | 27.6 | 34 | 030 | 136 | 138 | 100 | 068 | 65.8 | 310 15 33.6 | 35.0 | 10.6 | 1 20 44.2 |
| 19 | 312 14 | 10 3.2 | 5.4 | 26.3 | 8.2 | 35 | .. | .. | .. | 340 | 312 | 65.8 | 47 42 0.4 | .. | 5.7 | 98 49 27.3 |
| 20 | 335 46 | 7.9 | 8.3 | 29.6 | 8.5 | 38 | .. | .. | .. | 154 | 128 | 65.8 | 24 10 46.5 | .. | 26.9 | 75 17 34.6 |
| 21 | 346 46 | 11.2 | 12.1 | 4.0 | 12.1 | 32 | .. | 802 | .. | 728 | .. | 68.8 | 13 9 29.8 | 28.2 | 14.2 | 64 16 5.2 |
| 22 | 297 8 | 12.2 | 11.6 | 6.1 | 12.8 | 36 | .. | .. | .. | 986 | 972 | 68.8 | 62 48 36.0 | .. | 58.0 | 113 56 55.2 |
| 23 | 285 24 | 2.7 | 4.7 | 28.3 | 5.8 | 37 | .. | 416 | .. | 344 | .. | 68.8 | 74 32 33.1 | .. | 36.9 | 125 42 31.2 |
| 24 | 342 36 | 2.4 | 4.6 | 27.5 | 5.3 | 38 | .. | 276 | .. | 264 | .. | 68.8 | 17 18 13.2 | .. | 19.0 | 68 24 53.4 |
| 25 | 344 2 | 9 28.7 | 29.3 | 21.1 | 0.8 | 34 | .. | 634 | .. | 508 | .. | 68.8 | 15 51 11.6 | .. | 17.3 | 66 57 50.1 |
| 26 | 353 46 | 10 3.0 | 2.8 | 25.7 | 2.7 | 33 | 072 | 064 | .. | .. | .. | 68.8 | 6 9 24.7 | .. | 6.6 | 57 15 52.5 |
| 27 | 339 48 | 1.1 | 1.4 | 24.3 | 0.5 | 30 | .. | 048 | .. | 904 | .. | 68.8 | 20 4 3.1 | .. | 22.3 | 71 10 46.6 |
| 28 | 321 14 | 8.3 | 8.4 | 2.4 | 11.5 | 40 | 330 | 324 | .. | .. | .. | 68.8 | 38 40 48.5 | .. | 48.8 | 89 47 58.5 |
| 29 | 345 10 | 8.1 | 10.2 | 3.2 | 10.0 | 40 | .. | 892 | .. | 866 | .. | 68.8 | 14 44 58.6 | .. | 16.0 | 65 51 35.8 |
| 30 | 337 20 | 9 27.1 | 27.4 | 18.7 | 28.7 | 42 | 880 | 866 | .. | .. | .. | 68.8 | 22 35 15.4 | .. | 25.4 | 73 42 2.0 |
| 31 | 285 48 | 27.6 | 29.0 | 21.6 | 0.8 | 35 | .. | .. | .. | 502 | 530 | 68.8 | 74 8 0.0 | 27.2 | 31.7 | 125 17 52.9 |
| 32 | 333 38 | 10 8.8 | 8.6 | 2.1 | 9.1 | 38 | .. | .. | .. | 338 | 228 | 68.8 | 26 18 52.8 | .. | 30.2 | 77 25 44.2 |
| 33 | 341 30 | 9 27.9 | 28.9 | 18.8 | 0.6 | 32 | .. | 976 | .. | 930 | .. | 68.8 | 18 25 19.4 | .. | 20.3 | 69 32 0.9 |
| 34 | 338 40 | 25.8 | 25.2 | 16.4 | 26.7 | 35 | .. | 476 | .. | 468 | .. | 68.8 | 21 13 21.4 | .. | 23.7 | 72 20 6.3 |
| 35 | 335 40 | 26.2 | 28.6 | 21.8 | 0.7 | 36 | .. | .. | .. | 404 | 416 | 68.8 | 24 13 40.4 | .. | 27.5 | 75 20 29.1 |
| 36 | 282 52 | 10 3.9 | 5.2 | 0.0 | 6.5 | 41 | .. | .. | .. | 764 | 756 | 68.8 | 77 3 42.2 | .. | 4 20.7 | 128 14 24.1 |
| 37 | 304 12 | 1.0 | 2.7 | 23.3 | 3.0 | 43 | .. | .. | .. | 200 | 190 | 68.8 | 55 43 27.2 | .. | 1 29.5 | 106 51 17.9 |
| 38 | 321 4 | 4.5 | 3.9 | 26.2 | 5.7 | 43 | .. | .. | .. | .. | 712 | 68.8 | 38 51 38.1 | 26.0 | 49.2 | 89 58 48.5 |
| 39 | 283 58 | 9 25.0 | 25.2 | 19.3 | 25.4 | 37 | 244 | 186 | .. | 136 | 114 | 68.8 | 75 58 20.6 | .. | 4 0.5 | 127 8 42.3 |
| 40 | 52 22 | 29 8 | 0.5 | 23.6 | 0.6 | 36 | 232 | 332 | 210 | 252 | 185 | 68.8 | 307 34 11.6 | 25.8 | 1 19.4 | 358 39 13.4 |
| 41 | 310 32 | 10 0.4 | 29.2 | 21.2 | 1.1 | 33 | 376 | 336 | .. | 190 | 170 | 68.8 | 49 23 25.4 | .. | 1 11.3 | 100 30 57.9 |
| 42 | 321 6 | 6.5 | 4.7 | 28.9 | 6.9 | 37 | 894 | 814 | .. | 700 | 634 | 68.8 | 38 50 40.7 | .. | 49.3 | 89 57 51.2 |
| 43 | 340 4 | 5.4 | 5.0 | 28.7 | 6.6 | 36 | .. | .. | .. | 372 | .. | 68.8 | 19 52 20.0 | 24.8 | 22.2 | 70 59 3.4 |
| 44 | 348 10 | 9 23.1 | 22.6 | 14.7 | 24.5 | 35 | .. | .. | .. | 248 | 230 | 68.8 | 11 45 50.4 | .. | 12.8 | 62 52 24.4 |
| 45 | 327 52 | 29.5 | 28.5 | 22.5 | 1.3 | 36 | .. | 600 | .. | 446 | .. | 68.8 | 32 4 15.4 | .. | 38.3 | 83 11 14.9 |
| 46 | 325 54 | 20.7 | 20.8 | 14.1 | 21.0 | 36 | 440 | 432 | .. | 306 | 284 | 68.8 | 34 2 4.1 | .. | 41.3 | 85 9 6.6 |
| 47 | 295 10 | 10 2.0 | 1.5 | 25.3 | 1.4 | 40 | .. | .. | 668 | .. | .. | 68.8 | 64 47 20.9 | 26.0 | 2 9.3 | 115 55 51.4 |
| 48 | 7 38 | 7.7 | 7.9 | 1.8 | 6.7 | 33 | 708 | 700 | .. | 512 | 490 | 68.8 | 352 17 39.2 | .. | 8.3 | 43 23 52.1 |
| 49 | 294 56 | 9 21.5 | 18.8 | 12.9 | 21.7 | 39 | .. | .. | .. | 396 | 380 | 68.8 | 65 0 50.9 | 26.0 | 2 10.6 | 116 9 22.7 |
| 50 | 331 22 | 10 3.0 | 4.0 | 26.5 | 5.6 | 37 | .. | 630 | .. | 450 | .. | 67.9 | 28 34 34.4 | .. | 33.4 | 79 41 29.0 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|------------|
| | in. | ° | | " | " | " | " |
| 5 | 30.13 | 41.5 | 14 | — 6.9 | + 16 11.7 | .. | + 16 4.8 |
| 7 | 30.10 | 40.5 | 15 | — 7.0 | — 16 11.7 | .. | — 16 18.7 |
| 11 | 30.10 | 40.0 | 16 | — 4.3 | — 6.7 | .. | — 11.0 |
| 12 | 29.89 | 33.0 | 30 | — 0.2 | .. | .. | — 0.2 |
| 14 | 29.89 | 34.2 | 47 | — 49 6.0 | — 14 51.3 | .. | — 1 3 57.3 |
| 18 | 29.87 | 37.0 | | | | | |
| 21 | 29.92 | 29.5 | | | | | |
| 31 | 29.95 | 29.0 | | | | | |
| 38 | 29.93 | 29.5 | | | | | |
| 40 | 29.94 | 28.5 | | | | | |
| 43 | 29.94 | 28.0 | | | | | |
| 47 | 29.95 | 28.0 | | | | | |
| 49 | 29.95 | 28.5 | | | | | |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. |
|------------------|---------|---|-----------|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------------------|--------------|----------------|----------------|---------------------------|--------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. m. s. | s. | |
| 1876. Feb. 16 | 1 | <i>a</i> Aquilæ . . . | S. | 35.0 | 37.6 | 39.2 | 45.4 | 47.5 | 49.6 | 55.8 | 57.3 | 59.9 | m. s. 44 47.48 | + 0.30 | - 4.50 | - 4.48 | 19 44 43.30 | + 0.06 | |
| 17 | 2 | Sun I, S. . . . | S. | 10.0 | 12.6 | 14.3 | 20.6 | 22.6 | 24.7 | 31.0 | 32.6 | 35.2 | 1 22.62 | + 0.28 | . . . | - 4.48 | 22 1 18.42 | . . . | |
| | 3 | Sun II, N. . . . | S. | 22.9 | 25.7 | 27.4 | 33.6 | 35.6 | 37.8 | 43.9 | 45.5 | 48.0 | 3 35.60 | + 0.28 | . . . | - 4.48 | 22 3 31.40 | . . . | |
| | 4 | <i>a</i> Andromedæ . . . | S. | 48.1 | 50.9 | 52.8 | 59.7 | 2.1 | 4.4 | 11.4 | 12.9 | 15.6 | 2 2.02 | + 0.20 | - 4.55 | - 4.48 | 0 1 57.83 | + 0.09 | |
| | 5 | Venus I, S. . . . | S. | . . . | . . . | 26.7 | 28.8 | 30.8 | 32.8 | 34.9 | . . . | . . . | 13 30.80 | + 0.28 | . . . | - 4.48 | 0 13 26.00 | + 0.46 | |
| | 6 | <i>β</i> Ceti | S. | . . . | 21.3 | 23.5 | 25.7 | 27.9 | 29.9 | 34.3 | 35.9 | 38.6 | 37 25.66 | + 0.28 | - 4.40 | - 4.47 | 0 37 21.47 | - 0.02 | |
| | 7 | Polaris | S. | 34.0 | 35.5 | 32.5 | . . . | . . . | . . . | . . . | . . . | . . . | 12 18.27 | + 5.49 | . . . | - 4.47 | 1 12 22.62 | - 2.92 | |
| | 8 | <i>a</i> Orionis (R.) . . . | S. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | |
| | 9 | <i>a</i> Orionis | S. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | |
| | 10 | 22 Camelopardalis (R) | S. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | |
| | 11 | 22 Camelopardalis . | S. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | |
| | 12 | <i>δ</i> Ursæ Minoris, S. P. | S. | . . . | . . . | 19.0 | 43.5 | 10.5 | 35.5 | 0.5 | . . . | . . . | 12 9.84 | - 1.00 | . . . | - 4.47 | 18 12 3.38 | - 0.20 | |
| | 13 | B. A. C. 2136 . . . | S. | 38.6 | 41.9 | 43.6 | 51.2 | 53.7 | 56.4 | 3.7 | 5.6 | 8.7 | 26 53.71 | + 0.35 | . . . | - 4.47 | 6 26 49.59 | - 1.28 | |
| | 14 | <i>γ</i> Geminorum | S. | 25.7 | 28.3 | 30.0 | 36.3 | 38.5 | 40.7 | 47.0 | 48.6 | 51.3 | 30 38.49 | + 0.15 | - 4.31 | - 4.47 | 6 30 34.17 | - 0.19 | |
| | 15 | <i>a</i> Canis Majoris . . . | S. | 33.6 | 36.3 | 38.0 | 44.4 | 46.5 | 48.6 | 54.9 | 56.6 | 59.2 | 39 46.46 | + 0.28 | - 4.60 | - 4.46 | 6 39 42.28 | + 0.06 | |
| | 16 | 51 Cephei | S. | . . . | . . . | . . . | 55.0 | 37.0 | 0.5 | 32.0 | 26.0 | . . . | 42 11.58 | + 2.55 | . . . | - 4.46 | 6 42 9.67 | - 0.27 | |
| | 17 | <i>a</i> ² Geminorum | S. | 32.8 | 35.8 | 37.6 | 44.9 | 47.3 | 49.8 | 37.0 | 58.7 | 1.8 | 26 47.30 | + 0.26 | - 4.47 | - 4.45 | 7 26 43.11 | + 0.26 | |
| | 18 | <i>a</i> Canis Minoris . . . | S. | 42.0 | 44.7 | 46.0 | 52.3 | 54.3 | 56.4 | 2.4 | 4.0 | 6.6 | 32 54.30 | + 0.25 | - 4.43 | - 4.44 | 7 32 50.11 | - 0.17 | |
| | 19 | <i>β</i> Geminorum | S. | 35.8 | 38.6 | 40.4 | 47.4 | 49.6 | 51.9 | 58.9 | 0.7 | 3.6 | 37 49.66 | + 0.26 | - 4.43 | - 4.44 | 7 37 45.48 | - 0.04 | |
| | 20 | <i>λ</i> Ursæ Minoris, S. P. | S. | . . . | . . . | 41.0 | 46.0 | . . . | . . . | . . . | . . . | . . . | 47 0.00 | - 6.48 | . . . | - 4.44 | 19 46 49.08 | - 3.98 | |
| | 21 | Virginia | S. | . . . | . . . | 44.4 | 46.5 | . . . | . . . | . . . | . . . | . . . | 38 48.62 | + 0.25 | . . . | - 4.41 | 8 38 44.46 | . . . | |
| | 22 | Harmonia | S. | 59.0 | 1.4 | 3.5 | 10.2 | 12.5 | 14.7 | 21.3 | 23.0 | 25.8 | 45 12.38 | + 0.25 | . . . | - 4.41 | 8 45 8.22 | . . . | |
| | 23 | Parthenope | S. | 26.5 | 29.0 | 30.7 | 37.0 | 39.5 | 41.5 | 47.9 | 49.7 | 52.2 | 56 30.33 | + 0.25 | . . . | - 4.40 | 8 56 35.18 | . . . | |
| | 24 | Undina | S. | 4.8 | 7.4 | 9.0 | 16.0 | 18.5 | 20.6 | 27.2 | 29.0 | 31.8 | 17 18.27 | + 0.25 | . . . | - 4.40 | 9 17 14.12 | . . . | |
| | 25 | Uranus | S. | 28.9 | 31.3 | 33.0 | 39.4 | 41.5 | 43.6 | 50.0 | 51.7 | 54.2 | 20 41.52 | + 0.25 | . . . | - 4.40 | 9 20 37.37 | . . . | |
| | 26 | <i>ε</i> Leonis | S. | 41.4 | 44.3 | 46.0 | 52.7 | 54.9 | 57.3 | 3.8 | 5.5 | 8.3 | 38 54.91 | + 0.25 | - 4.42 | - 4.39 | 9 38 50.77 | - 0.03 | |
| 18 | 27 | Beatrix | S. | 11.6 | 14.0 | 16.2 | 23.0 | 25.1 | 27.6 | 34.3 | 35.9 | 38.0 | 44 25.18 | + 0.25 | . . . | - 4.39 | 9 44 21.04 | . . . | |
| | 28 | <i>a</i> Leonis | S. | 39.6 | 42.2 | 43.7 | 46.9 | 52.0 | 54.2 | 0.4 | 2.0 | 4.6 | 1 52.07 | + 0.25 | - 4.38 | - 4.38 | 10 1 47.94 | - 0.04 | |
| | 29 | <i>γ</i> ¹ Leonis | S. | . . . | . . . | 9.8 | 11.9 | 14.2 | 16.4 | 18.6 | . . . | . . . | 13 14.18 | + 0.25 | - 4.35 | - 4.38 | 10 13 10.05 | - 0.05 | |
| | 30 | Dione | S. | . . . | . . . | 20.6 | 23.0 | 25.3 | 27.4 | 29.9 | . . . | . . . | 16 25.24 | + 0.25 | . . . | - 4.38 | 10 10 21.11 | . . . | |
| | 31 | Hebe | S. | 14.3 | 16.0 | 18.6 | 24.9 | 26.9 | 29.0 | 35.5 | 37.0 | 39.6 | 41 26.97 | + 0.25 | . . . | - 4.38 | 10 41 22.84 | . . . | |
| | 32 | <i>γ</i> Aquilæ | P. | 15.5 | 17.0 | 21.1 | 23.3 | 25.4 | 27.5 | 29.5 | 33.5 | 35.3 | 40 25.34 | + 0.15 | - 4.32 | - 4.50 | 19 40 20.99 | - 0.15 | |
| | 33 | <i>a</i> Aquilæ | P. | 35.1 | 37.8 | 39.3 | 45.4 | 47.6 | 49.6 | 55.7 | 57.3 | 59.8 | 44 47.51 | + 0.14 | - 4.35 | - 4.50 | 19 44 43.15 | - 0.11 | |
| | 34 | <i>a</i> Cygni | P. | 57.4 | 1.0 | 3.0 | 11.7 | 14.6 | 17.5 | 26.2 | 28.3 | 31.9 | 37 14.62 | + 0.35 | - 4.47 | - 4.47 | 20 37 10.50 | + 0.02 | |
| | 35 | <i>c</i> Cygni | P. | 28.3 | 31.3 | 33.0 | 40.2 | 42.4 | 44.8 | 51.8 | 53.6 | 56.6 | 7 12.44 | + 0.23 | - 4.46 | - 4.45 | 21 7 38.22 | + 0.02 | |
| | 36 | <i>a</i> Cephei | P. | 11.5 | 17.0 | 20.4 | 33.5 | 37.6 | 42.0 | 55.0 | 58.2 | 3.0 | 15 37.68 | + 0.61 | . . . | - 4.44 | 21 15 34.05 | + 0.29 | |
| | 37 | Sun I, N. | P. | 2.0 | 4.7 | 6.3 | 12.5 | 14.6 | 16.7 | 22.9 | 24.4 | 27.1 | 5 14.58 | + 0.04 | . . . | - 4.41 | 22 5 10.21 | . . . | |
| | 38 | Sun II, S. | P. | 14.7 | 17.2 | 18.9 | 25.1 | 27.2 | 29.4 | 35.6 | 37.1 | 39.8 | 7 27.22 | + 0.04 | . . . | - 4.41 | 22 7 22.85 | . . . | |
| | 39 | <i>a</i> Andromedæ | P. | 48.0 | 50.9 | 52.2 | 59.5 | 1.0 | 4.3 | 11.1 | 13.0 | 15.8 | 2 1.91 | + 0.18 | - 4.31 | - 4.33 | 0 1 57.76 | + 0.02 | |
| | 40 | <i>γ</i> Pegasi | P. | 41.8 | 44.5 | 46.2 | 52.5 | 54.5 | 56.6 | 2.9 | 4.5 | 7.1 | 6 54.51 | + 0.12 | - 4.30 | - 4.33 | 0 6 50.30 | - 0.03 | |
| | 41 | Venus I, S. | P. | 40.9 | 43.4 | 44.9 | 51.2 | 53.3 | 55.3 | 1.4 | 2.9 | 5.6 | 17 53.21 | + 0.08 | . . . | - 4.33 | 0 17 48.06 | + 0.46 | |
| | 42 | <i>a</i> Cassiopeæ | P. | 8.8 | 13.4 | 16.2 | 27.0 | 30.6 | 34.3 | 45.4 | 48.4 | 52.5 | 33 30.69 | + 0.42 | . . . | - 4.32 | 0 33 26.79 | - 0.03 | |
| | 43 | <i>β</i> Ceti | P. | 13.0 | 15.6 | 17.3 | 23.8 | 25.9 | 28.0 | 34.4 | 36.0 | 38.7 | 37 25.86 | + 0.02 | - 4.34 | - 4.31 | 0 37 21.57 | + 0.08 | |
| | 44 | Polaris | P. | 32.4 | 23.3 | 25.4 | 47.5 | 15.5 | 40.4 | 59.8 | 5.5 | 33.5 | 12 13.68 | + 12.41 | . . . | - 4.29 | 1 12 21.80 | - 3.11 | |
| | 45 | <i>η</i> Piscium | P. | 42.0 | 44.7 | 46.3 | 52.6 | 54.7 | 56.9 | 3.2 | 4.7 | 7.4 | 24 54.72 | + 0.12 | - 4.29 | - 4.28 | 1 24 50.56 | + 0.08 | |
| | 46 | B. A. C. 1650 | P. | . . . | . . . | 1.0 | 3.6 | 6.0 | 8.6 | 11.0 | . . . | . . . | 13 6.04 | + 0.02 | . . . | - 4.32 | 5 13 1.76 | - 0.97 | |
| | 47 | B. A. C. 1694 | P. | 12.5 | 15.8 | 17.8 | 25.5 | 28.0 | 30.5 | 38.3 | 40.5 | 43.5 | 10 28.02 | + 0.02 | . . . | - 4.32 | 5 19 23.72 | - 1.01 | |
| | 48 | B. A. C. 1724 | P. | 48.0 | 52.0 | 54.0 | 1.9 | 4.3 | 6.9 | 14.6 | 16.5 | 19.7 | 24 4.31 | + 0.02 | . . . | - 4.32 | 5 24 0.01 | - 1.03 | |
| | 49 | B. A. C. 1753 | P. | 31.6 | 34.7 | 36.6 | 44.2 | 46.6 | 49.1 | 56.6 | 58.4 | 1.6 | 28 46.60 | + 0.02 | . . . | - 4.31 | 5 28 42.31 | - 1.04 | |
| | 50 | B. A. C. 1767 | P. | . . . | . . . | 14.9 | 17.2 | 19.3 | 21.5 | 23.8 | . . . | . . . | 30 19.34 | + 0.16 | . . . | - 4.31 | 5 30 15.19 | - 1.10 | |

11. Bisections at set C.

21, 22, 23, 24, 27, 30, 31, 48. Thread A used.

26. Telescope micrometer reading reduced for 38 revolutions.

36. Bisections at sets B and D.

47. Thread B used.

50. Bisections at threads V and VI.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom't. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | | |
| | ° " | ° " | " " | " " | " " | | | | | | | " " | ° " | ° " | " " | ° " | " " | |
| 1 | 329 36 | 10 0.4 | 3.1 | 24.9 | 1.1 | 38 | .. | 354 | .. | 210 | .. | 67.9 | 30 20 43.3 | 31.5 | + | 35.9 | 81 27 40.4 | - 2.2 |
| 2 | 308 46 | 9 26.5 | 27.0 | 22.0 | 2.0 | 36 | 365 | 370 | .. | .. | .. | 67.9 | 51 10 9.2 | 35.2 | + 1 | 14.6 | 102 17 45.0 | .. |
| 3 | 309 18 | 27.7 | 29.0 | 23.0 | 3.5 | 34 | .. | .. | .. | 490 | 460 | 67.9 | 50 37 44.9 | .. | + 1 | 13.1 | 101 45 19.2 | .. |
| 4 | 349 28 | 10 5.0 | 6.4 | 0.5 | 6.4 | 39 | .. | 330 | .. | 200 | .. | 67.9 | 10 29 3.2 | .. | + | 11.1 | 61 35 35.5 | - 0.8 |
| 5 | 321 44 | 9 24.0 | 25.0 | 17.5 | 27.9 | 30 | .. | .. | .. | 160 | 120 | 67.9 | 33 10 34.2 | .. | + | 47.2 | 89 17 42.6 | .. |
| 6 | 302 24 | 10 2.2 | 3.5 | 27.5 | 5.4 | 36 | .. | .. | .. | 140 | 120 | 67.9 | 57 32 13.6 | .. | + 1 | 34.2 | 108 40 9.0 | - 0.1 |
| 7 | 49 40 | 1.8 | 4.1 | 27.5 | 3.0 | 33 | 350 | 475 | .. | .. | .. | 67.9 | 310 15 32.4 | 36.6 | - 1 | 10.6 | 1 20 43.0 | - 3.4 |
| 8 | 211 26 | 10.7 | 14.5 | 6.0 | 10.4 | 34 | 591 | 518 | .. | .. | .. | 68.7 | 148 29 56.3 | .. | - | 37.2 | 82 37 2.1 | + 2.9 |
| 9 | 328 26 | 6.9 | 7.0 | 27.0 | 6.8 | 35 | .. | .. | .. | 020 | 000 | 68.7 | 31 29 59.8 | 30.9 | + | 37.2 | 82 36 58.2 | - 1.0 |
| 10 | 149 28 | 9.8 | 13.0 | 4.3 | 10.7 | 33 | 960 | 810 | .. | .. | .. | 68.7 | 210 27 43.8 | .. | + | 35.8 | 20 38 1.6 | - 1.7 |
| 11 | 30 24 | 5.3 | 4.9 | 27.4 | 3.9 | 36 | 334 | .. | .. | .. | 328 | 68.7 | 329 32 17.3 | .. | - | 35.8 | 20 38 2.7 | - 0.6 |
| 12 | 54 24 | 5.3 | 5.5 | 25.5 | 4.0 | 31 | 784 | .. | 750 | .. | 742 | 68.7 | 305 31 6.8 | .. | - 1 | 25.0 | 356 36 3.0 | - 0.6 |
| 13 | 285 56 | 9.6 | 10.4 | 3.0 | 10.1 | 36 | .. | .. | .. | 788 | 724 | 68.7 | 74 0 30.0 | .. | + 3 | 29.4 | 125 10 20.6 | - 5.2 |
| 14 | 337 34 | 7.5 | 7.5 | 29.3 | 7.3 | 38 | .. | 590 | .. | 550 | .. | 68.7 | 22 22 54.2 | .. | + | 25.0 | 73 29 40.4 | - 0.9 |
| 15 | 304 30 | 7.5 | 9.0 | 1.8 | 10.5 | 31 | .. | .. | .. | 260 | 230 | 68.7 | 55 25 4.7 | .. | + 1 | 28.1 | 106 32 54.0 | - 0.3 |
| 16 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 17 | 353 12 | 9 3 | 9.5 | 1.9 | 10.0 | 34 | .. | 410 | .. | 350 | .. | 68.7 | 6 43 52.4 | .. | + | 7.2 | 57 50 20.8 | - 1.3 |
| 18 | 326 36 | 7.5 | 9.5 | 0.6 | 8.5 | 36 | .. | 830 | .. | 650 | .. | 68.7 | 33 20 27.2 | .. | + | 40.1 | 84 27 28.5 | - 2.1 |
| 19 | 349 22 | 4.3 | 5.2 | 26.5 | 6.0 | 34 | .. | 940 | .. | 784 | .. | 68.7 | 10 33 55.0 | 29.9 | + | 11.4 | 61 40 27.6 | + 0.3 |
| 20 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 68.7 | .. | .. | .. | .. | .. | .. |
| 21 | 336 48 | 15.5 | 15.4 | 6.9 | 14.8 | 35 | .. | 770 | .. | 050 | .. | 68.7 | 23 5 32.4 | .. | + | 26.0 | 74 12 19.6 | - 1.8 |
| 22 | 344 6 | 13.7 | 15.4 | 7.0 | 15.6 | 33 | .. | 540 | .. | 240 | .. | 68.7 | 15 47 9.2 | .. | + | 17.3 | 66 53 47.7 | - 1.7 |
| 23 | 339 54 | 5.0 | 5.6 | 26.5 | 5.6 | 33 | .. | 320 | .. | 060 | .. | 68.7 | 19 58 56.1 | .. | + | 22.2 | 71 5 39.5 | - 1.7 |
| 24 | 345 14 | 2.6 | 3.0 | 23.5 | 4.0 | 35 | .. | .. | .. | 830 | 850 | 68.7 | 14 39 35.7 | .. | + | 16.0 | 65 46 12.9 | - 0.9 |
| 25 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 26 | 345 24 | 4.4 | 5.2 | 27.0 | 5.7 | 34 | 230 | 270 | .. | .. | .. | 68.7 | 14 32 45.9 | .. | + | 15.8 | 65 39 22.9 | - 0.5 |
| 27 | 342 54 | 0.6 | 1.1 | 22.0 | 3.8 | 33 | .. | 830 | .. | 680 | .. | 68.7 | 16 59 1.0 | .. | + | 18.7 | 68 5 40.9 | - 2.0 |
| 28 | 333 38 | 4.4 | 5.5 | 25.6 | 6.3 | 38 | .. | 560 | .. | 440 | .. | 68.7 | 26 18 50.6 | .. | + | 32.0 | 77 25 42.0 | - 1.1 |
| 29 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 30 | 338 44 | 4.4 | 5.4 | 25.6 | 1.8 | 33 | .. | 570 | .. | 460 | .. | 68.7 | 21 9 0.4 | .. | + | 23.7 | 72 15 45.1 | - 1.3 |
| 31 | 335 50 | 9 28.6 | 29.7 | 21.9 | 0.5 | 34 | .. | 540 | .. | 370 | .. | 68.7 | 24 3 9.8 | 28.0 | + | 27.3 | 75 9 58.3 | - 2.0 |
| 32 | 331 22 | 10 1.9 | 2.9 | 25.1 | 4.3 | 37 | .. | .. | .. | 580 | 535 | 68.4 | 28 24 35.1 | 34.9 | + | 32.7 | 79 31 29.0 | - 1.4 |
| 33 | 329 36 | 9 29.0 | 0.4 | 22.6 | 2.6 | 38 | .. | 560 | .. | 435 | .. | 68.4 | 30 20 45.9 | .. | + | 25.4 | 81 27 42.5 | - 0.2 |
| 34 | 5 52 | 28.4 | 29.9 | 22.1 | 0.1 | 34 | 475 | 460 | .. | 350 | 305 | 68.4 | 354 3 42.5 | 36.4 | - | 6.3 | 45 9 57.4 | - 0.2 |
| 35 | 350 46 | 10 4.3 | 5.7 | 27.0 | 6.1 | 37 | .. | .. | .. | 210 | 180 | 68.4 | 9 10 32.0 | 37.2 | + | 9.7 | 60 17 2.9 | + 0.5 |
| 36 | 23 6 | 1.5 | 3.5 | 25.9 | 3.2 | 37 | 570 | .. | 575 | .. | 560 | 68.4 | 336 50 34.0 | .. | - | 25.7 | 27 56 29.5 | - 3.4 |
| 37 | 309 38 | 9 26.0 | 25.0 | 19.5 | 0.3 | 30 | 855 | 805 | .. | .. | .. | 68.4 | 50 16 43.2 | .. | + 1 | 12.0 | 101 24 16.4 | .. |
| 38 | 309 6 | 10 5.5 | 8.3 | 0.8 | 11.3 | 31 | .. | .. | .. | 350 | 290 | 68.4 | 50 49 5.3 | 39.4 | + 1 | 13.4 | 101 56 39.9 | .. |
| 39 | 349 28 | 1.0 | 1.1 | 23.1 | 1.5 | 39 | 665 | .. | .. | .. | 590 | 68.4 | 10 29 3.7 | .. | + | 11.0 | 61 35 35.9 | - 0.5 |
| 40 | 335 32 | 1.2 | 4.2 | 24.8 | 3.0 | 33 | 730 | 660 | .. | 560 | 520 | 68.4 | 24 23 33.4 | 42.3 | + | 27.0 | 75 30 21.6 | + 0.5 |
| 41 | 322 16 | 9 29.0 | 1.1 | 23.4 | 2.6 | 31 | 950 | 930 | .. | 680 | 635 | 68.4 | 37 39 3.6 | .. | + | 45.9 | 88 46 10.7 | .. |
| 42 | 16 54 | 10 2.9 | 4.7 | 27.7 | 4.4 | 36 | 545 | 540 | .. | 435 | 415 | 68.4 | 343 2 19.6 | .. | - | 18.1 | 34 8 22.7 | - 1.6 |
| 43 | 302 24 | 0.5 | 2.6 | 24.3 | 4.1 | 36 | 400 | 340 | .. | 255 | 165 | 68.4 | 57 32 13.6 | .. | + 1 | 33.2 | 108 40 8.0 | - 1.0 |
| 44 | 49 40 | 2.2 | 3.8 | 25.0 | 1.6 | 33 | 640 | 670 | 645 | 635 | 595 | 68.4 | 310 15 33.6 | .. | - 1 | 10.1 | 1 20 44.7 | - 1.9 |
| 45 | 335 46 | 6.1 | 8.0 | 29.3 | 7.6 | 38 | .. | 140 | .. | 070 | .. | 68.4 | 24 10 46.5 | 42.8 | + | 26.7 | 75 17 34.4 | + 0.4 |
| 46 | 286 4 | 2.0 | 3.5 | 24.5 | 4.3 | 32 | .. | 970 | .. | 755 | .. | 68.1 | 73 51 21.5 | 37.0 | + 3 | 25.4 | 125 1 8.1 | - 6.2 |
| 47 | 283 42 | 5.6 | 7.6 | 29.5 | 8.5 | 36 | .. | 400 | .. | 395 | .. | 68.1 | 76 16 51.5 | .. | + 4 | 2.4 | 127 27 15.1 | - 6.6 |
| 48 | 283 42 | 5.6 | 7.6 | 29.5 | 8.5 | 28 | .. | 780 | .. | 660 | .. | 68.1 | 76 9 48.8 | .. | + 4 | 0.4 | 127 20 10.4 | - 6.5 |
| 49 | 285 52 | 5.7 | 8.5 | 29.7 | 8.4 | 34 | .. | 340 | .. | 280 | .. | 68.1 | 74 3 48.2 | .. | + 3 | 28.4 | 125 13 37.8 | - 6.1 |
| 50 | 342 6 | 2.8 | 4.5 | 24.5 | 4.7 | 32 | .. | .. | .. | 355 | 325 | 68.1 | 17 49 15.1 | .. | + | 19.4 | 68 55 55.7 | + 9.4 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|----------|-----|-----------|------------|-------------------------|-----------|
| 1 | 30.12 | 33.6 | 2 | 6.9 | 16 12.9 | .. | 16 19.8 |
| 2 | 30.00 | 35.6 | 3 | 6.9 | + 16 12.9 | .. | + 16 6.0 |
| 7 | 29.99 | 38.0 | 5 | 4.3 | 6.8 | .. | 11.1 |
| 9 | 30.06 | 32.8 | 37 | 6.8 | + 16 11.7 | .. | + 16 4.9 |
| 19 | 30.58 | 31.6 | 38 | 6.9 | - 16 11.7 | .. | - 16 15.6 |
| 31 | 30.09 | 30.0 | 41 | 4.3 | 6.8 | .. | 11.1 |
| 32 | 30.17 | 34.7 | | | | | |
| 34 | 30.18 | 36.2 | | | | | |
| 35 | 30.18 | 36.7 | | | | | |
| 38 | 30.16 | 38.6 | | | | | |
| 40 | 30.15 | 43.6 | | | | | |
| 45 | 30.15 | 42.2 | | | | | |
| 46 | 30.19 | 38.3 | | | | | |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|---------|---------|----------------------------|-----------|--------------------------------|------|------|------|------|------|------|------|-------|------------|--------------|----------------|----------------|---------------------------|----------------------------|
| | | | | I | II | III | IV | V | VI | VII | VIII | IX | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | |
| | | | | m. | s. | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| 1876. | | | | | | | | | | | | | | | | | | |
| Feb. 18 | 1 | B. A. C. 1794 ¹ | P. | 25.7 | 27.3 | | | | | 43.5 | 45.0 | | 34 35.38 | + 0.09 | | - 4.31 | 5 34 31.16 | - 1.03 |
| | 2 | B. A. C. 1794 ² | P. | | | 31.5 | 33.5 | 35.6 | 37.6 | 39.7 | | | 34 35.58 | + 0.09 | | - 4.31 | 5 34 31.36 | - 1.03 |
| | 3 | B. A. C. 1865 | P. | 2.2 | 5.0 | 6.7 | 14.0 | 16.5 | 18.7 | 25.8 | 27.7 | 30.6 | 45 16.33 | + 0.03 | | - 4.31 | 5 45 12.05 | - 1.09 |
| | 4 | Orionis. | P. | 20.4 | 23.0 | 24.5 | 30.8 | 32.9 | 35.0 | 41.0 | 42.6 | 45.3 | 48 32.83 | + 0.11 | - 4.29 | - 4.31 | 5 48 28.63 | - 0.05 |
| | 5 | B. A. C. 1922 | P. | 58.8 | 1.9 | 3.7 | 11.5 | 13.8 | 16.3 | 23.8 | 25.8 | 28.9 | 53 13.83 | + 0.02 | | - 4.31 | 5 53 9.54 | - 1.14 |
| | 6 | 22 Camelopardalis (R.) | P. | | | | | | | | | | | | | | | |
| | 7 | 22 Camelopardalis | P. | | | | | | | | | | 5 17.34 | + 0.78 | | - 4.31 | 6 5 13.81 | + 0.19 |
| | 8 | δ Ursæ Minoris, S.P. | P. | | | 22.0 | 47.5 | 13.4 | | | | | 12 13.20 | - 5.16 | | - 4.30 | 18 12 3.74 | - 0.10 |
| | 9 | μ Geminorum | P. | | | 30.7 | 32.9 | 35.3 | 37.4 | 42.0 | 43.6 | 46.4 | 15 33.03 | + 0.17 | - 4.28 | - 4.30 | 6 15 28.90 | - 0.06 |
| | 10 | B. A. C. 2098 | P. | 37.9 | 41.1 | 43.2 | 51.4 | 54.0 | 56.8 | 4.9 | 7.0 | 10.1 | 21 54.04 | + 0.01 | | - 4.30 | 6 21 49.75 | - 1.28 |
| | 11 | B. A. C. 2117 | P. | 37.0 | 39.0 | 44.3 | 47.2 | 49.9 | 52.6 | 55.3 | 0.6 | 2.8 | 24 49.86 | + 0.01 | | - 4.30 | 6 24 45.57 | - 1.29 |
| | 12 | γ Geminorum | P. | 25.6 | 28.4 | 29.9 | 36.3 | 38.4 | 40.6 | 47.0 | 48.6 | 51.3 | 30 38.46 | + 0.14 | - 4.28 | - 4.30 | 6 30 34.30 | - 0.05 |
| | 13 | α Canis Majoris | P. | 33.6 | 36.3 | 37.8 | 44.3 | 46.4 | 48.6 | 55.0 | 56.5 | 59.3 | 39 40.42 | + 0.05 | - 4.34 | - 4.30 | 6 39 42.17 | - 0.04 |
| | 14 | 51 Cephei | P. | | | 26.7 | 10.3 | 51.3 | | | | | 42 9.27 | + 6.21 | | - 4.30 | 6 42 11.18 | - 1.50 |
| | 15 | B. A. C. 2258 | P. | | | 23.0 | 25.6 | 28.0 | 30.6 | 35.8 | 37.6 | 40.8 | 47 25.58 | + 0.02 | | - 4.29 | 6 47 21.30 | - 1.34 |
| | 16 | B. A. C. 2295 | P. | 43.5 | 46.7 | 48.6 | 56.0 | 58.3 | 0.8 | 8.1 | 10.1 | 13.2 | 53 58.37 | + 0.02 | | - 4.29 | 6 53 54.10 | - 1.35 |
| | 17 | B. A. C. 2309 | P. | 38.5 | 41.3 | 43.0 | 50.0 | 52.3 | 54.8 | 1.5 | 3.3 | 6.1 | 56 52.31 | + 0.03 | | - 4.29 | 6 56 48.05 | - 1.34 |
| | 18 | B. A. C. 2335 | P. | 37.0 | 40.4 | 42.2 | 50.0 | 52.6 | 55.3 | 3.0 | 4.8 | 8.0 | 1 52.59 | + 0.02 | | - 4.29 | 7 1 48.32 | - 1.39 |
| | 19 | δ Canis Majoris | P. | | | | | | | | | | 3 26.46 | + 0.04 | 4.17 | - 4.29 | 7 3 22.21 | - 0.17 |
| | 20 | α Canis Minoris (R.) | P. | | | | | | | | | | | | | | | |
| | 21 | α Canis Minoris | P. | | | | | | | | | | | | | | | |
| | 22 | λ Ursæ Minoris, S.P. | P. | 54.0 | 32.0 | 51.0 | 3.0 | | | | | | 47 14.30 | - 10.02 | | - 4.28 | 19 46 54.00 | + 0.44 |
| | 23 | Harmonia | P. | 5.4 | 8.0 | 9.8 | 16.4 | 18.7 | 20.0 | 27.3 | 29.0 | 31.7 | 44 18.58 | + 0.17 | | - 4.27 | 8 44 14.48 | |
| | 24 | Parthenope | P. | 33.7 | 36.4 | 38.2 | 44.6 | 46.7 | 49.0 | 55.4 | 57.0 | 59.5 | 55 46.72 | + 0.16 | | - 4.26 | 8 55 42.62 | |
| | 25 | Undina | P. | 19.6 | 22.3 | 24.0 | 30.7 | 33.0 | 35.5 | 42.0 | 43.9 | 46.5 | 16 33.06 | + 0.17 | | - 4.26 | 9 16 28.97 | |
| | 26 | Uranus. | P. | 18.4 | 21.1 | 22.7 | 29.3 | 31.4 | 33.4 | 39.6 | 41.4 | 44.0 | 20 31.26 | + 0.14 | | - 4.26 | 9 20 27.14 | |
| | 27 | Nemausa | P. | 4.3 | 6.7 | 8.3 | 14.4 | 16.4 | 18.4 | 24.5 | 26.3 | 28.8 | 24 16.46 | + 0.11 | | - 4.26 | 9 24 12.31 | |
| | 28 | Beatrix | P. | 9.8 | 12.3 | 14.0 | 20.4 | 22.6 | 24.9 | 31.3 | 33.4 | 36.0 | 43 22.74 | + 0.16 | | - 4.25 | 9 43 18.65 | |
| | 29 | Euterpe | P. | 53.8 | 56.5 | 58.2 | 4.6 | 6.8 | 8.9 | 15.0 | 16.8 | 19.3 | 48 6.66 | + 0.14 | | - 4.25 | 9 48 2.55 | |
| | 30 | γ Leonis | P. | | | 12.1 | 14.3 | 16.4 | 18.5 | | | | 13 14.23 | + 0.16 | - 4.30 | - 4.25 | 10 13 10.14 | + 0.03 |
| | 31 | Dione | P. | 24.8 | | | | | | | | | 15 37.66 | + 0.15 | | - 4.25 | 10 15 33.56 | |
| | 32 | Hebe | P. | 21.7 | 24.3 | 26.6 | 32.2 | 34.2 | 36.4 | 42.6 | 44.4 | 47.0 | 40 31.31 | + 0.14 | | - 4.24 | 10 40 30.21 | |
| | 33 | Jupiter I, N. | P. | 31.4 | 34.0 | 35.7 | | | | 53.2 | 54.8 | 57.4 | 55 41.42 | + 0.08 | | - 4.16 | 15 55 40.34 | |
| | 34 | Jupiter II, S. | P. | | | 42.7 | 45.0 | 47.1 | 49.3 | 51.4 | | | 55 47.10 | + 0.08 | | - 4.16 | 15 55 43.02 | |
| | 35 | δ Ophiuchi | P. | 43.0 | 45.6 | 47.2 | 53.4 | 55.4 | 57.4 | 3.4 | 5.0 | 7.6 | 7 55.33 | + 0.12 | - 4.15 | - 4.16 | 16 7 51.29 | + 0.01 |
| | 36 | α Scorpii | P. | 39.0 | 42.0 | 43.7 | 50.5 | 52.8 | 55.0 | 1.8 | 3.6 | 6.4 | 21 52.76 | + 0.07 | - 4.16 | - 4.16 | 16 21 48.67 | - 0.01 |
| | 37 | ζ Ophiuchi | P. | 11.7 | 14.4 | 16.0 | 22.2 | 24.2 | 26.4 | 32.6 | 34.0 | 36.6 | 39 24.23 | + 0.10 | - 4.15 | - 4.15 | 16 30 20.18 | 0.00 |
| | 38 | η Herculis | P. | 26.9 | 30.2 | 32.2 | 40.0 | 42.6 | 45.4 | 53.1 | 55.3 | 58.4 | 38 42.68 | + 0.31 | - 4.10 | - 4.15 | 16 38 38.84 | - 0.04 |
| | 39 | κ Ophiuchi | P. | 39.6 | 42.3 | 43.7 | 50.0 | 52.1 | 54.2 | 0.4 | 2.0 | 4.5 | 51 52.09 | + 0.16 | - 4.16 | - 4.15 | 16 51 48.10 | + 0.05 |
| | 40 | ε Ursæ Minoris | P. | 12.3 | 31.6 | 42.7 | 27.8 | 42.9 | 58.4 | 43.6 | 54.7 | 11.4 | 58 43.09 | + 2.46 | | - 4.15 | 16 58 41.40 | - 0.62 |
| | 41 | Moon H | P. | 7.3 | 10.3 | 12.1 | 19.4 | 21.7 | 24.1 | 31.3 | 33.3 | 136.0 | 41 21.70 | + 0.06 | | - 4.14 | 17 41 17.62 | - 69.99 |
| | 42 | δ Draconis | E. | 59.7 | 6.5 | 10.5 | 20.2 | 31.8 | 37.3 | 52.9 | 57.0 | 3.8 | 12 31.74 | + 0.88 | | - 4.08 | 19 12 28.54 | + 0.25 |
| | 43 | δ Aquilæ | E. | 8.5 | 10.1 | 14.2 | 16.2 | 18.3 | 20.4 | 22.4 | 26.5 | 28.0 | 19 18.29 | + 0.02 | - 4.09 | - 4.03 | 19 19 14.23 | + 0.06 |
| | 44 | B. A. C. 6690 | E. | 32.4 | 35.4 | 37.0 | 44.0 | 46.0 | 48.7 | 55.5 | 57.2 | 0.1 | 25 46.29 | + 0.16 | | - 4.08 | 19 25 42.37 | + 0.90 |
| | 45 | γ Aquilæ | E. | 12.7 | 15.3 | 16.9 | 23.1 | 25.1 | 27.3 | 33.5 | 35.0 | 37.7 | 40 25.18 | + 0.06 | - 4.05 | - 4.08 | 19 40 21.16 | 0.00 |
| | 46 | α Aquilæ | E. | 34.9 | 37.6 | 39.2 | 45.4 | 47.4 | 49.5 | 55.5 | 57.2 | 59.7 | 44 47.38 | + 0.05 | - 4.11 | - 4.08 | 19 44 43.35 | + 0.07 |
| | 47 | B. A. C. 6034 | E. | 45.6 | 48.2 | 49.7 | 55.9 | 57.9 | 0.0 | 6.0 | 7.6 | 10.0 | 4 57.88 | 0.00 | | - 4.08 | 20 4 53.80 | + 0.65 |
| | 48 | B. A. C. 7022 | E. | 33.1 | 36.5 | 38.5 | 46.5 | 49.3 | 51.9 | 59.8 | 1.9 | 5.2 | 17 49.19 | + 0.27 | | - 4.08 | 20 17 45.38 | + 1.49 |
| | 49 | B. A. C. 7149 | E. | | | | | | | | 6.0 | 8.6 | 33 55.91 | + 0.08 | | - 4.08 | 20 33 51.91 | + 0.92 |
| | 50 | α Cygni | E. | 57.2 | 0.7 | 2.9 | 8.7 | 14.5 | 20.3 | 25.9 | 28.0 | 31.7 | 37 14.43 | + 0.29 | - 4.20 | - 4.08 | 20 37 10.64 | + 0.14 |

1, 2, 3, 7. Bisections at threads V and VI.

4, 39, 42. Bisections at sets B and D.

6. Bisections at threads II and III.

10, 23, 24, 25, 27, 28, 29, 31, 32. Thread A used.

11. Thread B used.

49. Bisections at set C.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | |
| | | r. | " | " | " | | | | | | | | | | | | |
| 1 | 319 2 | 10 7.5 | 8.6 | 1.1 | 8.5 | 32 | .. | .. | .. | 240 | 215 | 68.1 | 40 53 18.1 | .. + | 52.3 | 92 0 31.6 | + 2.1 |
| 2 | 319 2 | 7.5 | 8.6 | 1.1 | 8.5 | 32 | .. | .. | .. | 370 | 385 | 68.1 | 40 53 20.4 | .. + | 52.3 | 92 0 33.9 | + 2.1 |
| 3 | 290 26 | 6.5 | 7.5 | 28.8 | 7.2 | 37 | .. | .. | .. | 190 | 170 | 68.1 | 69 30 32.4 | .. + 2 | 40.1 | 120 39 34.0 | - 5.1 |
| 4 | 328 26 | 3.3 | 4.8 | 23.8 | 4.0 | 35 | 420 | .. | .. | .. | 395 | 68.1 | 31 30 0.4 | .. + | 37.0 | 82 36 58.6 | - 0.7 |
| 5 | 285 48 | 6.8 | 9.1 | 0.6 | 8.7 | 35 | .. | 375 | .. | 290 | .. | 68.1 | 74 8 4.5 | .. + 3 | 29.8 | 125 17 55.5 | - 5.8 |
| 6 | 149 28 | 3.0 | 6.6 | 26.7 | 4.5 | 34 | 220 | 130 | .. | .. | .. | 68.1 | 210 27 42.2 | .. + | 35.6 | 20 38 3.4 | + 0.2 |
| 7 | 30 24 | 9 29.7 | 29.7 | 19.5 | 29.0 | 36 | .. | .. | .. | 680 | 660 | 68.1 | 329 32 17.2 | .. - | 35.6 | 20 38 2.8 | - 0.4 |
| 8 | 54 24 | 10 2.5 | 3.6 | 22.7 | 2.1 | 32 | 035 | 030 | 060 | .. | .. | 68.1 | 305 31 8.2 | .. - 1 | 24.7 | 356 37 4.7 | + 1.3 |
| 9 | 343 38 | 4.8 | 5.8 | 25.9 | 6.3 | 37 | .. | .. | .. | 865 | 820 | 68.1 | 16 18 41.5 | .. + | 17.7 | 67 25 20.4 | + 0.4 |
| 10 | 280 10 | 6.3 | 8.5 | 0.3 | 6.9 | 31 | 780 | 680 | .. | .. | .. | 68.1 | 79 42 33.6 | .. + 5 | 23.3 | 130 54 18.1 | - 6.2 |
| 11 | 280 10 | 6.3 | 8.5 | 0.3 | 6.9 | 32 | .. | .. | .. | 980 | 915 | 68.1 | 79 48 0.4 | .. + 5 | 26.1 | 130 59 47.7 | - 6.1 |
| 12 | 337 34 | 2.3 | 3.1 | 23.9 | 3.0 | 39 | 130 | 065 | .. | 935 | 850 | 68.1 | 22 22 55.2 | .. + | 25.0 | 73 29 41.4 | + 0.1 |
| 13 | 304 30 | 7.7 | 9.0 | 1.0 | 9.9 | 31 | 525 | 460 | .. | 380 | 330 | 68.1 | 55 25 5.4 | .. + 1 | 27.9 | 106 32 54.5 | + 0.1 |
| 14 | 48 16 | 5.7 | 6.5 | 28.5 | 4.8 | 36 | .. | 715 | 730 | 700 | .. | 68.1 | 311 40 23.6 | .. - 1 | 8.2 | 2 45 36.6 | - 0.3 |
| 15 | 285 2 | 5.9 | 6.9 | 29.2 | 7.7 | 38 | .. | .. | .. | 380 | 390 | 68.1 | 71 54 51.0 | .. + 3 | 42.0 | 126 4 54.2 | - 5.2 |
| 16 | 287 8 | 9.8 | 11.6 | 3.0 | 10.4 | 31 | 730 | 635 | .. | .. | .. | 68.1 | 72 47 9.7 | .. + 3 | 13.9 | 123 56 44.8 | - 4.9 |
| 17 | 293 20 | 7.8 | 8.9 | 0.0 | 9.3 | 38 | .. | 575 | .. | 475 | .. | 68.1 | 66 36 53.7 | .. + 2 | 19.7 | 117 45 34.6 | - 4.0 |
| 18 | 282 56 | 6.8 | 8.1 | 1.0 | 7.7 | 39 | .. | 210 | .. | 070 | .. | 68.1 | 77 1 2.4 | .. + 4 | 18.6 | 128 11 42.2 | - 5.3 |
| 19 | 294 52 | 6.0 | 7.8 | 28.5 | 7.9 | 32 | .. | .. | .. | 495 | 500 | 68.1 | 95 3 21.0 | .. + 2 | 10.1 | 116 11 52.3 | - 1.1 |
| 20 | 213 16 | 9.2 | 13.6 | 4.1 | 7.1 | 32 | 995 | 975 | .. | .. | .. | 68.1 | 146 39 29.8 | .. - | 40.1 | 84 27 31.5 | + 0.9 |
| 21 | 326 36 | 5.7 | 8.0 | 27.7 | 7.7 | 36 | .. | .. | .. | 935 | 925 | 68.1 | 33 20 28.9 | .. + | 40.1 | 81 27 30.2 | - 0.4 |
| 22 | 52 6 | 3.1 | 4.1 | 24.3 | 3.2 | 38 | 090 | 140 | .. | .. | .. | 68.1 | 307 50 41.8 | 30.7 - 1 | 18.5 | 358 55 41.5 | + 1.3 |
| 23 | 344 10 | 6.3 | 8.0 | 28.0 | 7.5 | 34 | 620 | 520 | .. | 290 | 275 | 68.1 | 15 43 16.3 | 30.0 + | 17.2 | 66 49 54.7 | - 1.7 |
| 24 | 340 0 | 5.1 | 6.5 | 25.2 | 6.6 | 37 | .. | 505 | .. | 350 | .. | 68.1 | 19 54 0.5 | .. + | 22.2 | 71 0 43.9 | - 1.7 |
| 25 | 345 18 | 5.5 | 6.8 | 27.8 | 6.0 | 34 | .. | 610 | .. | 545 | .. | 68.1 | 14 35 17.6 | .. + | 15.9 | 65 41 54.7 | - 0.9 |
| 26 | 337 22 | 1.0 | 3.0 | 21.8 | 2.3 | 34 | 420 | 370 | .. | 270 | 215 | 68.1 | 22 33 42.6 | .. + | 25.5 | 73 40 29.1 | .. |
| 27 | 326 42 | 0.0 | 1.8 | 21.7 | 1.5 | 33 | .. | 585 | .. | 385 | .. | 68.1 | 33 10 55.5 | 29.1 + | 40.0 | 84 17 56.7 | - 3.9 |
| 28 | 342 58 | 5.5 | 6.8 | 27.3 | 6.5 | 36 | .. | 180 | .. | 045 | .. | 68.1 | 16 55 41.1 | .. + | 18.6 | 68 2 20.9 | - 2.0 |
| 29 | 336 50 | 7.5 | 9.5 | 0.1 | 10.3 | 33 | .. | 240 | .. | 030 | .. | 68.1 | 23 2 58.3 | .. + | 26.1 | 74 9 45.6 | - 3.1 |
| 30 | 341 30 | 2.7 | 3.3 | 23.9 | 5.2 | 32 | .. | .. | .. | 630 | 640 | 68.1 | 18 25 18.5 | .. + | 20.4 | 69 32 0.5 | + 0.8 |
| 31 | 338 43 | 9.8 | 11.0 | 1.5 | 10.9 | 31 | .. | 265 | .. | 040 | .. | 68.1 | 21 4 29.4 | .. + | 23.6 | 72 11 14.2 | - 1.3 |
| 32 | 336 0 | 6.0 | 8.0 | 27.3 | 7.0 | 32 | .. | 940 | .. | 670 | .. | 68.1 | 23 52 51.0 | .. + | 27.2 | 74 59 39.4 | - 2.0 |
| 33 | 301 42 | 5.9 | 5.9 | 28.0 | 8.6 | 33 | 165 | .. | .. | .. | 965 | 69.1 | 58 13 29.0 | 25.3 + 1 | 39.3 | 109 21 29.5 | .. |
| 34 | 301 42 | 5.9 | 5.9 | 28.0 | 8.6 | 35 | .. | 595 | .. | 485 | .. | 69.1 | 58 14 7.1 | .. + 1 | 39.3 | 109 22 7.6 | .. |
| 35 | 317 40 | 3.6 | 5.2 | 27.3 | 6.2 | 32 | 765 | 700 | .. | 590 | 555 | 69.1 | 42 15 21.4 | .. + | 56.0 | 93 22 38.6 | - 0.2 |
| 36 | 294 56 | 6.8 | 8.2 | 29.8 | 8.7 | 38 | .. | .. | .. | 135 | 210 | 69.1 | 65 0 49.7 | .. + 2 | 11.7 | 116 9 22.6 | - 2.1 |
| 37 | 310 44 | 9.2 | 10.4 | 0.5 | 9.2 | 33 | 040 | 010 | .. | 790 | 775 | 69.1 | 49 11 29.5 | .. + 1 | 11.4 | 100 19 2.1 | - 0.9 |
| 38 | 0 12 | 6.0 | 8.3 | 27.4 | 7.2 | 37 | 225 | 200 | .. | 100 | 115 | 69.1 | 359 44 32.7 | 25.2 - | 0.3 | 50 50 53.6 | + 0.6 |
| 39 | 330 38 | 4.0 | 4.6 | 25.4 | 3.6 | 39 | .. | 935 | .. | 810 | .. | 69.1 | 29 19 10.9 | .. + | 31.6 | 80 26 6.7 | - 2.2 |
| 40 | 43 16 | 6.0 | 5.5 | 27.5 | 4.5 | 38 | 305 | .. | 275 | .. | 245 | 69.1 | 316 40 47.9 | 25.2 - | 58.2 | 7 46 10.9 | - 0.6 |
| 41 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 42 | 28 23 | 9 27.7 | 27.9 | 20.2 | 27.7 | 35 | 540 | .. | .. | .. | 430 | 67.3 | 331 27 56.1 | .. - | 33.2 | 22 23 44.1 | - 2.2 |
| 43 | 323 56 | 29.0 | 0.2 | 23.2 | 1.5 | 39 | .. | .. | .. | 360 | 320 | 67.3 | 36 0 58.7 | 32.0 + | 44.4 | 87 8 4.3 | - 1.3 |
| 44 | 348 41 | 10 2.3 | 2.0 | 24.2 | 2.0 | 34 | .. | 310 | .. | 235 | .. | 67.3 | 11 11 41.7 | .. + | 12.1 | 62 18 15.0 | -19.2 |
| 45 | 331 22 | 3.5 | 5.5 | 28.0 | 6.0 | 37 | .. | 600 | .. | 455 | .. | 67.3 | 23 34 34.6 | .. + | 33.1 | 79 41 28.9 | - 1.6 |
| 46 | 329 36 | 2.3 | 5.0 | 28.3 | 4.3 | 38 | .. | 280 | .. | 220 | .. | 67.3 | 30 20 44.9 | .. + | 35.5 | 81 27 41.6 | - 1.2 |
| 47 | 319 52 | 1.7 | 3.3 | 26.8 | 4.8 | 36 | .. | .. | .. | 330 | 320 | 67.3 | 40 4 15.7 | .. + | 50.8 | 91 11 27.7 | -13.3 |
| 48 | 0 54 | 9 28.7 | 2.8 | 24.3 | 2.0 | 36 | 625 | 605 | .. | 500 | 465 | 67.3 | 359 2 16.2 | .. - | 1.0 | 50 8 36.4 | -16.4 |
| 49 | 336 32 | 10 4.0 | 7.2 | 1.5 | 7.3 | 38 | .. | .. | .. | 520 | 510 | 67.3 | 23 24 52.7 | .. + | 26.0 | 74 31 39.9 | -14.0 |
| 50 | 5 52 | 9 29.7 | 2.3 | 24.5 | 1.0 | 34 | .. | 420 | .. | 315 | .. | 67.3 | 354 3 42.6 | .. - | 6.3 | 45 9 57.5 | - 0.3 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|------|
| | in. | ° | | " | " | " | " |
| 22 | 30.20 | 34.0 | 26 | - 0.2 | .. | .. | 0.2 |
| 23 | 30.20 | 33.4 | 33 | - 1.4 | + 19.0 | .. | 17.6 |
| 27 | 30.20 | 32.7 | 34 | - 1.4 | - 19.0 | .. | 20.4 |
| 33 | 30.15 | 28.7 | | | | | |
| 38 | 30.16 | 28.4 | | | | | |
| 40 | 30.17 | 28.0 | | | | | |
| 43 | 30.26 | 33.0 | | | | | |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|---------|---------|--------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | |
| | | | | m. | s. | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| 1876. | | | | | | | | | | | | | | | | | | |
| Feb. 18 | 1 | Cygni | E. | 28.9 | 31.0 | 32.8 | 39.8 | 42.1 | 44.4 | 51.5 | 53.2 | 56.1 | 7 42.10 | + 0.18 | - 4.05 | - 4.08 | 21 7 38.20 | - 0.02 |
| | 2 | B. A. C. 7398 . . | E. | .. | .. | .. | .. | .. | .. | 45.6 | 47.6 | 50.8 | 12 35.11 | + 0.26 | .. | - 4.08 | 21 12 31.29 | + 1 63 |
| | 3 | Sun I, N. | E. | 53.2 | 55.6 | 57.3 | 3.6 | 5.7 | 7.8 | 13.9 | 15.4 | 18.0 | 9 5.61 | - 0.11 | .. | - 4.07 | 22 9 1.43 | .. |
| | 4 | Sun II, S. | E. | 5.7 | 8.2 | 9.8 | 16.0 | 18.0 | 20.2 | 26.3 | 28.0 | 30.7 | 11 18.10 | - 0.11 | .. | - 4.07 | 22 11 13.92 | .. |
| | 5 | Andromedæ . . . | E. | 47.7 | 50.7 | 52.5 | 59.4 | 1.7 | 4.0 | 10.9 | 12.7 | 15.6 | 2 1 69 | + 0.10 | - 4.04 | - 4.07 | 0 1 57.72 | - 0.01 |
| | 6 | Pegasi | E. | 41.7 | 44.4 | 46.0 | 52.2 | 54.4 | 59.5 | 2.8 | 4.4 | 6.9 | 6 54.37 | + 0.02 | - 4.06 | - 4.07 | 0 6 50.32 | - 0.01 |
| | 7 | Venus I, S. . . . | E. | 2.7 | 5.3 | 6.8 | 13.0 | 15.1 | 17.4 | 23.3 | 24.7 | 27.4 | 22 15.06 | - 0.05 | .. | - 4.07 | 0 22 10.94 | + 0.46 |
| | 8 | Venus N. | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 9 | B. A. C. 166 . . . | E. | .. | .. | 40.1 | 42.6 | 45.0 | 47.4 | 49.8 | .. | .. | 32 44.98 | + 0.11 | .. | - 4.07 | 0 32 41.02 | + 1.00 |
| | 10 | Ceti | E. | 12.9 | 15.4 | 17.1 | 23.7 | 25.8 | 27.0 | 34.3 | 36.0 | 38.8 | 37 25.77 | - 0.14 | - 4.10 | - 4.07 | 0 37 21.56 | + 0.08 |
| | 11 | B. A. C. 334 . . . | E. | 35.6 | 38.8 | 40.6 | 48.0 | 50.6 | 53.1 | 0.5 | 2.5 | 5.5 | 2 50.58 | + 0.15 | .. | - 4.07 | 1 2 46.66 | + 0.96 |
| | 12 | Polaris | E. | .. | .. | 19.6 | 20.6 | 47.5 | .. | 11.0 | 5.0 | 5.5 | 12 12.99 | + 14.73 | .. | - 4.06 | 1 12 23.66 | - 0.59 |
| | 13 | Io | E. | 11.5 | 14.2 | 16.2 | 22.0 | 24.2 | 26.2 | 31.7 | 33.3 | 36.2 | 13 23.94 | - 0.01 | .. | - 4.05 | 9 13 19.88 | .. |
| | 14 | Undina | E. | 35.0 | 37.9 | 40.0 | 46.8 | 48.7 | 50.8 | 57.2 | 59.0 | 2.0 | 15 48 60 | + 0.12 | .. | - 4.05 | 9 15 44.67 | .. |
| | 15 | Uranus | E. | 8.3 | 10.9 | 12.5 | 19.0 | 21.1 | 23.4 | 29.6 | 31.2 | 33.9 | 20 21.08 | + 0.07 | .. | - 4.05 | 9 20 17.10 | .. |
| | 16 | Nemausa | E. | 12.9 | 15.5 | 17.2 | 23.4 | 25.5 | 27.0 | 33.5 | 35.1 | 37.7 | 23 25.38 | + 0.06 | .. | - 4.04 | 9 23 21.40 | .. |
| | 17 | Leonis | E. | 41.2 | 44.0 | 45.7 | 52.5 | 54.7 | 57.0 | 3.6 | 5.4 | 8.2 | 38 54.70 | + 0.12 | - 4.07 | - 4.03 | 9 38 50.79 | - 0.02 |
| | 18 | Beatrix | E. | 7.8 | 10.4 | 12.2 | 18.8 | 21.0 | 23.3 | 29.7 | 31.4 | 34.1 | 42 20.97 | + 0.10 | .. | - 4.03 | 9 42 17.04 | .. |
| | 19 | Euterpe | E. | 55.8 | 58.8 | 0.2 | 6.6 | 8.7 | 10.8 | 17.2 | 19.0 | 21.5 | 47 8.73 | + 0.07 | .. | - 4.03 | 9 47 4.77 | .. |
| | 20 | Leonis | E. | 39.3 | 41.8 | 43.6 | 49.8 | 51.0 | 54.0 | 0.2 | 1.8 | 4.5 | 1 51.88 | + 0.05 | - 3.98 | - 4.02 | 10 1 47.91 | - 0.08 |
| | 21 | Leonis | E. | 1.0 | 3.6 | 5.3 | 12.0 | 14.1 | 16.1 | 22.7 | 24.4 | 27.1 | 13 14.03 | + 0.09 | - 4.02 | - 4.01 | 10 13 10.11 | - 0.01 |
| | 22 | Leonis (R.) . . . | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 23 | Leonis | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 24 | Hebe | E. | .. | .. | 37.0 | 39.4 | 41.5 | 43.6 | 45.9 | .. | .. | 39 41.48 | + 0.06 | .. | - 3.97 | 10 39 37.57 | .. |
| | 25 | Ursæ Majoris (R.) | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 26 | Ursæ Majoris . . | E. | .. | .. | .. | .. | .. | 20.2 | 28.9 | 32.0 | 37.7 | 56 11.23 | .. | .. | .. | .. | .. |
| | 27 | Leonis (R.) . . . | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 28 | Leonis | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 29 | Ophiuchi | E. | 1.8 | 4.5 | 6.0 | 12.3 | 14.4 | 16.5 | 22.7 | 24.3 | 27.0 | 29 14.39 | - 0.03 | - 3.68 | - 3.75 | 17 29 10.61 | - 0.04 |
| | 30 | B. A. C. 5996 . . | E. | 14.8 | 16.4 | 20.4 | 22.5 | 24.5 | 26.6 | 28.6 | 32.6 | 34.2 | 37 24.51 | - 0.06 | .. | - 3.73 | 17 37 29.72 | + 0.07 |
| | 31 | Herculis | E. | .. | .. | .. | 39.7 | 42.0 | 44.3 | 49.0 | 50.7 | 53.6 | 41 39.72 | + 0.04 | - 3.64 | - 3.73 | 17 41 36.03 | - 0.09 |
| | 32 | Draconis | E. | 26.7 | 30.8 | 33.2 | 43.2 | 46.5 | 49.8 | 59.6 | 2.0 | 6.0 | 53 46.42 | + 0.24 | .. | - 3.73 | 17 53 42.94 | - 0.06 |
| | 33 | Sagittarii | E. | 40.0 | 43.0 | 44.9 | 52.0 | 54.3 | 56.6 | 3.8 | 5.5 | 8.5 | 57 54.29 | - 0.17 | - 3.68 | - 3.73 | 17 57 50.39 | - 0.04 |
| | 34 | Ursæ Minoris . . | E. | 35.5 | 38.5 | 41.0 | 53.0 | 59.0 | 2.0 | 37.0 | 11.0 | .. | 12 2.25 | + 5.50 | .. | - 3.72 | 18 12 4.03 | - 0.20 |
| | 35 | Serpentis | E. | 45.0 | 47.5 | 49.0 | 55.1 | 57.1 | 59.4 | 5.4 | 6.9 | 9.4 | 14 57.18 | - 0.09 | - 3.72 | - 3.71 | 18 14 53.37 | + 0.06 |
| | 36 | Aquilæ | E. | 18.8 | 21.4 | 22.0 | 29.0 | 31.1 | 33.2 | 39.4 | 40.9 | 43.5 | 28 31.13 | - 0.11 | - 3.72 | - 3.71 | 18 28 27.31 | + 0.08 |
| | 37 | Lyre | E. | 31.5 | 34.8 | 36.7 | 44.6 | 47.3 | 49.8 | 57.0 | 59.6 | 2.9 | 32 47.20 | + 0.11 | - 3.67 | - 3.71 | 18 32 45.60 | - 0.02 |
| | 38 | Moon II | E. | 3.9 | 6.0 | 8.8 | 15.0 | 18.3 | 20.8 | 27.8 | 29.7 | 32.7 | 37 18.31 | - 0.17 | .. | - 3.71 | 18 37 14.43 | - 70.04 |
| | 39 | Lyre | E. | 18.3 | 21.4 | 23.3 | 30.6 | 33.0 | 35.4 | 42.8 | 44.6 | 47.7 | 45 33.01 | + 0.08 | - 3.72 | - 3.70 | 18 45 29.39 | + 0.05 |
| | 40 | Aquilæ | E. | 33.2 | 35.0 | 37.5 | 43.8 | 45.8 | 48.0 | 54.2 | 55.8 | 58.4 | 59 45.84 | - 0.03 | - 3.72 | - 3.69 | 18 59 42.12 | + 0.11 |
| | 41 | Draconis | E. | 5.2 | 9.3 | 20.0 | 25.3 | 30.7 | 36.0 | 41.2 | 51.8 | 55.7 | 12 30.58 | + 0.84 | .. | - 2.91 | 19 12 28.51 | + 0.05 |
| | 42 | B. A. C. 6690 . . | E. | 31.3 | 34.2 | 36.0 | 42.0 | 45.2 | 47.5 | 54.5 | 56.1 | 59.1 | 25 45.20 | + 0.20 | .. | - 2.91 | 19 25 42.49 | + 0.81 |
| | 43 | Aquilæ | E. | 11.6 | 14.2 | 15.8 | 22.0 | 24.0 | 26.1 | 32.4 | 34.0 | 36.6 | 40 24.08 | + 0.11 | - 2.91 | - 2.91 | 19 40 21.28 | + 0.03 |
| | 44 | Aquilæ | E. | 33.8 | 36.4 | 38.0 | 44.0 | 46.2 | 48.4 | 54.5 | 56.1 | 58.6 | 44 46.22 | + 0.10 | - 2.91 | - 2.91 | 19 44 43.41 | + 0.04 |
| | 45 | Sun I, S. | E. | 10.0 | 12.6 | 14.3 | 20.4 | 22.5 | 24.5 | 30.8 | 32.4 | 35.0 | 24 22.50 | + 0.04 | .. | - 2.89 | 22 24 19.65 | .. |
| | 46 | Sun II, N. | E. | 22.0 | 24.4 | 26.0 | 32.3 | 34.3 | 36.3 | 42.7 | 44.1 | 46.0 | 26 34.33 | + 0.04 | .. | - 2.89 | 22 26 31.45 | .. |
| | 47 | Andromedæ . . . | E. | 46.3 | 49.4 | 51.0 | 58.0 | 0.4 | 2.8 | 9.8 | 11.3 | 14.4 | 2 0 38 | + 0.20 | - 2.85 | - 2.87 | 0 1 57.71 | 0.00 |
| | 48 | Pegasi | E. | 40.4 | 43.1 | 44.8 | 51.0 | 53.2 | 55.3 | 1.5 | 2.8 | 5.7 | 6 53.09 | + 0.12 | - 2.89 | - 2.87 | 0 6 50.34 | + 0.02 |
| | 49 | B. A. C. 166 . . . | E. | 20.3 | 32.4 | 34.2 | 41.4 | 43.6 | 45.9 | 52.9 | 54.8 | 57.8 | 32 43.59 | + 0.21 | .. | - 2.87 | 0 32 40.93 | + 1.03 |
| | 50 | Venus I, S. . . . | E. | 28.5 | 30.6 | 32.6 | 38.8 | 40.8 | 42.8 | 49.0 | 50.6 | 53.0 | 39 40.78 | + 0.08 | .. | - 2.86 | 0 39 38.00 | + 0.47 |

11. Bisections at threads II and III.

13, 14, 16, 18, 19, 24. Thread A used.

24. Bisections at threads III and IV.

28. Thread B used.

34. Bisections at threads B₁, C₃, and C₆.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|-------|----|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | | |
| | | R. | " | " | " | | | | | | | " | " | " | " | " | " | | |
| 1 | 350 46 | 9 28.0 | 0.0 | 23.7 | 0.3 | 37 | .. | .. | .. | 530 | 510 | 67.3 | 9 10 30.6 | .. | + | 9.6 | 60 17 1.4 | - 1.2 | |
| 2 | 359 56 | 29.9 | 3.3 | 25.5 | 3.3 | 40 | .. | .. | .. | 360 | 330 | 67.3 | 0 1 16.5 | .. | .. | 0.0 | 51 7 37.7 | -11.6 | |
| 3 | 310 0 | 10 4.9 | 6.6 | 0.8 | 9.2 | 33 | 300 | 275 | .. | .. | .. | 67.3 | 49 55 30.0 | .. | + | 1 9.7 | 101 3 0.9 | .. | |
| 4 | 309 28 | 6.6 | 7.8 | 0.7 | 10.8 | 34 | .. | .. | .. | 440 | 425 | 67.3 | 50 27 51.9 | 48.5 | + | 1 11.0 | 101 35 24.1 | .. | |
| 5 | 349 28 | 2.2 | 6.2 | 28.7 | 7.6 | 39 | .. | 530 | .. | 410 | .. | 67.3 | 10 29 4.9 | .. | + | 10.8 | 61 35 36.9 | + 0.3 | |
| 6 | 335 32 | 9 29.0 | 0.7 | 23.5 | 1.6 | 33 | .. | 960 | .. | 820 | .. | 67.3 | 24 23 34.4 | .. | + | 26.5 | 75 30 22.1 | + 0.9 | |
| 7 | 322 48 | 10 2.0 | 5.8 | 28.3 | 7.1 | 33 | 550 | .. | .. | .. | 330 | 67.3 | 37 7 32.0 | .. | + | 44.1 | 88 14 37.3 | -11.7 | |
| 8 | 322 48 | 2.0 | 5.8 | 28.3 | 7.1 | 32 | .. | 660 | .. | 490 | .. | 67.3 | 37 7 18.8 | .. | + | 44.1 | 88 14 24.1 | + 1.5 | |
| 9 | 351 14 | 9 27.2 | 1.2 | 23.5 | 1.5 | 37 | .. | .. | .. | 405 | 385 | 67.3 | 8 42 29.1 | .. | + | 8.9 | 59 48 59.2 | + 4.5 | |
| 10 | 302 24 | 10 2.3 | 5.7 | 0.5 | 8.1 | 36 | .. | 190 | .. | 150 | .. | 67.3 | 57 32 14.5 | .. | + | 1 31.3 | 108 40 7.0 | - 1.9 | |
| 11 | 356 0 | 0.0 | 3.5 | 28.5 | 6.0 | 34 | 180 | 160 | .. | .. | .. | 67.3 | 3 55 41.3 | .. | + | 4.0 | 55 2 6.5 | + 7.8 | |
| 12 | 49 40 | 9 28.0 | 2.2 | 24.5 | 29.5 | 33 | .. | 710 | .. | 690 | .. | 67.3 | 310 15 31.3 | 52.0 | - | 1 8.6 | 1 20 43.9 | - 3.1 | |
| 13 | 321 32 | 10 0.4 | 2.8 | 21.0 | 2.2 | 39 | 320 | 310 | .. | .. | .. | 68.0 | 38 22 23.7 | 37.0 | + | 47.6 | 89 29 32.5 | - 2.5 | |
| 14 | 345 22 | 9 29.8 | 0.8 | 19.5 | 29.9 | 34 | .. | 820 | .. | 670 | .. | 68.0 | 14 31 13.5 | .. | + | 15.6 | 65 37 50.3 | - 0.9 | |
| 15 | 337 24 | 28.8 | 0.6 | 19.5 | 29.5 | 39 | 310 | 310 | .. | .. | .. | 68.0 | 22 32 57.7 | .. | + | 25.0 | 73 39 43.9 | .. | |
| 16 | 326 52 | 27.4 | 0.5 | 19.0 | 27.8 | 34 | .. | 120 | .. | 920 | .. | 68.0 | 33 1 1.0 | .. | + | 39.1 | 84 8 1.3 | - 3.8 | |
| 17 | 345 24 | 10 1.6 | 3.4 | 22.8 | 1.5 | 38 | 470 | 420 | .. | .. | .. | 68.0 | 14 32 44.9 | .. | + | 15.6 | 65 39 21.7 | - 1.6 | |
| 18 | 343 2 | 2.7 | 3.1 | 25.3 | 3.2 | 39 | .. | 655 | .. | 615 | .. | 68.0 | 16 52 32.0 | .. | + | 18.2 | 67 59 11.4 | - 1.9 | |
| 19 | 336 56 | 6.5 | 9.8 | 28.8 | 7.3 | 37 | 840 | 820 | .. | .. | .. | 68.0 | 22 57 36.9 | .. | + | 25.5 | 74 4 23.6 | - 3.1 | |
| 20 | 333 38 | 2.6 | 4.0 | 25.7 | 3.3 | 38 | .. | 805 | .. | 700 | .. | 68.0 | 26 18 52.2 | .. | + | 29.8 | 77 25 43.2 | 0.0 | |
| 21 | 341 30 | 3.0 | 3.0 | 24.4 | 5.5 | 32 | 805 | 750 | .. | .. | .. | 68.0 | 18 25 19.7 | .. | + | 20.0 | 69 32 0.9 | + 1.2 | |
| 22 | 208 52 | 1.0 | 4.6 | 24.5 | 29.7 | 33 | 295 | 235 | .. | .. | .. | 68.0 | 151 3 25.4 | .. | - | 33.3 | 80 3 29.1 | + 1.5 | |
| 23 | 331 0 | 1.7 | 4.8 | 25.7 | 3.7 | 37 | .. | .. | .. | 370 | 350 | 68.0 | 28 56 32.2 | .. | + | 33.3 | 80 3 26.7 | - 0.9 | |
| 24 | 336 12 | 1.7 | 1.5 | 23.7 | 1.0 | 39 | 835 | .. | 720 | .. | .. | 68.0 | 23 42 32.4 | .. | + | 26.4 | 74 49 20.0 | - 2.0 | |
| 25 | 156 24 | 1.8 | 4.3 | 23.5 | 1.7 | 31 | 660 | 610 | .. | .. | .. | 68.0 | 203 30 59.9 | .. | + | 26.2 | 27 34 55.1 | - 1.8 | |
| 26 | 23 28 | 1.3 | 2.6 | 24.3 | 0.7 | 39 | .. | .. | .. | 360 | 325 | 68.0 | 336 29 1.7 | 35.5 | - | 26.2 | 27 34 58.7 | + 1.8 | |
| 27 | 197 36 | 4.3 | 9.6 | 28.3 | 4.5 | 30 | 020 | 010 | .. | .. | .. | 68.0 | 162 18 39.7 | .. | - | 19.2 | 68 48 0.7 | + 1.8 | |
| 28 | 342 16 | 9 28.8 | 0.0 | 20.3 | 28.8 | 30 | .. | .. | .. | 620 | 580 | 68.0 | 17 41 16.7 | .. | + | 19.2 | 68 47 57.1 | - 1.8 | |
| 29 | 333 42 | 10 1.2 | 3.9 | 25.7 | 5.8 | 36 | .. | .. | .. | 680 | 620 | 67.9 | 26 14 21.3 | 36.5 | + | 29.7 | 77 21 12.2 | - 0.8 | |
| 30 | 325 40 | 9 29.9 | 1.2 | 21.8 | 2.8 | 35 | 520 | .. | .. | .. | 375 | 67.9 | 34 15 59.0 | .. | + | 11.1 | 85 23 1.3 | -18.2 | |
| 31 | 348 50 | 28.7 | 28.8 | 21.0 | 29.5 | 36 | .. | .. | .. | 200 | 150 | 67.9 | 11 6 9.6 | .. | + | 11.8 | 62 12 42.6 | - 0.1 | |
| 32 | 12 32 | 10 5.0 | 7.3 | 28.0 | 5.7 | 35 | 455 | .. | .. | .. | 305 | 67.9 | 347 24 3.9 | .. | - | 13.5 | 38 30 11.6 | - 0.6 | |
| 33 | 290 40 | 0.2 | 3.9 | 26.0 | 1.6 | 37 | .. | .. | .. | 410 | 340 | 67.9 | 69 16 30.8 | .. | + | 2 38.0 | 120 25 30.0 | - 1.4 | |
| 34 | 47 38 | 5.3 | 6.5 | 28.5 | 5.3 | 37 | 665 | .. | 750 | .. | 690 | 67.9 | 312 18 38.8 | .. | - | 1 6.1 | 3 23 53.9 | - 3.0 | |
| 35 | 318 8 | 4.0 | 6.5 | 28.3 | 8.7 | 38 | .. | .. | .. | 030 | 970 | 67.9 | 41 48 44.6 | .. | + | 53.8 | 92 55 59.6 | 0.0 | |
| 36 | 312 44 | 4.5 | 8.4 | 29.1 | 8.3 | 37 | 260 | 240 | .. | 145 | 125 | 67.9 | 47 12 31.7 | .. | + | 1 4.9 | 98 19 57.8 | + 0.8 | |
| 37 | 359 42 | 3.2 | 6.5 | 27.5 | 3.9 | 34 | 790 | 765 | .. | 710 | 640 | 67.9 | 0 13 52.1 | .. | + | 0.2 | 51 20 13.5 | - 0.4 | |
| 38 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 39 | 354 16 | 4.4 | 7.4 | 28.5 | 6.3 | 38 | 955 | 975 | .. | 920 | 870 | 67.9 | 5 40 42.9 | .. | + | 6.0 | 56 47 10.1 | - 0.6 | |
| 40 | 334 44 | 1.3 | 3.0 | 26.0 | 4.4 | 37 | 995 | .. | .. | .. | 775 | 67.9 | 25 12 38.6 | 39.5 | + | 28.2 | 76 19 28.0 | + 0.8 | |
| 41 | 28 28 | 5.6 | 6.3 | 28.3 | 6.5 | 35 | 115 | .. | .. | .. | .. | 69.6 | 331 28 0.5 | 24.0 | - | 33.4 | 22 33 48.3 | + 1.0 | |
| 42 | 348 44 | 3.5 | 4.4 | 24.5 | 3.2 | 34 | .. | 325 | .. | 210 | .. | 69.6 | 11 11 45.2 | .. | + | 12.2 | 62 18 18.6 | -19.9 | |
| 43 | 331 22 | 9 24.4 | 25.4 | 16.1 | 26.7 | 38 | .. | 240 | .. | 095 | .. | 69.6 | 28 34 36.7 | .. | + | 33.5 | 79 41 31.4 | + 0.5 | |
| 44 | 329 36 | 10 3.5 | 5.4 | 27.3 | 5.8 | 38 | .. | 300 | .. | 205 | .. | 69.6 | 30 20 47.7 | .. | + | 36.0 | 81 27 44.9 | + 1.7 | |
| 45 | 310 54 | 3.1 | 3.2 | 26.4 | 7.4 | 31 | 775 | 760 | .. | .. | .. | 69.6 | 49 1 6.2 | .. | + | 1 11.1 | 100 8 38.5 | .. | |
| 46 | 311 28 | 11.4 | 12.5 | 4.6 | 15.4 | 37 | .. | .. | .. | 370 | 330 | 69.6 | 48 28 43.4 | 22.5 | + | 1 9.8 | 99 36 14.4 | .. | |
| 47 | 349 28 | 6.5 | 6.5 | 0.0 | 7.8 | 39 | .. | 360 | .. | 200 | .. | 69.6 | 10 29 5.8 | .. | + | 11.4 | 61 35 38.4 | + 1.2 | |
| 48 | 335 32 | 9 28.6 | 28.5 | 21.0 | 0.8 | 33 | .. | 930 | .. | 760 | .. | 69.6 | 24 23 34.5 | .. | + | 28.0 | 75 30 23.7 | + 2.1 | |
| 49 | 351 14 | 10 1.5 | 2.1 | 25.0 | 3.1 | 37 | .. | 535 | .. | 210 | .. | 69.6 | 8 42 31.8 | 23.0 | + | 9.5 | 59 49 2.5 | + 3.9 | |
| 50 | 324 54 | 9 29.9 | 29.8 | 24.2 | 2.5 | 35 | 240 | .. | .. | .. | 040 | 69.6 | 35 1 56.2 | .. | + | 43.3 | 86 9 0.7 | .. | |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " " | " " | " " | " " |
| 4 | 30.12 | 46.0 | 3 | - 6.8 | + 16 11.6 | . | + 16 4.8 |
| 12 | 30.04 | 50.0 | 4 | - 6.9 | - 16 11.6 | . | - 16 18.5 |
| 13 | 30.16 | 40.5 | 7 | - 4.9 | - 6.8 | . | - 11.7 |
| 26 | 30.07 | 39.0 | 8 | - 4.9 | + 6.8 | - 0.4 | + 1.5 |
| 29 | 30.19 | 37.0 | 15 | - 0.2 | .. | .. | - 0.2 |
| 40 | 30.22 | 39.5 | 45 | - 6.7 | - 16 12.0 | . | - 16 18.7 |
| 41 | 29.98 | 28.5 | 46 | - 6.6 | + 16 12.0 | . | + 16 5.4 |
| 46 | 30.06 | 26.5 | 50 | - 4.1 | - 8.0 | . | - 12.1 |
| 49 | 30.06 | 31.0 | | | | | |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|------------------|---------|------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|-----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock apparent. | Clock adopted. | | |
| | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| 1876. Feb. 23 | 1 | Venus N. | E. | | | | | | | | | | | | | | | |
| | 2 | Polaris | E. | | 23.0 | 15.0 | 44.5 | 8.0 | 34.0 | | | 53.0 | 12 8.53 | +15.69 | | -2.86 | 1 12 21.36 | +0.06 |
| | 3 | B. A. C. 7022 . . . | F. | 31.7 | 35.2 | 37.0 | 42.4 | 45.1 | 47.8 | | | | 17 47.73 | +0.32 | | -2.71 | 20 17 45.34 | +1.38 |
| | 4 | B. A. C. 7149 . . . | F. | 41.9 | 44.5 | 46.2 | | | | 3.3 | 5.0 | 7.4 | 33 54.72 | -0.06 | | -2.71 | 20 33 51.95 | +0.84 |
| | 5 | 5 Cygni | F. | 26.8 | 29.7 | 31.4 | 38.6 | 40.9 | 43.3 | 50.3 | 52.0 | 55.0 | 7 40.89 | +0.13 | -2.72 | -2.70 | 21 7 38.32 | +0.03 |
| | 6 | α Cephei | F. | 9.4 | 15.0 | 18.3 | 31.0 | 35.6 | 40.0 | 53.3 | 56.4 | 1.7 | 15 35.70 | +1.10 | | -2.70 | 21 15 34.10 | +0.24 |
| | 7 | β Cephei | F. | | | 47.9 | 54.0 | 59.8 | 6.0 | 11.7 | | | 26 59.88 | +1.77 | | -2.70 | 21 26 58.95 | +0.67 |
| | 8 | ϵ Pegasi | F. | 55.3 | 57.9 | 59.5 | 3.0 | 7.8 | 11.9 | 16.0 | 17.5 | 20.0 | 38 7.72 | -0.13 | -2.67 | -2.70 | 21 38 4.89 | -0.02 |
| | 9 | Sun I, S. | F. | 58.3 | 0.8 | 2.5 | 8.7 | 10.9 | 12.0 | 18.9 | 20.6 | 23.2 | 28 10.76 | -0.36 | | -2.60 | 22 28 7.71 | |
| | 10 | Sun II, N. | F. | 10.0 | 12.6 | 14.2 | 20.5 | 22.4 | 24.5 | 30.7 | 32.4 | 34.8 | 30 22.46 | -0.36 | | -2.60 | 22 30 19.41 | |
| | 11 | Polaris | F. | | | | 26.0 | | | 46.0 | | | 11 52.25 | +31.56 | | -2.66 | 1 12 21.15 | +0.61 |
| | 12 | α Aquilæ | S. | 33.8 | 36.5 | 38.0 | 44.0 | 46.2 | 48.3 | 54.4 | 56.0 | 58.7 | 44 46.21 | -0.28 | -2.48 | | | |
| | 13 | Sun I, S. | S. | 45.5 | 48.0 | 49.7 | 55.9 | 58.0 | 0.1 | 6.4 | 7.9 | 10.6 | 31 58.01 | -0.52 | | -2.51 | 22 31 54.98 | |
| | 14 | Sun II, N. | S. | 57.0 | 59.8 | 1.4 | 7.5 | 9.4 | 11.5 | 17.9 | 19.3 | 21.9 | 34 9.52 | -0.52 | | -2.51 | 22 34 6.49 | |
| | 15 | α Andromedæ . . . | S. | 46.4 | 49.3 | 51.0 | 58.0 | 0.3 | 2.0 | 9.6 | 11.3 | 14.1 | 2 0.29 | -0.03 | -2.53 | | | |
| | 16 | Venus I, S. | S. | 11.7 | 14.2 | 15.8 | 22.0 | 23.9 | 26.0 | 32.3 | 34.0 | 36.5 | 48 24.04 | -0.36 | | -2.53 | 0 48 21.15 | +0.47 |
| | 17 | Polaris | S. | | | 54.0 | 21.5 | 47.0 | 16.5 | 43.0 | | | 11 48.32 | +33.86 | | -2.53 | 1 12 19.65 | -0.16 |
| | 18 | Polaris | P. | 10.2 | 58.5 | 58.6 | 25.5 | 51.7 | 18.5 | 44.2 | 45.0 | 34.1 | 11 51.79 | +30.05 | | -2.69 | 1 12 19.15 | +0.01 |
| 26 | 19 | η Piscium | P. | | | | | | 57.6 | 1.9 | 3.5 | 6.2 | 24 53.46 | -0.29 | -2.70 | -2.69 | 1 24 50.48 | +0.08 |
| | 20 | β Arietis | P. | 36.9 | 39.7 | 41.4 | 47.9 | 50.0 | 52.3 | 58.6 | 0.4 | 3.0 | 47 50.02 | -0.22 | -2.72 | -2.69 | 1 47 47.11 | +0.05 |
| | 21 | α Arietis | P. | | | | | | 18.6 | 22.5 | 24.0 | 26.9 | 0 13.57 | -0.19 | -2.66 | -2.69 | 2 0 10.69 | -0.02 |
| Mar. 2 | 22 | Sun I, N. | F. | 17.8 | 20.1 | 21.9 | 28.0 | 30.0 | 32.1 | 38.3 | 39.9 | 42.5 | 54 30.07 | -0.26 | | -2.44 | 22 54 27.37 | |
| | 23 | Sun II, S. | E. | 28.0 | 30.9 | 32.4 | 38.6 | 40.5 | 42.6 | 48.8 | 50.4 | 53.0 | 56 40.58 | -0.26 | | -2.44 | 22 56 37.88 | |
| | 24 | α Andromedæ . . . | E. | | | | | | 4.7 | 9.4 | 11.1 | 14.2 | 2 0.13 | +0.03 | -2.44 | | | |
| | 25 | γ Tauri | E. | 34.4 | 37.0 | 38.7 | 45.0 | 47.1 | 49.3 | 55.6 | 57.1 | 59.8 | 12 47.11 | -0.09 | -2.36 | -2.37 | 4 12 44.65 | 0.00 |
| | 26 | Moon S. | E. | | | | | | | | | | | | | | | |
| | 27 | ϵ Tauri | E. | 12.5 | 15.2 | 16.8 | 23.4 | 25.5 | 27.4 | 34.0 | 35.8 | 38.4 | 21 25.47 | -0.06 | -2.37 | -2.37 | 4 21 23.04 | -0.01 |
| | 28 | α Tauri | E. | 38.5 | 41.2 | 42.8 | 49.2 | 51.3 | 53.5 | 59.8 | 1.4 | 4.0 | 28 51.30 | -0.09 | -2.35 | -2.37 | 4 28 48.84 | -0.04 |
| | 29 | γ Camelopardalis . | E. | 15.7 | 22.0 | 26.0 | 41.3 | 46.0 | 51.0 | 6.2 | 10.0 | 16.3 | 41 46.06 | +0.98 | | -2.37 | 4 41 44.67 | +0.17 |
| | 30 | ϵ Aurigæ | E. | 43.5 | 46.5 | 48.4 | 55.6 | 58.0 | 0.5 | 7.8 | 9.7 | 12.7 | 48 58.08 | +0.09 | -2.39 | -2.37 | 4 48 55.80 | -0.02 |
| | 31 | δ Orionis (R.) . . . | E. | | | | | | | | | | | | | | | |
| | 32 | δ Orionis | E. | | | | | | | | | | | | | | | |
| | 33 | δ Ursæ Minoris, S. P. | E. | 47.5 | 5.0 | 38.5 | 54.4 | 21.0 | 46.5 | 1.5 | 35.0 | 54.5 | 12 20.77 | -10.40 | | -2.35 | 18 12 8.02 | +0.11 |
| | 34 | γ Geminorum (R.) . | E. | | | | | | | | | | | | | | | |
| | 35 | γ Geminorum | E. | | | | | | | | | | | | | | | |
| | 36 | β Aquarii | F. | 51.6 | 54.0 | 55.7 | 1.9 | 3.9 | 5.0 | 12.0 | 13.6 | 16.2 | 25 3.87 | -0.32 | -2.24 | -2.30 | 21 25 1.25 | -0.03 |
| | 37 | ϵ Pegasi | F. | 55.2 | 57.6 | 59.4 | 5.4 | 7.6 | 9.7 | 15.7 | 17.4 | 20.2 | 33 7.58 | -0.18 | -2.37 | -2.31 | 21 38 5.09 | +0.07 |
| 3 | 38 | Sun I, S. | F. | 1.5 | 3.9 | 5.4 | 11.7 | 13.7 | 15.8 | 21.0 | 23.5 | 25.9 | 58 13.70 | -0.36 | | -2.32 | 22 58 11.02 | |
| | 39 | Sun II, N. | F. | 11.5 | 14.2 | 15.9 | 22.0 | 24.0 | 26.2 | 32.3 | 33.9 | 36.5 | 0 24.06 | -0.36 | | -2.32 | 23 0 21.38 | |
| | 40 | Polaris | F. | | | 57.5 | 26.0 | 51.0 | 17.0 | 44.0 | | | 11 51.02 | +27.29 | | -2.33 | 1 12 15.99 | +0.19 |
| | 41 | β Orionis | F. | | | | | | | | | | | | | | | |
| | 42 | Moon I, N. | F. | 39.4 | 42.5 | 44.2 | 51.3 | 53.6 | 56.0 | 3.3 | 5.1 | 8.0 | 19 52.71 | +0.06 | | -2.39 | 5 19 51.38 | +77.02 |
| | 43 | B. A. C. 1841 . . . | F. | 12.5 | 15.6 | 17.5 | 24.8 | 27.2 | 29.5 | 36.5 | 38.6 | 41.6 | 41 27.12 | -0.57 | | -2.38 | 5 41 21.17 | -0.79 |
| | 44 | B. A. C. 1865 . . . | F. | | | 9.9 | 12.4 | 14.6 | 17.0 | 19.4 | | | 45 14.66 | -0.55 | | -2.38 | 5 45 11.73 | -0.81 |
| | 45 | B. A. C. 1922 . . . | F. | 57.1 | 0.3 | 2.2 | 9.8 | 12.2 | 14.8 | 22.2 | 24.0 | 27.3 | 53 12.21 | -0.60 | | -2.38 | 5 53 9.23 | -0.84 |
| | 46 | Durch. + 18°, 1111 | F. | 16.0 | 18.8 | 20.4 | 26.9 | 29.0 | 31.1 | 37.6 | 39.2 | 41.9 | 3 28.90 | -0.07 | | -2.38 | 6 3 26.54 | -1.09 |
| | 47 | δ Ursæ Minoris, S. P. | F. | | | 32.0 | 55.5 | 22.5 | 49.0 | 13.5 | | | 12 22.50 | -12.06 | | -2.38 | 18 12 8.10 | -0.10 |
| | 48 | μ Geminorum | F. | | | 26.6 | 28.9 | 31.0 | 33.5 | 35.5 | | | 15 31.10 | -0.02 | -2.36 | -2.37 | 6 15 28.71 | -0.05 |
| | 49 | B. A. C. 2098 . . . | F. | 36.0 | 39.5 | 41.7 | 49.0 | 52.3 | 55.1 | 3.1 | 5.0 | 8.7 | 21 52.33 | -0.67 | | -2.37 | 6 21 49.29 | -0.96 |
| | 50 | B. A. C. 2117 . . . | F. | | | 45.6 | 48.2 | 50.9 | 53.6 | 59.0 | 1.0 | 4.5 | 24 48.22 | -0.67 | | -2.37 | 6 24 45.28 | -0.97 |

2. Bisections at threads C₁, C₃, and D₁.
 7, 33, 42, 44. Bisections at sets B and D.
 49. Thread A used.
 50. Thread B used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|--------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | |
| 1 | 324 54 | 9 29.9 | 29.8 | 24.2 | 2.5 | 34 | .. | 175 | .. | 060 | .. | 69.6 | 35 1 40.5 | .. | 43.3 | 86 8 45.0 |
| 2 | 49 40 | 24.3 | 25.0 | 16.4 | 21.7 | 34 | 430 | .. | 485 | 385 | .. | 69.6 | 310 15 38.7 | .. | 12.8 | 1 20 47.1 |
| 3 | 0 54 | 25.1 | 23.2 | 18.2 | 28.4 | 36 | .. | .. | .. | 890 | 794 | 69.6 | 359 2 18.4 | 24.5 | 1.0 | 50 8 38.6 |
| 4 | 336 32 | 28.1 | 25.3 | 19.1 | 0.2 | 38 | .. | .. | .. | .. | 820 | 69.6 | 23 24 50.7 | .. | 26.7 | 74 31 38.6 |
| 5 | 350 46 | 10 1.4 | 29.2 | 22.3 | 2.6 | 37 | .. | 428 | .. | 336 | .. | 69.6 | 9 10 30.4 | .. | 9.9 | 60 17 1.5 |
| 6 | 23 6 | 9 24.3 | 21.9 | 15.9 | 25.9 | 38 | .. | 342 | .. | 238 | .. | 69.6 | 336 50 37.9 | .. | 26.3 | 27 56 32.8 |
| 7 | 31 2 | 24.9 | 21.7 | 12.6 | 24.7 | 33 | .. | .. | .. | 596 | 484 | 69.6 | 328 53 24.1 | .. | 37.1 | 19 59 8.2 |
| 8 | 330 22 | 27.2 | 24.9 | 18.5 | 0 5 | 38 | .. | 598 | .. | 524 | .. | 69.6 | 29 34 44.7 | 27.2 | 34.8 | 80 51 40.7 |
| 9 | 311 16 | 15.6 | 16.9 | 7.3 | 16.4 | 32 | 526 | 496 | .. | .. | .. | 69.6 | 48 38 59.1 | .. | 9.3 | 99 46 29.6 |
| 10 | 311 48 | 17.0 | 18.0 | 11.5 | 20.0 | 30 | .. | .. | .. | 938 | 826 | 69.6 | 48 6 40.0 | 29.5 | 8.0 | 99 14 9.2 |
| 11 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 12 | 329 36 | 28.0 | 28.8 | 20.4 | 0.8 | 38 | .. | 520 | .. | 370 | .. | 69.7 | 30 20 44.7 | 27.4 | 35.9 | 81 27 41.8 |
| 13 | 311 40 | 24.5 | 24.5 | 19.8 | 29.5 | 38 | 974 | 940 | .. | .. | .. | 69.7 | 48 16 48.4 | .. | 7.6 | 99 24 17.2 |
| 14 | 312 12 | 10 6.4 | 9.0 | 0.6 | 10.2 | 36 | .. | .. | .. | 598 | 538 | 69.7 | 47 44 27.1 | 35.0 | 6.3 | 98 51 54.6 |
| 15 | 349 28 | 7.1 | 8.2 | 4.4 | 11.2 | 39 | .. | 146 | .. | 986 | .. | 69.7 | 10 29 5.1 | .. | 11.1 | 61 35 37.4 |
| 16 | 325 56 | 6.1 | 8.5 | 3.1 | 9.5 | 33 | .. | 243 | .. | 098 | .. | 69.7 | 33 59 33.7 | .. | 40.2 | 85 6 35.1 |
| 17 | 49 40 | 9 26.8 | 29.1 | 22.1 | 27.0 | 34 | 010 | .. | 050 | .. | 060 | 69.7 | 310 15 36.6 | 41.2 | 10.2 | 1 20 47.6 |
| 18 | 49 40 | 10 2.7 | 6.2 | 29.5 | 6.0 | 33 | 405 | 400 | 435 | 425 | 375 | 69.4 | 310 15 34.0 | .. | 8.2 | 1 20 47.0 |
| 19 | 335 46 | 8.9 | 10.8 | 4.0 | 12.3 | 37 | .. | .. | .. | .. | 955 | 69.4 | 24 10 50.5 | 53.8 | 26.0 | 75 17 37.7 |
| 20 | 341 14 | 7.9 | 11.0 | 4.9 | 12.7 | 31 | 760 | 750 | .. | 585 | 510 | 69.4 | 18 41 12.7 | .. | 19.6 | 69 47 53.5 |
| 21 | 343 56 | 9.0 | 13.8 | 9.1 | 13 8 | 37 | .. | .. | .. | 415 | 410 | 69.4 | 16 0 44.4 | 52.7 | 16.6 | 67 7 22.2 |
| 22 | 314 28 | 11.9 | 14.1 | 4.7 | 17.5 | 37 | 450 | 420 | .. | .. | .. | 61.9 | 45 28 37.8 | .. | 1.9 | 96 36 0.9 |
| 23 | 313 50 | 7.5 | 9.6 | 1.3 | 11.8 | 38 | .. | .. | .. | 685 | 600 | 61.9 | 46 0 55.1 | 29.5 | 3.1 | 97 8 19.4 |
| 24 | 349 28 | 3.5 | 4.1 | 27.3 | 4.0 | 39 | .. | 900 | .. | 850 | .. | 61.9 | 10 29 7.2 | .. | 11.3 | 61 35 39.7 |
| 25 | 336 22 | 2.8 | 3.8 | 24.7 | 4.2 | 33 | .. | 475 | .. | 415 | .. | 61.9 | 23 33 27.8 | 31.5 | 26.5 | 74 40 15.5 |
| 26 | 346 46 | 20.5 | 22.3 | 11.5 | 20.8 | 32 | .. | 320 | 235 | 110 | 970 | 61.9 | 13 9 26.2 | .. | 14.2 | 64 16 1.6 |
| 27 | 339 58 | 9.0 | 10.5 | 0.0 | 8.6 | 38 | 830 | 800 | .. | 630 | 585 | 61.9 | 19 58 54.2 | .. | 22.1 | 71 5 37.5 |
| 28 | 337 18 | 4.0 | 5.5 | 27.3 | 5.7 | 33 | 930 | 880 | .. | 830 | 780 | 61.9 | 22 37 35.9 | .. | 25.3 | 73 44 22.4 |
| 29 | 27 10 | 9 28.5 | 29.6 | 19.1 | 27.6 | 36 | 070 | .. | .. | .. | 810 | 61.9 | 332 46 2.4 | .. | 31.3 | 23 51 52.3 |
| 30 | 354 0 | 10 3.5 | 4.0 | 25.8 | 4.3 | 32 | 595 | 580 | .. | 470 | 450 | 61.9 | 5 55 14.5 | .. | 6.3 | 57 1 42.0 |
| 31 | 219 12 | 2.8 | 3.5 | 27.5 | 1.8 | 34 | 520 | .. | .. | .. | .. | 61.9 | 140 43 42.8 | .. | 49.8 | 90 23 28.2 |
| 32 | 320 40 | 9 29.6 | 29.8 | 21.3 | 2.7 | 37 | .. | .. | .. | 010 | 960 | 61.9 | 39 16 20.1 | .. | 49.8 | 90 23 31.1 |
| 33 | 54 24 | 10 3.0 | 2.7 | 23.2 | 2.7 | 32 | 250 | .. | 110 | .. | 170 | 61.9 | 305 31 6.4 | .. | 25.2 | 356 36 2.4 |
| 34 | 202 18 | 7.5 | 9.5 | 1.8 | 6.3 | 31 | 630 | 535 | .. | .. | .. | 61.9 | 157 37 2.8 | .. | 25.1 | 73 29 43.5 |
| 35 | 337 34 | 0.7 | 0.0 | 20.9 | 0.3 | 39 | .. | .. | .. | 270 | 235 | 61.9 | 22 22 54.6 | .. | 25.1 | 73 29 40.9 |
| 36 | 314 56 | 12.7 | 12.9 | 4.8 | 14.9 | 33 | .. | .. | .. | 782 | 750 | 62.7 | 44 59 41.5 | 28.5 | 1.5 | 96 7 4.2 |
| 37 | 330 22 | 3.1 | 3.5 | 25.1 | 5.7 | 38 | .. | 720 | .. | 552 | .. | 62.7 | 29 34 45.5 | .. | 34.9 | 80 41 41.6 |
| 38 | 314 18 | 18.5 | 22.3 | 13.0 | 22.5 | 33 | 770 | 774 | .. | .. | .. | 62.7 | 45 37 46.5 | .. | 2.3 | 96 45 10.0 |
| 39 | 314 50 | 9 26.3 | 24.7 | 14.5 | 28.0 | 34 | .. | .. | .. | 336 | 284 | 62.7 | 45 5 32.4 | 32.5 | 1.2 | 96 12 54.8 |
| 40 | 49 40 | 10 2.3 | 3.8 | 24.0 | 4.1 | 34 | 240 | 254 | 254 | 260 | 270 | 62.7 | 310 15 37.8 | 36.5 | 11.3 | 1 20 47.7 |
| 41 | 312 42 | 3.7 | 4.1 | 24.3 | 6.3 | 32 | .. | .. | .. | 958 | 930 | 64.1 | 47 13 21.0 | .. | 5.9 | 98 20 48.1 |
| 42 | 319 30 | 4.0 | 3.5 | 22.3 | 4.3 | 31 | 120 | .. | 096 | .. | 990 | 64.1 | 10 24 50.2 | .. | 11.2 | 61 31 22.6 |
| 43 | 288 44 | 8.2 | 10.3 | 0.3 | 12.2 | 35 | 560 | 516 | .. | 422 | 400 | 64.1 | 71 12 4.0 | .. | 57.3 | 122 21 22.5 |
| 44 | 290 26 | 4.0 | 3.2 | 27.0 | 7.5 | 37 | .. | .. | .. | 696 | 676 | 64.1 | 69 30 33.7 | .. | 41.8 | 120 39 36.7 |
| 45 | 285 48 | 7.1 | 8.1 | 28.6 | 10.5 | 35 | .. | 736 | .. | 700 | .. | 64.1 | 74 8 6.2 | 33.2 | 31.4 | 125 17 58.8 |
| 46 | 339 46 | 6.1 | 6.5 | 28.8 | 8.5 | 34 | .. | 178 | .. | 108 | .. | 64.1 | 20 9 41.3 | .. | 22.3 | 71 16 24.8 |
| 47 | 54 24 | 3.5 | 3.3 | 24.2 | 5.2 | 32 | 056 | 058 | 064 | 056 | 052 | 64.1 | 305 31 5.7 | .. | 25.1 | 356 36 1.8 |
| 48 | 343 38 | 8.6 | 7.1 | 28.3 | 11.0 | 37 | .. | .. | .. | 792 | 774 | 64.1 | 16 18 39.6 | .. | 17.8 | 67 25 18.6 |
| 49 | 280 10 | 18.7 | 18.1 | 10.3 | 19.6 | 31 | 204 | 196 | .. | 156 | 136 | 64.1 | 79 42 33.5 | .. | 24.8 | 130 54 19.5 |
| 50 | 280 10 | 18.7 | 18.1 | 10.3 | 19.6 | 32 | .. | .. | .. | 670 | 660 | 64.1 | 79 48 3.4 | .. | 27.5 | 130 59 52.1 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|---------|
| | in. | ° | | " | " | " | " |
| 3 | 30.17 | 24.0 | 1 | 4.1 | 8.0 | 0.3 | 3.6 |
| 8 | 30.14 | 27.5 | 9 | 6.7 | 16 10.2 | .. | 16 16.9 |
| 10 | 30.12 | 28.5 | 10 | 6.6 | 16 10.2 | .. | 16 3.6 |
| 12 | 30.15 | 28.0 | 13 | 6.6 | 16 11.3 | .. | 16 17.9 |
| 14 | 30.11 | 35.3 | 14 | 6.5 | 16 11.3 | .. | 16 4.8 |
| 17 | 30.07 | 41.6 | 16 | 4.1 | 7.0 | .. | 11.1 |
| 19 | 30.02 | 50.8 | 22 | 6.3 | 16 9.2 | .. | 16 2.9 |
| 21 | 30.02 | 50.9 | 23 | 6.4 | 16 9.2 | .. | 16 15.6 |
| 23 | 30.06 | 32.5 | 26 | 13 15.0 | 16 8.0 | .. | 20 23.0 |
| 25 | 30.11 | 32.5 | 38 | 6.3 | 16 7.6 | .. | 16 13.9 |
| 36 | 30.32 | 29.5 | 39 | 6.3 | 16 7.6 | .. | 16 1.3 |
| 39 | 30.30 | 33.2 | 42 | 10 31.0 | 16 11.2 | .. | 5 40.2 |
| 40 | 30.29 | 44.0 | | | | | |
| 45 | 30.28 | 35.3 | | | | | |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|---------|---------|-----------|--------------------------------|-----|------|-----|----|-----|------|-------|-----|------------|--------------|------------------|----------------|---------------------------|----------------------------|----|----|----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock. appar nt. | Clock adopted. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 1876. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

10. Thread B used.

15, 16, 18, 19, 20, 22, 32, 39, 40, 43, 49. Thread A used.

32, 38. Bisections at sets B and D.

45. Bisections at threads D₃ and VI.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom't. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------------------|--------------------------------|----------------------------|-------------|----|-----|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | | | | | | | |
| 1 | 337 34 | 10 8.2 | 7.6 | 29.9 | 9.4 | 38 | .. | 940 | .. | 908 | .. | 64.1 | 22 22 55.8 | .. | + | 25.1 | 73 29 42.1 | + | 0.8 |
| 2 | 283 4 | 10.7 | 11.8 | 3.9 | 14.8 | 35 | .. | .. | .. | 418 | 410 | 64.1 | 76 52 6.7 | .. | + | 4 15.8 | 128 2 43.7 | - | 7.7 |
| 3 | 283 4 | 10.7 | 11.8 | 3.9 | 14.8 | 35 | .. | .. | .. | 690 | 678 | 64.1 | 76 52 10.9 | .. | + | 4 15.8 | 128 2 47.9 | - | 7.7 |
| 4 | 304 30 | 4.1 | 7.3 | 26.5 | 8.5 | 32 | .. | 106 | .. | 068 | .. | 64.1 | 55 25 8.7 | 34.0 | + | 1 28.1 | 106 32 58.0 | + | 2.1 |
| 5 | 330 36 | 10.1 | 11.3 | 1.6 | 11.1 | 31 | .. | 542 | .. | 480 | .. | 64.1 | 29 19 4.5 | .. | + | 34.3 | 80 26 0.0 | + | 0.4 |
| 6 | 285 24 | 4.1 | 4.6 | 26.1 | 8.1 | 37 | .. | .. | .. | 602 | 588 | 64.1 | 74 32 33.1 | .. | + | 3 37.5 | 125 42 31.8 | - | 7.4 |
| 7 | 337 46 | 4.6 | 4.0 | 23.8 | 8.2 | 36 | .. | .. | .. | 260 | 252 | 64.1 | 22 10 12.6 | .. | + | 24.9 | 73 16 58.7 | + | 1.3 |
| 8 | 337 46 | 4.6 | 4.0 | 23.8 | 8.2 | 31 | .. | .. | .. | 986 | 970 | 64.1 | 22 9 7.0 | .. | + | 24.9 | 73 15 53.1 | + | 1.4 |
| 9 | 353 58 | 6.4 | 7.6 | 27.7 | 8.6 | 32 | .. | .. | .. | 250 | 186 | 64.1 | 5 57 13.3 | 32.8 | + | 6.4 | 57 3 40.9 | + | 3.5 |
| 10 | 353 58 | 6.4 | 7.6 | 27.7 | 8.6 | 31 | .. | 424 | .. | 334 | .. | 64.1 | 5 59 31.6 | .. | + | 6.4 | 57 5 59.2 | + | 2.9 |
| 11 | 342 50 | 1.4 | 0.3 | 21.1 | 3.6 | 34 | 848 | 834 | .. | .. | .. | 64.1 | 17 5 45.0 | .. | + | 18.8 | 68 12 25.0 | - | 0.4 |
| 12 | 323 54 | 0.5 | 1.5 | 19.8 | 4.3 | 38 | .. | .. | .. | 740 | 724 | 64.1 | 36 2 46.7 | .. | + | 44.4 | 87 9 52.3 | - | 3.6 |
| 13 | 337 32 | 10.2 | 10.7 | 0.6 | 12.8 | 33 | 530 | .. | .. | .. | 385 | 64.1 | 22 23 34.5 | .. | + | 25.2 | 73 30 20.9 | .. | .. |
| 14 | 337 32 | 10.2 | 10.7 | 0.6 | 12.8 | 33 | .. | 322 | .. | 226 | .. | 64.1 | 22 23 31.6 | .. | + | 25.2 | 73 30 18.0 | .. | .. |
| 15 | 343 26 | 8.1 | 8.2 | 29.1 | 10.1 | 37 | .. | 046 | .. | 038 | .. | 64.1 | 16 27 53.6 | .. | + | 18.1 | 67 34 32.9 | - | 1.8 |
| 16 | 337 54 | 1.7 | 2.9 | 23.5 | 4.1 | 39 | .. | 612 | .. | 490 | .. | 64.1 | 22 0 26.2 | 32.0 | + | 24.7 | 73 7 12.1 | - | 2.8 |
| 17 | 347 38 | 9 24.5 | 23.2 | 14.9 | 26.6 | 36 | 410 | 369 | .. | 300 | 282 | 64.1 | 12 18 2.5 | .. | + | 13.3 | 63 24 37.0 | - | 1.1 |
| 18 | 339 42 | 10 2.1 | 2.5 | 22.5 | 5.3 | 35 | .. | 182 | .. | 086 | .. | 64.1 | 20 11 18.6 | .. | + | 22.5 | 71 18 2.3 | - | 1.2 |
| 19 | 335 58 | 5.1 | 6.2 | 25.0 | 6.8 | 37 | .. | .. | .. | .. | 620 | 64.1 | 23 56 1.0 | .. | + | 27.2 | 75 2 49.4 | - | 5.7 |
| 20 | 335 58 | 5.1 | 6.2 | 25.0 | 6.8 | 40 | 330 | 298 | .. | .. | .. | 64.1 | 23 56 39.3 | .. | + | 27.2 | 75 3 27.7 | .. | .. |
| 21 | 331 0 | 9 27.9 | 24.6 | 17.9 | 1.6 | 38 | 182 | 160 | .. | .. | .. | 64.1 | 28 56 32.3 | 31.2 | + | 33.9 | 80 3 27.4 | - | 0.6 |
| 22 | 320 6 | 10 1.7 | 1.7 | 22.4 | 4.7 | 36 | .. | 996 | .. | 008 | .. | 64.1 | 39 47 46.6 | .. | + | 51.1 | 90 54 58.9 | - | 2.2 |
| 23 | 321 4 | 9 29.2 | 29.4 | 20.8 | 1.2 | 34 | .. | .. | .. | 344 | 336 | 64.1 | 38 51 38.1 | 29.5 | + | 49.6 | 89 58 48.9 | - | 1.7 |
| 24 | 5 52 | 10 13.5 | 15.2 | 6.1 | 10.5 | 34 | .. | 040 | .. | 920 | .. | 63.9 | 354 3 45.2 | .. | - | 6.4 | 45 10 0.0 | - | 1.1 |
| 25 | 23 6 | 13.5 | 16.0 | 9.0 | 13.1 | 37 | .. | 420 | .. | 356 | .. | 63.9 | 336 50 39.2 | .. | - | 26.1 | 27 56 34.3 | - | 3.0 |
| 26 | 330 22 | 10.3 | 14.0 | 6.2 | 12.0 | 38 | .. | 228 | .. | 112 | .. | 63.9 | 29 34 48.4 | .. | + | 34.6 | 80 41 44.2 | + | 0.4 |
| 27 | 314 42 | 16.3 | 18.3 | 12.3 | 19.3 | 37 | 640 | 586 | .. | .. | .. | 63.9 | 45 14 44.0 | 39.3 | + | 1 0.9 | 96 22 6.1 | .. | .. |
| 28 | 315 14 | 15.4 | 19.6 | 11.2 | 18.5 | 36 | .. | .. | .. | 480 | 384 | 63.9 | 44 42 28.9 | .. | + | 59.8 | 95 49 49.9 | .. | .. |
| 29 | 349 28 | 2.5 | 4.7 | 29.0 | 7.8 | 39 | .. | 970 | .. | 700 | .. | 63.9 | 10 29 6.9 | .. | + | 11.2 | 61 35 39.3 | + | 0.5 |
| 30 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 31 | 343 38 | 20.5 | 18.5 | 8.5 | 19.3 | 37 | .. | 372 | .. | 178 | .. | 63.9 | 16 18 40.9 | 37.5 | + | 17.7 | 67 25 19.8 | .. | 0.0 |
| 32 | 349 38 | 15.5 | 14.5 | 3.0 | 14.3 | 38 | 687 | .. | 631 | .. | 606 | 63.9 | 10 16 23.3 | .. | + | 11.0 | 61 22 55.5 | .. | .. |
| 33 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 34 | 292 16 | 12.6 | 14.0 | 4.0 | 14.4 | 33 | .. | 374 | .. | 260 | .. | 63.9 | 67 39 34.4 | .. | + | 2 26.8 | 118 48 22.4 | - | 0.2 |
| 35 | 294 52 | 9.9 | 11.1 | 1.7 | 12.5 | 32 | .. | 900 | .. | 770 | .. | 63.9 | 65 3 24.7 | .. | + | 2 10.0 | 116 11 55.9 | + | 0.3 |
| 36 | 343 16 | 18.4 | 19.8 | 10.5 | 18.5 | 37 | .. | 331 | .. | 178 | .. | 63.9 | 16 40 40.6 | 36.0 | + | 18.2 | 67 47 20.0 | - | 1.2 |
| 37 | 337 34 | 10.8 | 10.5 | 3.6 | 9.7 | 38 | .. | 650 | .. | 540 | .. | 63.9 | 22 22 53.0 | .. | + | 25.1 | 73 29 39.3 | .. | .. |
| 38 | 31 24 | 12.1 | 12.0 | 3.3 | 11.3 | 34 | 028 | .. | .. | .. | 932 | 63.9 | 328 31 43.5 | .. | - | 37.4 | 10 37 27.3 | - | 1.2 |
| 39 | 343 26 | 17.4 | 18.0 | 6.9 | 17.7 | 34 | .. | 150 | .. | 140 | .. | 63.9 | 16 27 17.8 | .. | + | 18.0 | 67 33 57.0 | - | 1.8 |
| 40 | 337 58 | 18.0 | 18.0 | 10.0 | 18.5 | 41 | .. | 380 | .. | 240 | .. | 63.9 | 21 57 8.5 | .. | + | 24.6 | 73 3 54.3 | - | 2.8 |
| 41 | 336 0 | 10.8 | 11.8 | 1.1 | 12.5 | 35 | .. | .. | .. | 120 | 100 | 63.9 | 23 56 1.2 | .. | + | 27.1 | 75 2 49.5 | - | 5.6 |
| 42 | 335 30 | 6.5 | 7.8 | 29.0 | 9.7 | 31 | .. | 665 | .. | 430 | .. | 63.9 | 24 25 2.2 | .. | + | 27.8 | 75 31 51.2 | - | 6.3 |
| 43 | 338 26 | 20.0 | 17.9 | 8.9 | 19.5 | 34 | .. | 560 | .. | 390 | .. | 63.9 | 21 27 24.3 | .. | + | 24.0 | 72 34 9.5 | - | 1.8 |
| 44 | 156 24 | 2.7 | 5.5 | 24.9 | 3.3 | 32 | 050 | 930 | .. | .. | .. | 63.9 | 203 31 2.5 | .. | + | 26.6 | 27 34 52.1 | - | 1.4 |
| 45 | 23 28 | 8.5 | 10.3 | 1.2 | 8.2 | 39 | .. | .. | .. | 010 | 970 | 63.9 | 336 28 58.4 | .. | - | 26.6 | 27 34 53.0 | - | 0.5 |
| 46 | 342 16 | 14.5 | 17.7 | 7.0 | 14.8 | 39 | .. | .. | .. | 794 | 794 | 63.9 | 18 41 17.5 | 32.2 | + | 20.7 | 69 47 59.4 | + | 1.0 |
| 47 | 306 58 | 12.5 | 14.1 | 4.6 | 14.1 | 38 | .. | 500 | .. | 470 | .. | 63.9 | 52 58 53.8 | .. | + | 1 21.1 | 104 6 36.1 | - | 0.1 |
| 48 | 336 18 | 5.8 | 9.0 | 29.0 | 8.0 | 33 | .. | .. | .. | 212 | 182 | 63.9 | 23 37 28.4 | .. | + | 26.8 | 74 44 16.4 | + | 0.4 |
| 49 | 321 24 | 12.1 | 15.3 | 5.3 | 14.3 | 37 | .. | 000 | .. | 570 | .. | 63.9 | 38 29 54.8 | 31.4 | + | 48.8 | 89 37 4.8 | - | 2.7 |
| No. | Barom. | At. Ther. | | | | | | | | | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. | | | | |
| | in. | ° | | | | | | | | | | " | " | " | " | | | | |
| 4 | 30.30 | 35.0 | | | | | | | | | 13 | - 0.2 | - 1.4 | .. | - | 1.6 | | | |
| 9 | 30.33 | 34.0 | | | | | | | | | 14 | - 0.2 | + 1.4 | .. | + | 1.2 | | | |
| 16 | 30.33 | 33.5 | | | | | | | | | 27 | - 6.3 | - 16 8.1 | .. | - 16 | 14.4 | | | |
| 21 | 30.33 | 33.0 | | | | | | | | | 28 | - 6.2 | + 16 8.1 | .. | + 16 | 1.9 | | | |
| 23 | 30.35 | 32.0 | | | | | | | | | 32 | - 10 23.5 | + 16 13.0 | .. | + | 5 49.4 | | | |
| 27 | 30.44 | 38.8 | | | | | | | | | 37 | - 0.2 | .. | .. | - | 0.2 | | | |
| 31 | 30.39 | 39.5 | | | | | | | | | | | | | | | | | |
| 36 | 30.40 | 38.6 | | | | | | | | | | | | | | | | | |
| 46 | 30.39 | 35.0 | | | | | | | | | | | | | | | | | |
| 49 | 30.40 | 35.0 | | | | | | | | | | | | | | | | | |

For summary of the elements of reduction see page 3.

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. |
|--------|---------|---|-----------|--------------------------------|-----------|-----------|------------|----------|-------|----------|-------|-----|------------|--------------|----------------|----------------|---------------------------|--------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | | |
| | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. | |
| 1876. | | | | | | | | | | | | | | | | | | | |
| Mar. 5 | 1 | Polaris | P. | 8.056.5 | 2.023.5 | 50.017.0 | 36.542.0 | 31.0 | 11 | 49.61 | | | | +24.37 | . . . | -2.01 | 1 12 11.97 | -3.22 | |
| | 2 | Piscium | P. | 40.042.7 | 44.450.6 | 52.754.8 | 1.0 | 2.6 | 5.4 | 24 52 69 | | | | -0.26 | -2.02 | -2.01 | 1 24 50.42 | +0.08 | |
| | 3 | Arietis | P. | 36.238.9 | 40.547.1 | 49.251.4 | 57.959.4 | 2.2 | 47 | 49.20 | | | | -0.20 | -2.00 | -2.01 | 1 47 46.99 | +0.01 | |
| | 4 | 50 Cassiopee | P. | | 36.643.4 | 50.056.5 | 3.4 | . . . | . . . | 52 49.97 | | | | +1.32 | . . . | -2.01 | 1 52 49.28 | +0.09 | |
| | 5 | " Arietis | P. | 59.6 2.3 | 4.010.6 | 12.815.0 | 21.723.4 | 26.1 | 0 | 12.83 | | | | -0.17 | -2.02 | -2.01 | 2 0 10.65 | +0.02 | |
| | 6 | δ Ursæ Minoris, S. P. | P. | | 32.356.7 | 22.348.6 | 15.8 | . . . | . . . | 12 23.18 | | | | -10.78 | . . . | -2.01 | 18 12 10.39 | +1.59 | |
| | 7 | μ Geminorum | P. | 17.520.2 | 21.928.6 | 30.733.0 | 39.641.3 | 44.9 | 15 | 30.76 | | | | -0.15 | -1.92 | -2.01 | 6 15 28.60 | -0.13 | |
| | 8 | γ Geminorum | P. | 23.626.2 | 27.834.2 | 36.438.5 | 44.846.4 | 49.1 | 30 | 36.33 | | | | -0.22 | -2.00 | -2.01 | 6 30 34.10 | -0.04 | |
| | 9 | B. A. C. 2194 | P. | 8.010.9 | 12.719.4 | 21.724.0 | 30.732.4 | 35.2 | 36 | 21.67 | | | | -0.12 | . . . | -2.01 | 6 36 19.54 | -1.34 | |
| | 10 | α Canis Majoris | P. | 31.734.4 | 36.042.4 | 44.546.7 | 53.054.6 | 57.3 | 39 | 44.51 | | | | -0.51 | -2.11 | -2.01 | 6 39 41.99 | +0.02 | |
| | 11 | 51 Cephei | P. | | 11.654.6 | 37.7 | | . . . | 41 | 54.47 | | | | +12.34 | . . . | -2.01 | 6 42 4.80 | +0.43 | |
| | 12 | 50 Draconis, S. P. | P. | 12.2 2.0 | 55.932.0 | 24.345.7 | 51.846.3 | 36.5 | 50 | 24.08 | | | | -2.82 | . . . | -2.01 | 18 50 19.25 | +0.75 | |
| | 13 | δ Geminorum (R.) | P. | | | | | . . . | . . . | . . . | | | | . . . | . . . | . . . | . . . | . . . | |
| | 14 | δ Geminorum | P. | | | | | . . . | . . . | . . . | | | | . . . | . . . | . . . | . . . | . . . | |
| | 15 | α Geminorum | P. | | 33.235.0 | | | 54.356.0 | . . . | 26 44.62 | | | | -0.04 | . . . | -1.99 | 7 26 42.59 | -1.79 | |
| | 16 | α Geminorum | P. | | 40.242.7 | 45.047.4 | 49.8 | . . . | 26 | 45.02 | | | | -0.04 | -2.06 | -1.99 | 7 26 42.99 | +0.31 | |
| | 17 | Moon I, N. | P. | 49.652.6 | 54.4 1.5 | 3.7 6.0 | 13.014.8 | 17.9 | 34 | 3.72 | | | | -0.11 | . . . | -1.99 | 7 34 1.62 | +75.82 | |
| | 18 | λ Ursæ Minoris, S. P. | P. | | 20.229.7 | 40.350.4 | 6.8 | . . . | 47 | 41.48 | | | | -33.00 | . . . | -1.99 | 19 47 6.49 | +0.29 | |
| | 19 | (VIII) 2 | P. | 53.956.8 | 58.8 6.3 | 8.911.4 | 19.020.8 | 24.0 | 13 | 8.88 | | | | -0.70 | . . . | -1.98 | 8 13 6.20 | -1.35 | |
| | 20 | B. A. C. 2817 ¹ , S. | P. | 7.310.2 | 11.8 | | | 30.332.0 | 35.0 | 19 21.10 | | | | -0.10 | . . . | -1.98 | 8 19 19.02 | -1.98 | |
| | 21 | B. A. C. 2817 ² , N. | P. | | 16.719.0 | 21.323.7 | 25.9 | . . . | 19 | 21.32 | | | | -0.10 | . . . | -1.98 | 8 19 19.24 | -1.98 | |
| | 22 | B. A. C. 2970 | P. | 59.6 2.2 | 3.810.1 | 12.314.3 | 20.622.1 | 24.8 | 40 | 12.20 | | | | -0.26 | . . . | -1.98 | 8 40 9.96 | -1.79 | |
| | 23 | B. A. C. 2909 | P. | 44.547.4 | 49.356.7 | 59.1 1.5 | 8.810.6 | 13.6 | 44 | 59.06 | | | | -0.03 | . . . | -1.97 | 8 44 57.06 | -2.24 | |
| | 24 | B. A. C. 3026 | P. | | 15.818.1 | 20.422.8 | 27.329.1 | 32.0 | 48 | 18.09 | | | | -0.09 | . . . | -1.97 | 8 48 16.03 | -2.14 | |
| | 25 | B. A. C. 3056 | P. | 45.048.2 | 50.257.5 | 59.9 2.3 | 9.611.4 | 14.5 | 51 | 59.84 | | | | -0.03 | . . . | -1.97 | 8 51 57.84 | -2.27 | |
| | 26 | B. A. C. 3068 | P. | 37.340.5 | 42.349.6 | 52.054.5 | 1.7 3.4 | 6.6 | 53 | 51.99 | | | | -0.03 | . . . | -1.97 | 8 53 49.99 | -2.28 | |
| | 27 | B. A. C. 3146 | P. | 46.549.0 | 50.656.8 | 58.9 1.0 | 7.0 8.6 | 11.2 | 7 | 58.84 | | | | -0.34 | . . . | -1.97 | 9 7 56.57 | -1.74 | |
| | 28 | Uranus | P. | 44.647.3 | 48.955.3 | 57.559.7 | 6.0 7.6 | 10.3 | 17 | 57.47 | | | | -0.22 | . . . | -1.96 | 9 17 55.29 | . . . | |
| | 29 | B. A. C. 3238 | P. | 2.9 6.0 | 8.015.3 | 17.720.3 | 27.629.6 | 32.6 | 23 | 17.78 | | | | -0.01 | . . . | -1.96 | 9 23 15.81 | -2.43 | |
| | 30 | Beatrix | P. | 21.5 . . . | 25.932.7 | 34.936.9 | 43.4 . . . | 48.0 | 28 | 34.76 | | | | -0.16 | . . . | -1.96 | 9 28 32.64 | . . . | |
| | 31 | B. A. C. 3303 | P. | 23.325.8 | 27.433.5 | 35.637.7 | 43.745.3 | 47.9 | 33 | 35.58 | | | | -0.38 | . . . | -1.96 | 9 33 33.24 | -1.76 | |
| | 32 | B. A. C. 3336 | P. | 29.332.0 | 33.539.7 | 41.743.8 | 50.051.5 | 54.4 | 39 | 41.71 | | | | -0.30 | . . . | -1.96 | 9 39 39.48 | -1.87 | |
| | 33 | B. A. C. 3497 | P. | 25.327.8 | 29.335.6 | 37.739.7 | 46.047.6 | 50.0 | 51 | 37.67 | | | | -0.29 | . . . | -1.96 | 9 51 35.42 | -1.92 | |
| | 34 | Weisse (2) 15 | P. | 11.914.3 | 16.322.6 | 24.826.8 | 33.034.9 | 37.6 | 3 | 24.69 | | | | -0.19 | . . . | -1.95 | 10 3 22.55 | -2.12 | |
| | 35 | Duich. 15 ¹ , 2184 | P. | 8.511.0 | 12.719.0 | 21.123.3 | 29.631.3 | 33.9 | 10 | 21.16 | | | | -0.23 | . . . | -1.95 | 10 10 18.98 | -2.05 | |
| | 36 | Anonymous | P. | 11.514.3 | 15.822.3 | 24.326.3 | 32.834.3 | 37.0 | 20 | 24.29 | | | | -0.24 | . . . | -1.95 | 10 20 22.10 | -2.05 | |
| | 37 | Hebe | P. | 7.810.4 | 12.018.6 | 20.722.9 | 29.430.9 | 33.6 | 26 | 20.70 | | | | -0.21 | . . . | -1.95 | 10 26 18.54 | . . . | |
| | 38 | B. A. C. 3663 | P. | 57.5 0.1 | 1.8 7.9 | 10.012.0 | 18.019.6 | 22.1 | 35 | 9.89 | | | | -0.38 | . . . | -1.94 | 10 35 7.57 | -1.83 | |
| | 39 | B. A. C. 3671 | P. | 31.334.1 | 35.842.5 | 44.747.0 | 53.655.4 | 58.0 | 36 | 44.71 | | | | -0.14 | . . . | -1.94 | 10 36 42.63 | -2.27 | |
| | 40 | γ Leonis | P. | 36.038.7 | 40.346.6 | 48.650.7 | 56.958.5 | 1.0 | 42 | 48.59 | | | | -0.27 | -2.02 | -1.94 | 10 42 46.38 | +0.08 | |
| | 41 | ι Cephei, S. P. | P. | | 25.8 | | 16.311.2 | 6.4 | . . . | 45 16.16 | | | | -1.84 | . . . | -1.94 | 22 45 12.38 | +0.22 | |
| | 42 | α Ursæ Majoris (R.) | P. | | | | | . . . | . . . | . . . | | | | . . . | . . . | . . . | . . . | . . . | |
| | 43 | α Ursæ Majoris | P. | | | | | . . . | . . . | . . . | | | | . . . | . . . | . . . | . . . | . . . | |
| | 44 | B. A. C. 3842 | P. | 27.430.2 | 31.938.7 | 40.943.2 | 49.851.5 | 54.3 | 8 | 40.88 | | | | -0.14 | . . . | -1.93 | 11 8 38.81 | -2.27 | |
| | 45 | B. A. C. 3851 | P. | 23.827.0 | 28.930.3 | 38.440.9 | 48.050.0 | 53.0 | 11 | 38.44 | | | | -0.03 | . . . | -1.93 | 11 11 36.58 | -2.51 | |
| | 46 | τ Leonis | P. | 25.528.0 | 29.635.9 | 37.940.0 | 46.047.6 | 50.0 | 21 | 37.83 | | | | -0.34 | -1.97 | -1.93 | 11 21 35.56 | +0.02 | |
| | 47 | γ Cephei, S. P. | P. | | 32.422.9 | 13.5 5.0 | 55.9 . . . | . . . | 34 | 13.95 | | | | -3.13 | . . . | -1.93 | 23 34 8.89 | +0.46 | |
| | 48 | β Leonis | P. | 35.638.3 | 39.946.3 | 48.350.5 | 56.758.4 | 0.0 | 42 | 48.32 | | | | -0.23 | -2.02 | -1.93 | 11 42 46.16 | +0.07 | |
| | 49 | B. A. C. 4027 | P. | 33.435.9 | 37.443.7 | 45.747.8 | 54.055.6 | 58.2 | 48 | 45.72 | | | | -0.29 | . . . | -1.93 | 11 48 43.50 | -1.94 | |
| | 50 | B. A. C. 4056 | P. | 14.217.0 | 18.525.3 | 27.529.8 | 36.338.0 | 40.9 | 55 | 27.53 | | | | -0.15 | . . . | -1.92 | 11 55 25.46 | -2.10 | |
| | 51 | α Virginis | P. | 45.347.8 | 49.555.0 | 57.859.8 | 5.9 7.6 | 10.2 | 58 | 57.72 | | | | -0.29 | -1.95 | -1.92 | 11 58 55.51 | +0.01 | |

17. Bisections at threads II-VI.
 25, 30, 34, 37. Thread A used.
 26, 35, 40, 42. Thread B used.
 41, 47. Bisections at set C.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom't. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | | | | | |
| 1 | 49 40 | 10 9.8 | 11.6 | 5.0 | 10.0 | 33 | 615 | 665 | 630 | 610 | 575 | 61.4 | 310 15 34.8 | 54.9 | - 1 9.0 | 1 20 47.0 | - 3.1 |
| 2 | 335 46 | 11.5 | 13.2 | 7.7 | 14.4 | 38 | 245 | 225 | .. | 980 | 925 | 61.4 | 24 10 45.8 | .. | + 26.2 | 75 17 33.2 | - 1.9 |
| 3 | 341 14 | 9.0 | 12.4 | 6.7 | 15.5 | 31 | 905 | 875 | .. | 770 | 675 | 61.4 | 18 41 8.8 | .. | + 19.7 | 69 47 49.7 | - 0.7 |
| 4 | 32 52 | 16.6 | 18.0 | 10.5 | 16.6 | 37 | .. | .. | .. | 935 | 950 | 61.4 | 327 4 47.7 | .. | - 37.8 | 18 10 31.1 | - 0.5 |
| 5 | 343 56 | 6.2 | 10.5 | 4.5 | 13.5 | 38 | 260 | 270 | .. | 135 | 095 | 61.4 | 16 0 44.4 | 56.5 | + 16.7 | 67 7 22.3 | - 0.4 |
| 6 | 54 24 | 12.8 | 14.0 | 4.0 | 13.2 | 31 | 280 | .. | 280 | .. | 265 | 61.4 | 305 31 2.5 | .. | - 1 22.8 | 356 36 0.9 | 0.0 |
| 7 | 343 38 | 17.5 | 18.0 | 7.4 | 19.5 | 37 | 565 | .. | .. | .. | 365 | 61.4 | 16 18 42.3 | 48.5 | + 17.3 | 67 25 20.8 | + 1.0 |
| 8 | 337 34 | 11.5 | 11.4 | 2.0 | 11.2 | 38 | 960 | 950 | .. | 800 | 750 | 61.4 | 22 22 57.0 | .. | + 24.4 | 73 29 42.6 | + 1.3 |
| 9 | 346 18 | 15.6 | 15.7 | 5.1 | 17.0 | 35 | 620 | 555 | .. | 445 | 380 | 63.4 | 13 38 9.9 | .. | + 14.4 | 64 44 45.5 | + 9.1 |
| 10 | 304 30 | 12.0 | 12.3 | 2.1 | 14.0 | 31 | .. | .. | .. | 805 | 725 | 63.4 | 55 25 9.9 | .. | + 1 25.9 | 106 32 56.0 | 0.0 |
| 11 | 48 16 | 14.6 | 14.5 | 4.9 | 13.6 | 36 | .. | 245 | 255 | 220 | .. | 63.4 | 311 40 19.6 | .. | - 1 6.6 | 2 45 34.2 | + 0.2 |
| 12 | 65 44 | 8.8 | 8.6 | 28.0 | 8.0 | 37 | 675 | .. | 725 | .. | 635 | 63.4 | 294 12 35.5 | 47.4 | - 2 11.3 | 345 16 45.4 | + 1.2 |
| 13 | 106 36 | 15.1 | 19.3 | 7.0 | 15.2 | 32 | 080 | 110 | .. | .. | .. | 63.4 | 163 19 16.9 | .. | - 17.8 | 67 47 22.1 | + 1.0 |
| 14 | 343 16 | 12.1 | 13.7 | 2.0 | 11.3 | 37 | .. | .. | .. | 740 | 675 | 63.4 | 16 40 41.3 | .. | + 17.8 | 67 47 20.3 | - 0.8 |
| 15 | 353 12 | 11.9 | 12.6 | 2.0 | 13.1 | 34 | .. | .. | .. | 720 | 740 | 63.4 | 6 43 55.9 | .. | + 7.0 | 57 50 24.1 | + 8.8 |
| 16 | 353 12 | 11.9 | 12.6 | 2.0 | 13.1 | 34 | .. | .. | .. | 530 | 410 | 63.4 | 6 43 52.2 | .. | + 7.0 | 57 50 20.4 | - 0.4 |
| 17 | 347 40 | 6.9 | 7.9 | 27.4 | 6.5 | 28 | 015 | 665 | 145 | 210 | 240 | 63.4 | 12 14 8.3 | .. | + 12.9 | 63 20 42.4 | .. |
| 18 | 52 6 | 9.9 | 10.7 | 28.6 | 10.1 | 37 | 550 | 505 | 490 | 515 | 485 | 63.4 | 307 50 34.1 | 46.2 | - 1 16.5 | 358 55 38.8 | - 0.5 |
| 19 | 285 24 | 12.0 | 14.0 | 3.3 | 14.2 | 32 | .. | 125 | .. | 075 | .. | 63.4 | 74 31 14.9 | .. | + 3 32.2 | 125 41 8.3 | - 7.8 |
| 20 | 348 22 | 14.2 | 14.6 | 1.6 | 15.0 | 31 | .. | 545 | .. | 375 | .. | 63.4 | 11 33 5.9 | .. | + 12.2 | 62 39 39.3 | + 4.2 |
| 21 | 348 22 | 14.2 | 14.6 | 1.6 | 15.0 | 31 | .. | 310 | .. | 155 | .. | 63.4 | 11 33 2.8 | .. | + 12.2 | 62 39 35.9 | + 4.2 |
| 22 | 333 36 | 11.5 | 13.5 | 4.0 | 12.6 | 32 | .. | 545 | .. | 430 | .. | 63.4 | 26 19 20.6 | .. | + 29.6 | 77 26 11.4 | - 0.5 |
| 23 | 353 58 | 14.5 | 16.9 | 5.3 | 14.9 | 31 | .. | 985 | .. | 830 | .. | 63.4 | 5 57 14.4 | .. | + 6.2 | 57 3 41.8 | + 3.7 |
| 24 | 349 26 | 13.3 | 14.0 | 4.9 | 13.0 | 32 | .. | .. | .. | 850 | 840 | 63.4 | 10 29 27.8 | .. | + 11.1 | 61 36 0.1 | + 2.4 |
| 25 | 353 52 | 14.7 | 14.1 | 4.9 | 15.2 | 27 | 590 | 600 | .. | .. | .. | 63.4 | 5 59 33.0 | .. | + 6.3 | 57 6 0.5 | + 3.1 |
| 26 | 353 52 | 14.7 | 14.1 | 4.9 | 15.2 | 46 | 095 | 100 | .. | .. | .. | 63.4 | 6 9 22.3 | .. | + 6.5 | 57 15 50.0 | + 3.0 |
| 27 | 323 54 | 11.1 | 11.4 | 29.7 | 12.4 | 38 | 475 | 460 | .. | .. | .. | 63.4 | 36 2 49.2 | .. | + 43.5 | 87 9 53.9 | - 3.7 |
| 28 | 337 34 | 9.1 | 9.4 | 29.7 | 8.1 | 36 | 480 | 480 | .. | 335 | 290 | 63.4 | 22 22 16.8 | 43.1 | + 24.6 | 73 20 2.6 | .. |
| 29 | 355 14 | 10.9 | 14.0 | 3.5 | 12.9 | 33 | 490 | .. | .. | .. | 425 | 63.4 | 4 41 35.4 | .. | + 4.9 | 55 48 1.5 | + 0.8 |
| 30 | 343 26 | 11.6 | 12.3 | 3.4 | 12.4 | 33 | .. | 010 | .. | 910 | .. | 63.4 | 16 26 54.0 | .. | + 17.7 | 67 33 32.9 | - 1.8 |
| 31 | 320 28 | 14.3 | 15.0 | 4.0 | 15.3 | 34 | .. | 080 | .. | 970 | .. | 63.4 | 39 27 45.9 | .. | + 49.3 | 90 34 56.4 | - 5.4 |
| 32 | 328 20 | 9.6 | 11.0 | 0.3 | 10.2 | 36 | .. | 505 | .. | 395 | .. | 63.4 | 31 36 18.7 | .. | + 36.9 | 82 43 16.8 | - 4.7 |
| 33 | 329 58 | 11.2 | 13.2 | 1.3 | 11.0 | 38 | 595 | 560 | .. | 390 | 365 | 63.4 | 29 58 51.2 | 42.7 | + 34.6 | 81 5 47.0 | - 5.1 |
| 34 | 339 48 | 8.7 | 10.7 | 28.8 | 9.6 | 34 | .. | 205 | .. | 075 | .. | 63.4 | 20 5 9.1 | .. | + 21.9 | 71 11 52.2 | - 4.7 |
| 35 | 336 2 | 13.0 | 14.4 | 3.8 | 11.8 | 33 | 255 | 245 | .. | 150 | 105 | 63.4 | 23 56 4.2 | .. | + 26.6 | 75 2 52.0 | - 5.6 |
| 36 | 335 30 | 8.0 | 10.5 | 0.1 | 9.4 | 31 | .. | 690 | .. | 480 | .. | 63.4 | 24 25 3.4 | .. | + 27.2 | 75 31 51.8 | - 6.3 |
| 37 | 338 34 | 7.3 | 9.5 | 27.1 | 8.5 | 33 | 035 | 940 | .. | 780 | 735 | 63.4 | 21 18 48.4 | .. | + 23.4 | 72 25 33.0 | - 1.8 |
| 38 | 319 58 | 10.6 | 12.8 | 2.5 | 12.6 | 36 | 630 | 605 | .. | .. | .. | 63.4 | 39 58 21.8 | .. | + 50.2 | 91 5 33.2 | - 5.1 |
| 39 | 344 52 | 8.6 | 10.0 | 27.6 | 9.3 | 32 | .. | 455 | .. | 375 | .. | 63.4 | 15 3 15.6 | .. | + 16.1 | 66 9 52.9 | - 6.7 |
| 40 | 332 16 | 8.7 | 9.7 | 28.8 | 8.5 | 30 | .. | 180 | .. | 030 | .. | 63.4 | 27 41 12.6 | .. | + 31.5 | 78 48 5.3 | + 1.3 |
| 41 | 75 26 | 10.5 | 11.5 | 28.8 | 8.0 | 36 | 370 | .. | 370 | .. | 340 | 63.4 | 284 30 16.7 | .. | - 3 47.9 | 335 32 50.0 | - 0.4 |
| 42 | 156 28 | 9.7 | 13.5 | 2.1 | 10.7 | 37 | 355 | 310 | .. | .. | .. | 63.4 | 203 31 3.5 | .. | + 26.1 | 27 34 51.6 | - 1.7 |
| 43 | 23 28 | 13.7 | 16.0 | 5.5 | 13.8 | 38 | .. | .. | .. | 500 | 455 | 63.4 | 336 28 56.4 | .. | - 26.1 | 27 34 51.5 | - 1.8 |
| 44 | 344 48 | 9.5 | 11.0 | 0.0 | 9.8 | 32 | .. | 355 | .. | 240 | .. | 63.4 | 15 7 15.0 | .. | + 16.2 | 66 13 52.4 | - 9.2 |
| 45 | 353 16 | 14.3 | 15.0 | 5.3 | 14.9 | 35 | .. | 320 | .. | 230 | .. | 63.4 | 6 40 5.4 | 42.3 | + 7.0 | 57 46 33.6 | - 9.0 |
| 46 | 324 36 | 8.5 | 9.6 | 28.3 | 9.8 | 38 | 420 | 440 | .. | 295 | 260 | 63.4 | 35 20 46.6 | .. | + 42.5 | 86 27 50.3 | + 0.8 |
| 47 | 64 4 | 8.5 | 8.7 | 27.2 | 7.9 | 36 | 105 | .. | 135 | .. | 130 | 63.4 | 295 52 11.4 | .. | - 2 3.1 | 346 56 29.5 | + 0.5 |
| 48 | 336 18 | 10.1 | 12.5 | 1.9 | 10.2 | 33 | 225 | 240 | .. | 090 | 070 | 63.4 | 23 37 29.2 | .. | + 26.2 | 74 44 16.6 | + 0.6 |
| 49 | 330 10 | 8.4 | 8.4 | 28.0 | 9.4 | 32 | 545 | 475 | .. | 375 | 340 | 63.4 | 29 45 15.5 | .. | + 34.3 | 80 52 11.0 | - 11.8 |
| 50 | 343 50 | 6.2 | 7.1 | 25.2 | 6.1 | 37 | 355 | 365 | .. | 230 | 205 | 63.4 | 16 6 27.6 | .. | + 17.3 | 67 13 6.1 | - 12.7 |
| 51 | 330 28 | 10.4 | 11.9 | 0.5 | 11.2 | 35 | 220 | 225 | .. | 040 | 010 | 63.4 | 29 27 59.1 | .. | + 33.9 | 80 34 54.2 | + 1.0 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|----------|
| | in. | ° | | " | " | " | " |
| 1 | 30.41 | 51.2 | | | | | |
| 5 | 30.40 | 54.0 | 17 | - 12 23.3 | + 16 13.1 | . | + 3 49.8 |
| 7 | 30.40 | 50.2 | 28 | - 0.2 | .. | . | - 0.2 |
| 12 | 30.40 | 49.5 | | | | | |
| 18 | 30.41 | 48.3 | | | | | |
| 23 | 30.40 | 45.7 | | | | | |
| 33 | 30.40 | 45.3 | | | | | |
| 45 | 30.38 | 44.7 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|--------|---------|------------------------------------|-----------|--------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|--------------|-----------------|-----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock. appar't. | Clock. adopted. | | |
| 1876. | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| Mar. 5 | 1 | Elpis | P. | 39.9 | 42.3 | 43.6 | 50.0 | 52.0 | 54.1 | 59.9 | 1.5 | 4.0 | 9 51.92 | - 0.37 | . . . | - 1.92 | 12 9 49.63 | . . . |
| | 2 | Virginis | P. | 25.0 | 28.3 | 29.7 | 36.0 | 38.0 | 40.0 | 46.0 | 47.7 | 50.3 | 13 37.96 | - 0.37 | - 2.07 | - 1.92 | 12 13 35.67 | + 0.13 |
| | 3 | Corvi | P. | 43.5 | 46.1 | 47.8 | 54.5 | 56.7 | 58.9 | 5.6 | 7.3 | 10.0 | 27 56.71 | - 0.57 | - 2.00 | - 1.92 | 12 27 54.22 | + 0.04 |
| | 4 | Canum Venat. | P. | 2.0 | 5.4 | 7.4 | 15.4 | 17.9 | 20.6 | 28.6 | 30.5 | 33.7 | 50 17.94 | + 0.06 | - 2.01 | - 1.91 | 12 50 16.09 | + 0.10 |
| | 5 | Polaris, S. P. | P. | 20.7 | 35.9 | . . . | 37.6 | 3.6 | 42.5 | 18.5 | 48.1 | 0.5 | 12 41.75 | -26.73 | . . . | - 1.90 | 1 12 13.12 | - 1.80 |
| | 6 | a Virginis | P. | 31.2 | 33.7 | 35.3 | 41.5 | 43.6 | 45.7 | 51.9 | 53.5 | 56.0 | 18 43.60 | - 0.46 | - 1.85 | - 1.90 | 13 18 41.24 | - 0.07 |
| | 7 | c Virginis | P. | 14.2 | 16.6 | 18.4 | 24.3 | 26.4 | 28.5 | 34.6 | 36.1 | 38.7 | 28 26.42 | - 0.37 | - 1.90 | - 1.90 | 13 28 24.15 | 0.00 |
| | 8 | η Bootis | P. | 37.0 | 40.5 | 42.0 | 48.5 | 50.7 | 52.9 | 59.4 | 1.0 | 3.7 | 48 50.70 | - 0.19 | - 1.94 | - 1.89 | 13 48 48.62 | 0.00 |
| | 9 | 50 Cassiopeæ, S. P. | P. | 32.8 | 34.6 | 20.5 | | | | 27.3 | 22.6 | 14.5 | 52 53.71 | - 2.36 | . . . | - 1.89 | 1 52 49.46 | + 0.29 |
| | 10 | a Draconis (R.) | P. | | | | | | | | | | | | | | | |
| | 11 | a Draconis | P. | | | | | | | | | | | | | | | |
| | 12 | a Bootis (R) | P. | | | | | | | | | | | | | | | |
| | 13 | a Bootis | P. | | | | | | | | | | | | | | | |
| | 14 | 5 Ursæ Minoris (R.) | P. | | | | | | | | | | | | | | | |
| | 15 | 5 Ursæ Minoris | P. | | | | | | | | | | | | | | | |
| | 16 | c Cygni | E. | 26.4 | 29.2 | 30.9 | 38.1 | 40.5 | 42.8 | 49.8 | 51.7 | 54.5 | 7 40.43 | - 0.18 | - 1.76 | - 1.74 | 21 7 38.51 | + 0.03 |
| | 17 | a Cephei | E. | | 26.5 | 31.0 | 35.3 | 39.9 | 44.2 | | | | 15 35.44 | + 0.49 | . . . | - 1.74 | 21 15 34.19 | + 0.09 |
| | 18 | e Pegasi | E. | 54.7 | 57.3 | 58.9 | 5.0 | 7.2 | 9.3 | 15.4 | 17.0 | 19.7 | 38 7.17 | - 0.37 | - 1.72 | - 1.74 | 21 38 5.06 | - 0.01 |
| 6 | 19 | Sun I, N. | E. | 8.7 | 11.5 | 12.9 | 19.0 | 21.0 | 23.1 | 29.4 | 30.8 | 33.4 | 9 21.09 | - 0.55 | . . . | - 1.71 | 23 9 18.83 | . . . |
| | 20 | Sun II, S. | E. | | 27.0 | 29.0 | 31.0 | 33.1 | 35.2 | | | | 11 31.06 | - 0.55 | . . . | - 1.71 | 23 11 28.80 | . . . |
| | 21 | a Andromedæ | E. | 45.0 | 48.5 | 50.4 | 57.2 | 59.7 | 2.0 | 8.9 | 10.7 | 13.6 | 1 59.62 | - 0.26 | - 1.64 | - 1.70 | 0 1 57.66 | - 0.04 |
| | 22 | γ Pegasi | E. | 39.7 | 42.4 | 44.0 | 50.2 | 52.4 | 54.5 | 0.7 | 2.3 | 5.0 | 6 52.36 | - 0.39 | - 1.66 | - 1.70 | 0 6 50.27 | - 0.04 |
| | 23 | Polaris | E. | 15.5 | 3.0 | 9.5 | 28.0 | 56.0 | 24.0 | 42.0 | 49.0 | 37.0 | 11 56.00 | +19.43 | . . . | - 1.69 | 1 12 13.74 | - 0.92 |
| | 24 | η Piscium | E. | 39.8 | 42.4 | 44.0 | 50.4 | 52.5 | 54.6 | 0.9 | 2.5 | 5.0 | 24 52.46 | - 0.39 | - 1.67 | - 1.68 | 1 24 50.39 | + 0.06 |
| | 25 | Venus I, S. | E. | 54.0 | 56.5 | 58.2 | 4.4 | 6.4 | 8.5 | 14.8 | 16.4 | 19.0 | 32 6.47 | - 0.43 | . . . | - 1.68 | 1 32 4.36 | + 0.50 |
| | 26 | Venus, N. | E. | | | | | | | | | | | | | | | |
| | 27 | B. A. C. 569 | E. | 48.0 | 51.0 | 52.8 | 59.8 | 2.2 | 4.5 | 11.5 | 13.3 | 16.3 | 46 2.16 | - 0.26 | . . . | - 1.68 | 1 46 0.22 | + 0.74 |
| | 28 | β Arietis | E. | 35.9 | 38.6 | 40.4 | 46.9 | 49.1 | 51.3 | 57.6 | 59.4 | 2.0 | 47 49.02 | - 0.34 | - 1.69 | - 1.68 | 1 47 47.00 | + 0.03 |
| | 29 | a Arietis | E. | | | | | | | | | | | | | | | |
| | 30 | δ Ursæ Minoris, S. P. | E. | 47.5 | 3.0 | 37.0 | 30.0 | | | | | | 12 20.05 | - 8.48 | . . . | - 1.52 | 18 12 10.05 | + 0.95 |
| | 31 | γ Geminorum (R) | E. | | | | | | | | | | | | | | | |
| | 32 | γ Geminorum | E. | | | | | | | | | | | | | | | |
| | 33 | 51 Cephei | E. | | | 32.0 | 14.5 | 57.0 | 49.0 | 21.5 | | | 41 56.94 | + 9.12 | . . . | - 1.52 | 6 42 4.54 | + 0.50 |
| | 34 | 51 Cephei (R) | E. | | | | | | | | | | | | | | | |
| | 35 | a ² Geminorum | E. | 30.2 | 33.3 | 35.1 | 42.4 | 44.7 | 47.1 | 54.4 | 56.1 | 59.2 | 26 44.72 | - 0.26 | - 1.55 | - 1.50 | 7 26 42.96 | + 0.29 |
| | 36 | a Canis Minoris | E. | 39.6 | 42.0 | 43.7 | 49.9 | 51.9 | 54.0 | 0.1 | 1.7 | 4.2 | 32 51.90 | - 0.48 | - 1.47 | - 1.50 | 7 32 49.92 | - 0.19 |
| | 37 | β Geminorum | E. | 33.2 | 36.0 | 37.8 | 44.8 | 47.1 | 49.4 | 56.5 | 58.0 | 1.1 | 37 47.10 | - 0.30 | - 1.49 | - 1.50 | 7 37 45.30 | - 0.04 |
| | 38 | γ Ursæ Minoris, S. P. | E. | 25.5 | 3.0 | 45.0 | 9.5 | 16.5 | | | | | 47 28.54 | -25.68 | . . . | - 1.50 | 19 47 1.36 | - 3.52 |
| | 39 | Moon I, N. | E. | 7.0 | 9.9 | 11.6 | 18.2 | 20.6 | 22.9 | 29.5 | 31.3 | 34.0 | 37 20.56 | - 0.35 | . . . | - 1.49 | 8 37 18.72 | +73.19 |
| | 40 | B. A. C. 3138 | E. | 22.8 | 25.6 | 27.3 | 33.8 | 36.0 | 38.3 | 44.9 | 46.6 | 49.3 | 6 36.07 | - 0.36 | . . . | - 1.48 | 9 6 34.23 | - 2.04 |
| | 41 | B. A. C. 3146 | E. | 46.0 | 48.7 | 50.3 | 56.4 | 58.5 | 0.6 | 6.7 | 8.1 | 10.8 | 7 58.46 | - 0.49 | . . . | - 1.48 | 9 7 56.49 | - 1.74 |
| | 42 | Uranus I, C. | E. | 35.3 | 38.0 | 39.8 | | | | 56.7 | 58.4 | 1.0 | 17 48.20 | - 0.40 | . . . | - 1.47 | 9 17 46.33 | . . . |
| | 43 | Uranus II | E. | | 44.4 | 46.5 | 48.6 | 50.8 | 52.9 | | | | 17 48.64 | - 0.40 | . . . | - 1.47 | 9 17 46.77 | . . . |
| | 44 | B. A. C. 3238 | E. | 2.9 | 5.9 | 7.7 | 15.2 | 17.6 | 20.0 | 27.4 | 29.3 | 32.5 | 23 17.61 | - 0.24 | . . . | - 1.47 | 9 23 15.90 | - 2.43 |
| | 45 | B. A. C. 3252 | E. | 42.4 | 45.6 | 47.6 | 55.2 | 57.9 | 0.4 | 8.0 | 10.0 | 13.1 | 25 57.80 | - 0.20 | . . . | - 1.47 | 9 25 56.13 | - 2.54 |
| | 46 | B. A. C. 3261 | E. | 26.4 | 29.6 | 31.6 | 39.2 | 41.7 | 44.2 | 51.9 | 53.9 | 57.0 | 26 41.72 | - 0.20 | . . . | - 1.47 | 9 26 40.05 | - 2.54 |
| | 47 | Leonis | E. | 39.1 | 41.9 | 43.8 | 50.5 | 52.7 | 55.0 | 1.6 | 3.3 | 6.2 | 38 52.68 | - 0.33 | - 1.56 | - 1.47 | 9 38 50.88 | + 0.05 |
| | 48 | Anonymous | E. | | | | | | | | | | | | | | | |
| | 49 | (IX) 8 | E. | 21.0 | 24.3 | 26.5 | 34.5 | 37.1 | 39.9 | 47.9 | 49.8 | 53.1 | 41 37.12 | - 0.83 | . . . | - 1.47 | 9 41 34.82 | - 1.57 |
| | 50 | Dione | E. | 26.0 | 28.4 | 30.7 | 37.0 | 39.2 | 41.8 | 47.9 | 49.7 | 52.5 | 2 39.24 | - 0.37 | . . . | - 1.46 | 10 2 37.41 | . . . |

- 1, 45, 48. Thread A used.
9, 10, 12, 23. Bisections at sets B and D.
11, 15. Bisections at threads V and VI.
14. Bisections at threads II and III.
34. Bisection is the mean of five measures at thread VI.
38. Bisection at threads B₁, B₃, and C₂.
46. Thread B used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | | " | " | " | " | | | | | | | | | | | | | |
| 1 | 321 30 | 7.8 | 8.0 | 27.0 | 8.0 | 32 | 570 | 590 | .. | .. | .. | 63.4 | 38 22 42.0 | .. | + | 47.5 | 89 29 50.7 | - 2.7 |
| 2 | 321 4 | 10.4 | 11.5 | 1.3 | 9.6 | 34 | 100 | 105 | .. | 950 | 910 | 63.4 | 38 51 41.8 | .. | + | 48.4 | 89 58 51.4 | + 0.6 |
| 3 | 298 22 | 12.0 | 12.5 | 3.0 | 14.1 | 37 | 595 | 535 | .. | 390 | 340 | 63.4 | 61 34 36.6 | .. | + | 50.6 | 112 42 48.4 | + 1.7 |
| 4 | 0 0 | 10.0 | 12.3 | 0.8 | 10.6 | 29 | 880 | 840 | .. | 715 | 655 | 63.4 | 359 54 37.4 | 40.8 | - | 0.1 | 51 0 58.5 | - 0.2 |
| 5 | 52 22 | 9.9 | 10.8 | 0.0 | 8.5 | 35 | .. | 620 | 530 | 555 | .. | 63.4 | 307 34 4.6 | .. | - | 18.1 | 358 39 7.7 | - 2.1 |
| 6 | 310 32 | 14.7 | 16.7 | 5.1 | 15.0 | 33 | 935 | 980 | .. | .. | .. | 63.4 | 49 23 20.7 | .. | + | 10.1 | 100 31 1.0 | + 0.8 |
| 7 | 321 6 | 10.2 | 11.8 | 1.3 | 11.8 | 38 | .. | 160 | .. | 950 | .. | 63.4 | 38 50 45.0 | .. | + | 48.4 | 89 57 54.6 | + 0.2 |
| 8 | 340 4 | 9.3 | 11.2 | 0.4 | 10.0 | 36 | 870 | 845 | .. | 660 | 640 | 63.4 | 19 52 23.4 | .. | + | 21.8 | 70 59 6.4 | + 0.3 |
| 9 | 69 10 | 11.4 | 11.8 | 28.5 | 7.9 | 34 | 355 | .. | 340 | .. | 315 | 63.4 | 290 45 45.8 | .. | - | 37.6 | 341 49 29.4 | + 1.2 |
| 10 | 153 52 | 10.8 | 15.3 | 3.0 | 11.2 | 33 | 640 | 590 | .. | .. | .. | 63.4 | 206 3 37.0 | .. | + | 29.1 | 25 2 14.8 | - 2.7 |
| 11 | 26 0 | 8.3 | 9.0 | 28.1 | 6.2 | 36 | .. | .. | .. | 865 | 765 | 63.4 | 333 56 23.0 | .. | - | 29.4 | 25 2 14.8 | - 2.7 |
| 12 | 199 0 | 12.5 | 16.0 | 3.5 | 9.3 | 35 | 370 | 355 | .. | .. | .. | 63.4 | 160 56 4.1 | .. | - | 20.8 | 70 10 37.0 | + 2.1 |
| 13 | 340 52 | 11.2 | 11.4 | 1.6 | 12.0 | 34 | .. | .. | .. | 700 | 640 | 63.4 | 19 3 54.0 | .. | + | 20.8 | 70 10 36.0 | + 0.2 |
| 14 | 142 36 | 10.2 | 13.4 | 2.7 | 8.7 | 35 | 450 | 340 | .. | .. | .. | 63.4 | 217 20 1.9 | .. | + | 45.9 | 13 45 33.4 | - 3.5 |
| 15 | 37 16 | 13.2 | 12.7 | 3.4 | 11.3 | 35 | .. | .. | .. | 015 | 000 | 63.4 | 322 40 0.5 | 39.8 | - | 45.9 | 13 45 35.8 | - 1.1 |
| 16 | 350 46 | 5.0 | 7.9 | 29.0 | 7.2 | 37 | .. | .. | .. | 680 | 595 | 63.4 | 9 10 35.3 | .. | + | 9.5 | 60 17 6.0 | + 0.5 |
| 17 | 23 6 | 4.5 | 7.0 | 0.8 | 8.0 | 37 | .. | .. | .. | 990 | 910 | 63.4 | 336 50 41.0 | 55.5 | - | 25.0 | 27 56 37.2 | - 0.6 |
| 18 | 330 22 | 1.9 | 4.2 | 24.5 | 4.7 | 39 | .. | 680 | .. | 980 | .. | 63.4 | 29 34 51.7 | .. | + | 33.0 | 80 41 45.9 | + 2.0 |
| 19 | 316 0 | 17.2 | 20.4 | 10.3 | 20.1 | 35 | 200 | 170 | .. | .. | .. | 63.4 | 43 56 6.7 | .. | + | 55.2 | 95 3 23.1 | .. |
| 20 | 315 26 | 12.1 | 16.5 | 7.6 | 18.7 | 28 | .. | .. | .. | 300 | 225 | 63.4 | 44 28 20.8 | 64.5 | + | 56.3 | 95 35 38.3 | .. |
| 21 | 349 23 | 8.7 | 11.8 | 5.6 | 14.7 | 39 | .. | 610 | .. | 520 | .. | 63.4 | 10 29 8.9 | .. | + | 10.6 | 61 35 40.7 | + 1.7 |
| 22 | 335 32 | 4.0 | 7.0 | 29.5 | 8.5 | 34 | .. | .. | .. | 040 | 950 | 63.4 | 24 23 39.3 | .. | + | 25.9 | 75 30 26.4 | + 3.9 |
| 23 | 49 40 | 0.6 | 3.5 | 28.8 | 29.0 | 33 | 875 | .. | 025 | .. | 815 | 63.4 | 310 15 34.5 | .. | - | 7.2 | 1 20 48.5 | - 1.8 |
| 24 | 335 46 | 3.1 | 9.3 | 29.2 | 4.5 | 38 | .. | 690 | .. | 590 | .. | 63.4 | 24 10 48.4 | .. | + | 25.6 | 75 17 35.2 | - 0.1 |
| 25 | 331 0 | 9 24.3 | 2.5 | 21.7 | 28.8 | 35 | 150 | .. | .. | 850 | .. | 63.4 | 28 55 45.6 | .. | + | 31.5 | 80 2 38.3 | .. |
| 26 | 331 0 | 24.3 | 2.5 | 21.7 | 28.8 | 34 | .. | 120 | .. | 950 | .. | 63.4 | 28 55 30.7 | .. | + | 31.5 | 80 2 23.4 | .. |
| 27 | 350 2 | 10 0.3 | 5.8 | 28.8 | 3.5 | 39 | .. | 400 | .. | 280 | .. | 63.4 | 9 54 57.3 | .. | + | 9.9 | 61 1 28.4 | + 6.9 |
| 28 | 341 14 | 10.5 | 19.7 | 7.2 | 11.8 | 31 | .. | 920 | .. | 750 | .. | 63.4 | 18 41 12.6 | .. | + | 19.2 | 69 47 53.0 | + 2.5 |
| 29 | 343 56 | 7.0 | 16.0 | 6.5 | 8.3 | 38 | .. | .. | .. | 130 | 100 | 63.4 | 16 0 47.3 | 68.0 | + | 16.3 | 67 7 24.8 | + 2.1 |
| 30 | 54 24 | 7.0 | 6.5 | 26.5 | 5.7 | 31 | 780 | 765 | .. | .. | .. | 60.0 | 305 30 59.1 | .. | - | 21.3 | 356 35 59.0 | - 1.8 |
| 31 | 202 18 | 20.5 | 20.3 | 9.4 | 14.3 | 31 | 130 | 695 | .. | .. | .. | 60.0 | 157 37 0.5 | .. | - | 24.0 | 73 29 44.7 | + 3.5 |
| 32 | 337 32 | 13.5 | 14.3 | 4.5 | 10.8 | 31 | .. | .. | .. | 005 | 940 | 60.0 | 22 22 56.4 | .. | + | 24.0 | 73 29 41.6 | + 0.4 |
| 33 | 48 16 | 14.3 | 13.1 | 0.5 | 8.7 | 36 | 430 | .. | 445 | .. | 395 | 60.0 | 311 40 16.4 | 55.0 | - | 5.3 | 2 45 32.3 | - 1.5 |
| 34 | 131 36 | 8.7 | 11.0 | 28.5 | 5.0 | 34 | .. | .. | .. | 857 | .. | 60.0 | 228 19 43.0 | .. | + | 5.3 | 2 45 32.9 | - 0.9 |
| 35 | 353 12 | 9.1 | 8.8 | 28.0 | 8.8 | 35 | .. | 120 | .. | 000 | .. | 60.0 | 6 43 52.6 | .. | + | 6.9 | 57 50 29.7 | 0.6 |
| 36 | 326 36 | 13.3 | 15.7 | 0.8 | 13.2 | 37 | .. | 400 | .. | 335 | .. | 60.0 | 33 20 32.3 | .. | + | 38.3 | 84 27 51.8 | + 0.5 |
| 37 | 349 22 | 12.3 | 11.7 | 1.5 | 8.7 | 35 | .. | 145 | .. | 055 | .. | 60.0 | 10 33 55.5 | .. | + | 10.9 | 61 40 27.6 | + 1.4 |
| 38 | 52 6 | 7.9 | 9.2 | 29.4 | 7.1 | 38 | 080 | 946 | 800 | .. | .. | 60.2 | 307 50 33.8 | .. | - | 14.9 | 358 55 40.1 | + 1.1 |
| 39 | 343 52 | 5.1 | 5.8 | 22.9 | 4.8 | 34 | 670 | 815 | 970 | 105 | 280 | 60.0 | 16 3 47.2 | .. | + | 16.8 | 67 10 25.2 | .. |
| 40 | 342 50 | 6.2 | 6.5 | 25.3 | 3.3 | 34 | 970 | .. | .. | .. | .. | 60.0 | 17 5 46.6 | .. | + | 18.0 | 68 12 25.8 | - 0.2 |
| 41 | 323 54 | 9.5 | 12.3 | 28.7 | 7.4 | 38 | .. | 760 | .. | 665 | .. | 60.0 | 36 2 49.1 | .. | + | 42.5 | 87 9 52.8 | - 3.8 |
| 42 | 337 34 | 11.7 | 12.7 | 0.5 | 9.7 | 33 | .. | 660 | .. | 9.5 | .. | 60.0 | 22 21 37.8 | .. | + | 24.0 | 73 28 23.0 | .. |
| 43 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 44 | 355 14 | 12.5 | 14.3 | 2.8 | 10.8 | 33 | 750 | 720 | .. | .. | .. | 60.0 | 4 41 35.2 | .. | + | 4.8 | 55 48 1.2 | + 1.0 |
| 45 | 358 2 | 10.5 | 13.1 | 1.3 | 8.8 | 35 | .. | 680 | .. | 610 | .. | 60.0 | 1 51 30.3 | .. | + | 1.9 | 52 57 57.4 | + 1.3 |
| 46 | 358 2 | 10.5 | 13.1 | 1.3 | 8.8 | 36 | .. | .. | .. | 345 | 325 | 60.0 | 1 56 48.1 | .. | + | 2.0 | 53 3 11.3 | + 1.2 |
| 47 | 345 24 | 12.0 | 14.7 | 1.3 | 9.4 | 38 | .. | 320 | .. | 270 | .. | 60.0 | 14 32 45.2 | .. | + | 15.2 | 65 39 21.0 | - 0.7 |
| 48 | 281 2 | 7.8 | 9.7 | 28.5 | 8.6 | 41 | .. | .. | .. | 350 | 335 | 60.0 | 78 52 55.9 | .. | + | 48.9 | 130 4 6.0 | - 8.1 |
| 49 | 281 2 | 7.8 | 9.7 | 28.5 | 8.6 | 41 | 820 | 805 | .. | .. | .. | 60.0 | 78 55 34.1 | .. | + | 50.0 | 1 0 6 45.3 | - 8.1 |
| 50 | 339 52 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 60.0 | .. | .. | .. | .. | .. | .. |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| 4 | 30.38 | 43.7 | 19 | - 6.1 | + 16 7.6 | .. | + 16 1.5 |
| 15 | 30.37 | 42.4 | 20 | - 6.2 | - 16 7.6 | .. | - 16 13.8 |
| 17 | 30.41 | 51.0 | 25 | - 3.7 | - 7.6 | .. | - 11.3 |
| 20 | 30.39 | 57.5 | 26 | - 3.7 | + 7.6 | 0.3 | + 3.6 |
| 29 | 30.33 | 66.0 | 39 | - 16 11.9 | + 16 10.8 | .. | - 1.1 |
| 33 | 30.28 | 58.0 | 42 | - 0.2 | .. | .. | - 0.2 |

For summary of the elements of reduction see page 3.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. | | | |
|-------|---------|---------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|----------------------------|----|-------|--------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | | | | |
| 1876. | | | | | | | | | | | | m. | s. | s. | | | | h. | m. | s. | s. |
| Mar 6 | 1 | Lalande 19809 | E. | 6.3 | 8.8 | 10.6 | 16.9 | 18.9 | 21.0 | 27.3 | 28.9 | 31.7 | 4 | 18.93 | - 0.41 | . | - 1.46 | 10 | 4 | 17.06 | - 2.05 |
| | 2 | Durch 15°, 2184 | E. | 8. | 10.7 | 12.3 | 18.7 | 20.8 | 23.0 | 29.1 | 30.8 | 33.5 | 10 | 20.78 | - 0.41 | . | - 1.46 | 10 | 10 | 18.91 | - 2.05 |
| | 3 | Anonymous | E. | 11.2 | 14.0 | 15.7 | 22.0 | 24.0 | 26.1 | 32.0 | 34.1 | 37.0 | 20 | 24.08 | - 0.42 | . | - 1.45 | 10 | 20 | 22.21 | - 2.06 |
| | 4 | Hebe | E. | 16.9 | 19.6 | 21.2 | 27.7 | 29.7 | 32.0 | 38.3 | 39.9 | 42.6 | 25 | 29.77 | - 0.39 | . | - 1.45 | 10 | 25 | 27.93 | . |
| | 5 | Leonis (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 6 | Leonis | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 7 | Ursæ Majoris (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 8 | Ursæ Majoris | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 9 | Leonis | E. | 21.5 | 24.3 | 25.9 | 32.5 | 34.7 | 36.9 | 43.5 | 45.2 | 48.0 | 7 | 31.72 | - 0.36 | - 1.43 | - 1.45 | 11 | 7 | 32.91 | - 0.08 |
| | 10 | Crateris | E. | 59.6 | 2.2 | 3.9 | 10.3 | 12.3 | 14.4 | 20.6 | 22.3 | 24.9 | 13 | 12.28 | - 0.62 | - 1.39 | - 1.45 | 11 | 13 | 10.51 | + 0.22 |
| | 11 | Pales | E. | . | . | . | . | . | . | . | . | . | 28 | 15.11 | - 0.53 | . | - 1.44 | 11 | 28 | 13.17 | . |
| | 12 | Leonis | E. | 35.2 | 37.9 | 39.4 | 45.8 | 48.0 | 50.2 | 56.5 | 58.0 | 0 | 7 | 42 47.99 | - 0.41 | - 1.50 | - 1.44 | 11 | 42 | 46.14 | + 0.04 |
| | 13 | Elpis | E. | 57.4 | 0.0 | 1.8 | 7.7 | 10.0 | 12.1 | 17.0 | 19.6 | 21.9 | 9 | 9.82 | - 0.51 | . | - 1.43 | 12 | 9 | 7.88 | . |
| 8 | 14 | B. A. C. 7149 | P. | 40.2 | 42.6 | 44.4 | 50.8 | 52.0 | 55.0 | 1.2 | 3.0 | 5.7 | 33 | 52.91 | - 0.06 | . | - 0.74 | 20 | 33 | 52.11 | + 0.55 |
| | 15 | Cygni | P. | 54.2 | 57.8 | 0.0 | 8.7 | 11.6 | 14.4 | 23.2 | 25.3 | 28.9 | 37 | 11.57 | + 0.13 | - 0.76 | - 0.74 | 20 | 37 | 10.96 | + 0.04 |
| | 16 | Delphini | P. | 41.6 | 44.3 | 46.0 | 52.3 | 54.1 | 56.7 | 3.6 | 4.6 | 7.1 | 40 | 54.44 | - 0.07 | . | - 0.74 | 20 | 40 | 53.64 | + 0.58 |
| | 17 | Cygni | P. | 16.1 | 19.5 | 21.6 | 29.6 | 32.5 | 35.1 | 43.2 | 45.2 | 48.7 | 52 | 32.39 | + 0.09 | - 0.62 | - 0.73 | 20 | 52 | 31.75 | + 0.01 |
| | 18 | Cygni | P. | 25.0 | 28.0 | 29.8 | 36.9 | 39.3 | 41.7 | 48.7 | 50.5 | 53.4 | 7 | 39.26 | + 0.31 | - 0.71 | - 0.73 | 21 | 7 | 38.51 | - 0.01 |
| | 19 | B. A. C. 7398 | P. | 16.4 | 19.7 | 21.6 | 29.6 | 32.2 | 34.9 | 42.8 | 44.5 | 47.8 | 12 | 32.17 | + 0.05 | . | - 0.72 | 21 | 12 | 31.53 | + 1.30 |
| | 20 | Cephei | P. | 8.5 | 13.9 | 17.0 | 30.2 | 34.7 | 39.0 | 52.0 | 55.4 | 0.9 | 15 | 34.63 | + 0.42 | . | - 0.72 | 21 | 15 | 34.33 | + 0.14 |
| | 21 | Cephei | P. | . | . | 46.7 | 53.2 | 59.2 | 5.3 | 11.6 | . | . | 26 | 59.08 | + 0.70 | . | - 0.72 | 21 | 26 | 59.06 | + 0.41 |
| 9 | 22 | Sun I, N. | P. | 11.7 | 14.2 | 15.8 | 21.9 | 23.9 | 25.0 | 32.2 | 33.7 | 36.3 | 20 | 23.96 | - 0.18 | . | - 0.66 | 23 | 20 | 23.12 | . |
| | 23 | Sun II, S. | P. | 21.0 | 23.9 | 25.4 | 31.5 | 33.5 | 35.5 | 41.1 | 43.2 | 45.8 | 22 | 33.49 | - 0.18 | . | - 0.66 | 23 | 22 | 32.63 | . |
| | 24 | B. A. C. 166 | P. | 27.3 | 30.3 | 32.2 | 39.2 | 41.6 | 44.0 | 51.6 | 52.7 | 55.8 | 32 | 41.58 | - 0.03 | . | - 0.62 | 0 | 32 | 40.93 | + 1.10 |
| | 25 | Ceti | P. | . | . | 17.9 | 20.1 | 22.5 | 24.5 | 26.7 | . | . | 37 | 22.34 | - 0.24 | - 0.62 | - 0.62 | 0 | 37 | 21.48 | + 0.08 |
| | 26 | B. A. C. 334 | P. | 32.9 | 35.3 | 37.1 | 44.6 | 47.0 | 49.6 | 57.1 | 59.0 | 2.1 | 2 | 47.08 | 0.00 | . | - 0.60 | 1 | 2 | 46.48 | + 1.13 |
| | 27 | Polaris | P. | 8.0 | 13.0 | 7.0 | 34.5 | 1.0 | 28.5 | 53.5 | 16.0 | 52.5 | 12 | 0.40 | + 12.23 | . | - 0.60 | 1 | 12 | 12.03 | - 0.95 |
| | 28 | Piscium | P. | 38.4 | 41.0 | 42.7 | 49.0 | 51.1 | 53.3 | 59.4 | 1.2 | 3.7 | 24 | 51.99 | - 0.11 | - 0.59 | - 0.60 | 1 | 24 | 50.37 | + 0.06 |
| | 29 | Venus I, S. | P. | 4.8 | 7.3 | 8.9 | 15.2 | 17.3 | 19.5 | 25.6 | 27.2 | 29.9 | 45 | 17.30 | - 0.12 | . | - 0.59 | 1 | 45 | 16.50 | + 0.51 |
| | 30 | Arietis | P. | 34.6 | 37.3 | 38.6 | 45.0 | 47.7 | 49.8 | 56.3 | 57.9 | 0.7 | 47 | 47.64 | - 0.08 | - 0.59 | - 0.58 | 1 | 47 | 46.98 | + 0.03 |
| | 31 | Cassiopee | P. | 9.9 | 18.0 | 23.0 | 42.0 | 49.3 | 55.8 | 15.4 | 20.3 | 28.4 | 52 | 49.19 | + 0.68 | . | - 0.58 | 1 | 52 | 49.20 | + 0.25 |
| | 32 | Arietis | P. | 57.9 | 0.7 | 2.4 | 9.0 | 11.3 | 13.5 | 20.0 | 21.9 | 24.5 | 0 | 11.24 | - 0.07 | - 0.58 | - 0.58 | 2 | 0 | 10.59 | + 0.01 |
| | 33 | Ursæ Minoris, S. P. | P. | . | . | . | 11.5 | 20.5 | 32.0 | . | . | . | 47 | 21.67 | - 17.96 | . | - 0.64 | 19 | 47 | 3.24 | - 4.08 |
| | 34 | Ursæ Majoris (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 35 | Ursæ Majoris | P. | . | . | . | . | . | 42.6 | 53.7 | 57.8 | 5.2 | 8 | 31.14 | + 0.63 | . | - 0.63 | 8 | 0 | 31.14 | - 0.25 |
| | 36 | B. A. C. 2778 | P. | 37.9 | 39.7 | 41.3 | 47.5 | 49.6 | 51.6 | 57.8 | 59.4 | 2.0 | 9 | 49.54 | - 0.09 | . | - 0.62 | 8 | 9 | 48.83 | - 1.59 |
| | 37 | (VII), 2 | P. | 51.6 | 54.6 | 56.0 | 4.1 | 6.6 | 9.3 | 16.7 | 18.5 | 21.7 | 13 | 6.63 | - 0.24 | . | - 0.62 | 8 | 13 | 5.77 | - 1.28 |
| | 38 | Anonymous | P. | 33.6 | 36.8 | 38.9 | 46.3 | 48.9 | 51.4 | 59.0 | 0.0 | 4.1 | 14 | 48.88 | - 0.24 | . | - 0.62 | 8 | 14 | 48.03 | - 1.29 |
| | 39 | Lacaille 3373 | P. | . | . | 28.2 | 30.0 | 33.5 | 36.0 | 38.6 | . | . | 26 | 33.44 | - 0.25 | . | - 0.61 | 8 | 26 | 32.57 | - 1.33 |
| | 40 | B. A. C. 2877 | P. | . | . | 46.0 | 49.0 | 52.2 | 54.7 | 57.4 | . | . | 26 | 52.16 | - 0.25 | . | - 0.61 | 8 | 26 | 51.30 | - 1.33 |
| | 41 | B. A. C. 2911 | P. | 9.0 | 10.6 | 14.7 | 16.7 | 18.7 | 20.8 | 22.8 | 26.0 | 28.5 | 32 | 18.74 | - 0.11 | . | - 0.61 | 8 | 32 | 18.02 | - 1.61 |
| | 42 | B. A. C. 2945 | P. | 34.4 | 37.0 | 38.5 | 44.7 | 46.7 | 48.9 | 54.9 | 56.5 | 59.0 | 36 | 46.73 | - 0.11 | . | - 0.61 | 8 | 36 | 46.01 | - 1.63 |
| | 43 | Hydræ | P. | 2.5 | 4.9 | 6.6 | 12.7 | 14.8 | 16.8 | 23.0 | 24.5 | 27.0 | 40 | 14.76 | - 0.10 | - 0.45 | - 0.61 | 8 | 40 | 14.07 | - 0.20 |
| | 44 | B. A. C. 3026 | P. | 2.5 | 5.4 | 7.2 | 14.2 | 16.4 | 18.8 | 25.7 | 27.5 | 30.4 | 48 | 16.46 | 0.00 | . | - 0.60 | 8 | 48 | 15.86 | - 2.10 |
| | 45 | B. A. C. 3056 | P. | 43.5 | 46.6 | 48.5 | 55.8 | 58.1 | 0.0 | 7.9 | 9.8 | 12.8 | 51 | 58.18 | + 0.03 | . | - 0.59 | 8 | 51 | 57.62 | - 2.24 |
| | 46 | B. A. C. 3068 | P. | 35.7 | 38.8 | 40.7 | 48.0 | 50.5 | 52.8 | 0.1 | 1.9 | 5.0 | 53 | 50.39 | + 0.03 | . | - 0.59 | 8 | 53 | 49.82 | - 2.25 |
| | 47 | B. A. C. 3117 | P. | 3.0 | 5.8 | 7.5 | 14.0 | 16.2 | 18.5 | 25.1 | 26.7 | 29.5 | 2 | 16.26 | - 0.03 | . | - 0.59 | 9 | 2 | 15.64 | - 2.02 |
| | 48 | B. A. C. 3138 | P. | 21.6 | 24.3 | 26.0 | 32.7 | 34.8 | 37.0 | 43.0 | 45.3 | 48.0 | 6 | 34.81 | - 0.07 | . | - 0.58 | 9 | 6 | 34.20 | - 2.03 |
| | 49 | B. A. C. 3144 | P. | 25.1 | 28.3 | 30.2 | 37.8 | 40.2 | 42.8 | 50.1 | 52.0 | 55.3 | 7 | 49.20 | + 0.05 | . | - 0.58 | 9 | 7 | 39.67 | - 2.38 |
| | 50 | Uranus. | P. | . | . | . | 19.9 | 22.0 | 24.2 | 26.3 | . | 34.8 | 17 | 22.03 | - 0.06 | . | - 0.58 | 9 | 17 | 21.3 | . |

3, 4, 11, 13, 42, 45. Thread A used.

6, 19, 41, 46. Thread B used.

11. Transits at threads VI and VII.

15, 20, 31. Bisections at sets B and D.

21. Bisections at set C.

34. Bisections at threads I, II, and III.

35. Bisections at threads V and VI.

46. Telescope micrometer reading decreased one revolution in reduction.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|--------|----|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | | |
| | | r. " | " | " | " | | | | | | | | | | | | | | |
| 1 | 336 8 | 10 15.0 | 16.3 | 1.0 | 11.5 | 34 | .. | 310 | .. | 230 | .. | 60.0 | 23 47 44.9 | .. | + | 25.8 | 74 54 31.9 | - 5.2 | |
| 2 | 336 0 | 8.5 | 9.2 | 25.8 | 8.6 | 35 | .. | .. | .. | 790 | 760 | 60.0 | 23 56 4.0 | .. | + | 26.0 | 75 2 51.2 | - 5.6 | |
| 3 | 335 30 | 2.2 | 5.6 | 21.2 | 2.1 | 42 | .. | 480 | .. | 385 | .. | 60.0 | 24 25 6.0 | .. | + | 26.7 | 75 31 53.9 | - 6.3 | |
| 4 | 338 41 | 8.5 | 11.0 | 29.0 | 9.5 | 39 | 060 | 045 | .. | 940 | 905 | 60.0 | 21 10 20.0 | .. | + | 22.7 | 72 17 3.0 | - 1.1 | |
| 5 | 207 36 | 12.0 | 14.5 | 4.0 | 11.0 | 39 | 555 | 525 | .. | .. | .. | 60.0 | 152 18 46.0 | .. | - | 30.8 | 78 48 6.0 | + 2.1 | |
| 6 | 332 16 | 15.5 | 16.0 | 5.9 | 13.3 | 29 | .. | .. | .. | 840 | 815 | 60.0 | 27 41 12.5 | .. | + | 30.8 | 73 48 4.5 | + 0.6 | |
| 7 | 156 21 | 11.8 | 15.5 | 4.0 | 12.6 | 31 | 770 | 570 | .. | .. | .. | 60.0 | 203 31 3.1 | .. | + | 25.5 | 27 34 52.6 | - 0.4 | |
| 8 | 23 28 | 13.2 | 15.3 | 4.8 | 11.0 | 38 | .. | .. | .. | 990 | 830 | 60.0 | 336 23 58.4 | .. | - | 25.5 | 27 34 54.1 | + 1.1 | |
| 9 | 342 16 | 11.8 | 15.0 | 3.7 | 11.6 | 40 | .. | 420 | .. | 350 | .. | 60.0 | 17 41 18.6 | .. | + | 18.7 | 65 47 58.5 | + 0.2 | |
| 10 | 306 58 | 13.0 | 17.3 | 5.0 | 12.8 | 39 | .. | 120 | .. | 035 | .. | 60.0 | 52 58 59.6 | .. | + | 17.6 | 104 6 33.4 | + 1.9 | |
| 11 | 320 18 | 17.3 | 17.0 | 7.0 | 16.2 | 33 | .. | .. | .. | 030 | 110 | 60.0 | 39 34 57.9 | .. | + | 48.4 | 90 42 7.5 | - 2.2 | |
| 12 | 330 18 | 13.5 | 15.3 | 3.9 | 13.4 | 33 | .. | 325 | .. | 230 | .. | 60.0 | 23 37 30.5 | 50.5 | + | 25.6 | 71 44 17.3 | + 1.4 | |
| 13 | 321 38 | 13.3 | 15.0 | 2.8 | 12.3 | 33 | .. | 330 | .. | 210 | .. | 60.0 | 35 15 29.8 | .. | + | 46.2 | 89 22 34.2 | - 2.7 | |
| 14 | 336 32 | 16.5 | 18.3 | 9.4 | 16.6 | 38 | .. | 625 | .. | 435 | .. | 61.9 | 23 24 56.8 | 39.0 | + | 25.8 | 71 31 43.8 | - 16.0 | |
| 15 | 5 52 | 11.7 | 12.8 | 2.6 | 10.3 | 34 | 595 | .. | .. | 430 | .. | 61.9 | 351 3 43.4 | .. | - | 6.2 | 45 10 3.4 | + 1.3 | |
| 16 | 336 44 | 18.1 | 18.6 | 8.6 | 17.1 | 37 | .. | 880 | .. | 800 | .. | 61.9 | 23 12 46.3 | .. | + | 25.6 | 74 19 33.1 | - 15.6 | |
| 17 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 40.2 | .. | .. | .. | .. | .. |
| 18 | 350 46 | 15.5 | 16.5 | 5.1 | 14.5 | 37 | .. | 595 | .. | 235 | .. | 61.9 | 9 10 36.6 | 41.3 | + | 9.6 | 60 17 7.4 | + 1.5 | |
| 19 | 359 56 | 12.2 | 14.4 | 4.9 | 11.7 | 39 | 570 | 490 | .. | .. | .. | 61.9 | 0 1 21.1 | .. | .. | 0.0 | 51 7 42.3 | - 15.6 | |
| 20 | 23 6 | 13.7 | 16.3 | 8.2 | 14.1 | 37 | 715 | .. | 755 | .. | 600 | 61.9 | 336 50 42.0 | .. | - | 25.4 | 27 56 37.8 | - 0.8 | |
| 21 | 31 2 | 13.9 | 15.5 | 4.2 | 13.3 | 33 | 085 | .. | .. | .. | 195 | 61.9 | 325 53 30.4 | 42.9 | - | 35.7 | 19 59 15.9 | + 0.7 | |
| 22 | 317 10 | 9.5 | 12.2 | 2.7 | 12.0 | 35 | 115 | 075 | .. | .. | .. | 61.9 | 42 45 56.0 | .. | + | 54.2 | 93 53 11.4 | .. | |
| 23 | 316 38 | 15.3 | 16.8 | 7.2 | 17.3 | 35 | .. | .. | .. | 230 | 250 | 61.9 | 43 15 7.0 | 47.8 | + | 55.2 | 94 25 23.4 | .. | |
| 24 | 351 14 | 14.2 | 16.7 | 6.0 | 14.9 | 37 | .. | 135 | .. | 020 | .. | 61.9 | 8 42 32.1 | 51.0 | + | 8.9 | 59 49 2.2 | + 1.6 | |
| 25 | 302 24 | 8.5 | 11.5 | 1.0 | 11.9 | 36 | .. | 300 | .. | 140 | .. | 61.9 | 57 32 14.1 | .. | + | 31.1 | 103 40 6.4 | - 0.5 | |
| 26 | 356 0 | 11.1 | 14.8 | 3.8 | 13.3 | 34 | .. | 140 | .. | 030 | .. | 61.9 | 3 55 44.1 | 52.2 | + | 4.0 | 55 2 9.3 | + 4.9 | |
| 27 | 49 40 | 8.5 | 11.2 | 0.7 | 8.0 | 33 | 575 | 910 | 880 | 850 | .. | 61.9 | 310 15 37.2 | .. | - | 1 8.4 | 1 20 50.0 | - 1.1 | |
| 28 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 29 | 332 28 | 8.3 | 11.8 | 0.4 | 10.0 | 36 | .. | 845 | .. | 700 | .. | 61.9 | 27 28 21.9 | 52.3 | + | 30.2 | 70 35 13.3 | .. | |
| 30 | 341 14 | 11.7 | 14.9 | 3.5 | 13.5 | 31 | .. | 915 | .. | 830 | .. | 61.9 | 18 41 10.8 | .. | + | 19.6 | 69 47 51.6 | + 0.9 | |
| 31 | 32 52 | 8.0 | 9.5 | 29.7 | 7.8 | 35 | 565 | .. | 575 | .. | .. | 61.9 | 327 4 47.9 | .. | - | 37.5 | 18 10 31.6 | - 1.0 | |
| 32 | 343 56 | 8.7 | 12.2 | 0.7 | 11.0 | 33 | 395 | 390 | .. | 120 | 075 | 61.9 | 16 0 45.2 | 52.7 | + | 16.6 | 67 7 23.0 | 0.0 | |
| 33 | 52 6 | 11.5 | 13.5 | 1.8 | 10.2 | 37 | .. | 470 | 4.5 | 490 | .. | 61.7 | 307 50 33.7 | 42.2 | - | 1 16.1 | 355 55 38.8 | + 0.5 | |
| 34 | 150 0 | 6.6 | 11.5 | 0.0 | 8.5 | 39 | 605 | 500 | 470 | .. | .. | 61.7 | 209 56 15.0 | .. | + | 34.1 | 21 9 32.1 | - 1.7 | |
| 35 | 29 52 | 10.2 | 11.7 | 29.7 | 8.5 | 34 | .. | .. | .. | 300 | 305 | 61.7 | 330 3 45.8 | .. | - | 34.1 | 21 9 33.9 | + 0.1 | |
| 36 | 330 36 | 11.8 | 14.8 | 3.5 | 11.0 | 31 | .. | 720 | .. | 630 | .. | 61.7 | 29 19 6.4 | .. | + | 33.3 | 80 26 0.9 | + 0.3 | |
| 37 | 235 24 | 11.5 | 13.4 | 3.8 | 12.4 | 32 | .. | 345 | .. | 195 | .. | 61.7 | 71 31 15.2 | .. | + | 3 31.2 | 125 41 7.6 | - 8.5 | |
| 38 | 285 21 | 11.5 | 13.4 | 3.8 | 12.4 | 37 | .. | .. | .. | 915 | 925 | 61.7 | 74 32 42.7 | .. | + | 3 31.5 | 125 42 35.5 | - 8.2 | |
| 39 | 232 28 | 10.8 | 14.9 | 4.3 | 13.0 | 35 | 440 | 370 | .. | .. | .. | 61.7 | 77 28 2.3 | .. | + | 4 21.1 | 128 38 44.6 | - 8.8 | |
| 40 | 282 28 | 10.8 | 14.9 | 4.3 | 13.0 | 35 | .. | .. | .. | 970 | 925 | 61.7 | 77 28 13.0 | .. | + | 4 21.2 | 128 38 55.4 | - 8.0 | |
| 41 | 324 52 | 10.6 | 10.8 | 0.1 | 9.1 | 31 | .. | .. | .. | 910 | 925 | 61.7 | 35 6 27.0 | .. | + | 41.7 | 86 13 29.9 | - 2.1 | |
| 42 | 324 52 | 10.6 | 10.8 | 0.1 | 9.1 | 39 | .. | 245 | .. | 130 | .. | 61.7 | 35 2 25.3 | .. | + | 41.7 | 86 9 23.2 | - 2.3 | |
| 43 | 327 56 | 10.9 | 13.5 | 0.8 | 11.5 | 37 | .. | .. | .. | 800 | 850 | 61.7 | 32 0 41.1 | .. | + | 37.1 | 83 7 39.4 | - 0.6 | |
| 44 | 349 26 | 11.5 | 12.9 | 2.4 | 11.0 | 33 | 010 | 020 | .. | 900 | 925 | 61.7 | 10 29 25.5 | .. | + | 11.0 | 61 35 57.7 | + 2.8 | |
| 45 | 353 52 | 8.8 | 9.6 | 29.4 | 8.4 | 27 | 900 | 930 | .. | .. | .. | 61.7 | 5 59 31.7 | .. | + | 6.2 | 57 5 59.1 | + 3.6 | |
| 46 | 353 52 | 8.8 | 9.6 | 29.4 | 8.4 | 47 | 460 | 405 | .. | .. | .. | 61.7 | 6 9 21.0 | .. | + | 6.4 | 57 15 48.6 | + 3.4 | |
| 47 | 343 36 | 9.3 | 11.3 | 20.1 | 8.9 | 37 | .. | 725 | .. | 670 | .. | 61.7 | 16 20 35.6 | .. | + | 17.4 | 67 27 14.2 | + 0.4 | |
| 48 | 342 50 | 7.2 | 8.5 | 28.0 | 7.1 | 31 | 690 | 695 | .. | .. | .. | 61.7 | 17 5 46.5 | .. | + | 18.3 | 68 12 26.0 | 0.0 | |
| 49 | 356 10 | 11.9 | 14.1 | 2.8 | 10.3 | 39 | .. | .. | .. | 815 | 795 | 61.7 | 3 44 51.3 | .. | + | 3.9 | 51 51 19.4 | + 2.8 | |
| 50 | 337 36 | 7.4 | 10.1 | 27.6 | 7.1 | 34 | .. | .. | .. | 425 | 335 | 61.7 | 22 19 44.8 | .. | + | 24.4 | 73 26 30.4 | .. | |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " | " | " | " |
| 12 | 30.22 | 53.0 | 22 | - 6.0 | + 16 6.0 | .. | + 16 6.0 |
| 14 | 30.03 | 39.3 | 23 | - 6.1 | - 16 6.0 | .. | - 16 12.1 |
| 17 | 30.04 | 40.3 | 29 | - 3.6 | - 7.6 | .. | - 11.2 |
| 18 | 30.04 | 41.1 | 50 | - 0.2 | .. | .. | - 0.2 |
| 21 | 30.04 | 42.4 | | | | | |
| 23 | 30.02 | 46.2 | | | | | |
| 24 | 30.00 | 48.6 | | | | | |
| 26 | 29.99 | 50.0 | | | | | |
| 29 | 30.00 | 52.6 | | | | | |
| 32 | 29.95 | 51.5 | | | | | |
| 33 | 30.00 | 44.3 | | | | | |

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|-----------------|---------|--------------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | |
| | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| 1876. Mar. 9 | 1 | a Hydræ | P. | | | | | 33.9 | 36.0 | 40.1 | 41.7 | 44.2 | 21 31.86 | — 0.15 | — 0.44 | — 0.57 | 9 21 31.14 | — 0.16 |
| | 2 | B. A. C. 3303 | P. | 21.4 | 24.0 | 29.6 | 31.7 | 33.7 | 35.8 | 37.8 | 43.5 | 46.0 | 33 33.72 | — 0.12 | | — 0.56 | 9 33 33.04 | — 1.75 |
| | 3 | Leonis | P. | 37.9 | 40.6 | 42.4 | 49.0 | 51.3 | 53.6 | 0.3 | 1.9 | 4.8 | 38 51.31 | — 0.02 | — 0.53 | — 0.56 | 9 38 50.73 | — 0.09 |
| | 4 | B. A. C. 3407 | P. | 23.5 | 26.3 | 27.7 | 34.0 | 36.0 | 38.0 | 44.3 | 45.8 | 48.3 | 51 35.99 | — 0.09 | | — 0.55 | 9 51 35.35 | — 1.92 |
| | 5 | a Leonis | P. | 36.0 | 38.6 | 40.2 | 46.5 | 48.6 | 50.7 | 57.0 | 58.5 | 1.0 | 1 48.57 | — 0.08 | — 0.49 | — 0.55 | 10 1 47.94 | — 0.10 |
| | 6 | Durb. 15°, 2184 | P. | 6.7 | 9.5 | 11.0 | 17.3 | 19.5 | 21.6 | 28.0 | 29.5 | 32.2 | 10 19.48 | — 0.07 | | — 0.54 | 10 10 18.87 | — 2.05 |
| | 7 | γ ¹ Leonis | P. | 57.7 | 0.5 | 2.2 | | | | 19.5 | 21.2 | 24.0 | 13 10.85 | — 0.04 | — 0.63 | — 0.54 | 10 13 10.27 | + 0.07 |
| | 8 | γ ² Leonis | P. | | | 6.7 | 8.0 | 11.1 | 13.3 | 15.5 | | | 13 11.10 | — 0.04 | | — 0.54 | 10 13 10.52 | — 2.17 |
| | 9 | Anonymous | P. | | | 18.6 | 20.6 | 22.7 | 24.9 | 26.9 | | | 20 22.74 | — 0.07 | | — 0.53 | 10 20 22.14 | — 2.06 |
| | 10 | Hebe | P. | 47.5 | 50.2 | 51.8 | 55.3 | 0.4 | 2.6 | 9.0 | 10.6 | 13.2 | 23 0.40 | — 0.05 | | — 0.53 | 10 22 59.82 | |
| | 11 | B. A. C. 3663 | P. | 56.0 | 58.6 | 0.0 | 6.1 | 8.2 | 10.2 | 16.4 | 17.9 | 20.5 | 35 8.21 | — 0.13 | | — 0.52 | 10 35 7.56 | — 1.84 |
| | 12 | B. A. C. 3671 | P. | 29.7 | 32.5 | 34.2 | 41.0 | 43.2 | 45.4 | 52.0 | 53.7 | 56.5 | 36 43.13 | — 0.02 | | — 0.52 | 10 36 42.59 | — 2.28 |
| | 13 | B. A. C. 3788 | P. | 27.4 | 30.0 | 31.5 | 37.7 | 39.5 | 41.9 | 48.0 | 49.6 | 52.1 | 58 39.78 | — 0.10 | | — 0.51 | 10 58 39.17 | — 1.98 |
| | 14 | B. A. C. 3822 | P. | 44.0 | 46.6 | 48.6 | 50.0 | 58.3 | 0.8 | 7.9 | 9.7 | 12.7 | 3 58.32 | — 0.23 | | — 0.50 | 11 3 57.59 | — 1.67 |
| | 15 | B. A. C. 3842 | P. | 25.8 | 28.7 | 30.4 | 37.3 | 39.4 | 41.6 | 48.2 | 50.0 | 52.8 | 8 39.36 | — 0.02 | | — 0.50 | 11 8 38.84 | — 2.30 |
| | 16 | B. A. C. 3851 | P. | 22.5 | 25.5 | 27.4 | 34.6 | 36.9 | 39.4 | 46.5 | 48.4 | 51.5 | 11 36.97 | + 0.03 | | — 0.49 | 11 11 36.51 | — 2.54 |
| | 17 | Moon I, N. | P. | 37.9 | 40.4 | 42.0 | 48.2 | 50.3 | 52.5 | 58.7 | 0.3 | 2.9 | 21 59.36 | — 0.11 | | — 0.49 | 11 21 49.76 | +65.68 |
| | 18 | Moon II | P. | | | | | | | 5.8 | 10.0 | 11.7 | 14 1.59 | — 0.11 | | — 0.49 | 11 24 0.99 | —65.55 |
| | 19 | Groombridge 1822 | P. | 47.8 | 51.7 | 54.0 | 3.5 | 6.3 | 9.3 | 18.5 | 20.8 | 24.7 | 39 6.27 | + 0.17 | | — 0.47 | 11 39 5.97 | — 3.25 |
| | 20 | β Leonis | P. | 34.0 | 36.6 | 38.2 | 44.6 | 46.7 | 48.5 | 55.2 | 56.7 | 59.3 | 42 46.68 | — 0.06 | — 0.51 | — 0.47 | 11 42 46.15 | + 0.02 |
| | 21 | B. A. C. 4027 | P. | 31.7 | 34.1 | 35.7 | 42.0 | 44.0 | 46.0 | 52.5 | 53.9 | 56.4 | 48 44.01 | — 0.09 | | — 0.47 | 11 48 43.45 | — 1.99 |
| | 22 | B. A. C. 4056 | P. | 12.6 | 15.0 | 17.0 | 23.8 | 26.0 | 28.3 | 34.7 | 36.4 | 39.4 | 55 25.97 | — 0.03 | | — 0.47 | 11 55 25.47 | — 2.24 |
| | 23 | B. A. C. 4092 | P. | 16.3 | 19.7 | 21.7 | 29.8 | 32.5 | 35.2 | 43.2 | 45.3 | 48.6 | 2 32.48 | — 0.26 | | — 0.47 | 12 2 31.75 | — 1.69 |
| | 24 | Elpis | P. | 46.8 | 49.1 | 50.7 | 57.1 | 58.8 | 1.0 | | | | 6 58.93 | — 0.12 | | — 0.46 | 12 6 58.35 | |
| | 25 | Ausonia | P. | | | 11.4 | 13.7 | 15.7 | 17.8 | 21.9 | 23.6 | | 23 13.67 | — 0.15 | | — 0.45 | 12 23 13.07 | |
| | 26 | 12 ¹ Canum Venat. | P. | 59.5 | 2.7 | 4.8 | | | | 25.8 | 27.7 | 31.1 | 50 15.27 | + 0.08 | | — 0.43 | 12 50 14.92 | — 2.57 |
| | 27 | 12 ² Canum Venat. | P. | | | 11.3 | 14.0 | 16.5 | 19.2 | 21.7 | | | 50 16.54 | + 0.08 | — 0.56 | — 0.43 | 12 50 16.19 | + 0.13 |
| | 28 | B. A. C. 4367 | P. | 52.7 | 54.5 | 55.8 | 0.7 | 2.8 | 4.0 | 6.9 | 11.0 | 12.6 | 56 2.73 | — 0.08 | | — 0.43 | 12 56 2.22 | — 1.99 |
| | 29 | η Virginis | P. | 21.9 | 24.4 | 26.0 | 32.1 | 34.2 | 36.3 | 42.4 | 43.9 | 46.4 | 3 34.18 | — 0.14 | — 0.50 | — 0.42 | 13 3 33.62 | + 0.04 |
| | 30 | Polaris, S. P. | P. | 3.6 | | 20.6 | 54.4 | 26.5 | 0.7 | 32.5 | 40.6 | 34.5 | 12 26.44 | — 14.33 | | — 0.41 | 1 12 11.70 | — 1.02 |
| | 31 | a Virginis | P. | 29.4 | 32.0 | 33.6 | 39.9 | 41.9 | 44.0 | 50.2 | 51.7 | 54.4 | 18 41.90 | — 0.16 | — 0.38 | — 0.41 | 13 18 41.33 | — 0.05 |
| | 32 | B. A. C. 4518 | P. | 34.6 | 37.8 | 39.8 | 47.0 | 50.3 | 52.9 | 0.9 | 2.8 | 6.2 | 25 50.36 | — 0.26 | | — 0.41 | 13 25 49.69 | — 1.59 |
| | 33 | B. A. C. 4522 | P. | 20.9 | 24.4 | 26.3 | 34.2 | 36.0 | 39.6 | 47.4 | 49.3 | 52.6 | 26 36.84 | — 0.26 | | — 0.41 | 13 26 36.17 | — 1.58 |
| | 34 | γ Virginis | P. | | | | | | | 32.9 | 34.4 | 37.0 | 28 24.72 | — 0.12 | — 0.38 | — 0.40 | 13 28 24.20 | — 0.62 |
| | 35 | η Ursæ Majoris | P. | | | | | | | 54.8 | 57.3 | 1.3 | 42 42.20 | + 0.19 | | — 0.39 | 13 42 42.00 | + 0.04 |
| | 36 | η Bootis | P. | 36.2 | 38.9 | 40.5 | 47.0 | 49.2 | 51.4 | 57.8 | 59.3 | 2.0 | 48 49.14 | — 0.05 | — 0.43 | — 0.39 | 13 48 48.70 | — 0.01 |
| | 37 | 50 Cassiopeiæ, S. P. | P. | 30.1 | 21.8 | 17.1 | 57.4 | 51.0 | 44.3 | 24.5 | 19.9 | 11.8 | 52 50.88 | — 1.30 | | — 0.38 | 1 52 49.20 | + 0.18 |
| | 38 | a Draconis (R.) | P. | | | | | | | | | | | | | | | |
| | 39 | a Draconis | P. | | | 56.2 | 0.9 | 5.6 | 10.7 | 15.5 | | | 1 5.78 | + 0.49 | | — 0.38 | 14 1 5.89 | + 0.13 |
| | 40 | a Bootis (R.) | P. | | | | | | | | | | | | | | | |
| | 41 | a Bootis | P. | | | | | | | | | | | | | | | |
| 13 | 42 | B. A. C. 1976 | P. | 20.8 | 24.0 | 25.8 | 33.3 | 35.8 | 38.4 | 45.7 | 47.5 | 50.7 | 2 35.78 | — 0.33 | | + 0.95 | 6 2 36.40 | — 0.65 |
| | 43 | B. A. C. 1996 | P. | 51.3 | 54.4 | 56.4 | 3.8 | 6.3 | 8.8 | 16.2 | 18.0 | 21.0 | 6 6.24 | — 0.33 | | + 0.95 | 6 6 6.86 | — 0.66 |
| | 44 | δ Ursæ Minoris, S. P. | P. | | | 27.5 | 53.1 | 18.8 | 44.1 | 9.6 | 1.0 | 35.6 | 12 18.76 | — 7.78 | | + 0.95 | 18 12 11.93 | + 0.27 |
| | 45 | η Geminorum | P. | 14.3 | 17.2 | 18.7 | 25.4 | 27.9 | 28.8 | 36.4 | 38.1 | 40.9 | 15 27.60 | — 0.04 | + 1.00 | + 0.95 | 6 15 28.51 | — 0.09 |
| | 46 | γ Geminorum | P. | 20.3 | 23.0 | 24.6 | 31.0 | 33.1 | 35.3 | 41.6 | 43.2 | 45.8 | 30 33.10 | — 0.08 | + 0.96 | + 0.95 | 6 30 34.97 | — 0.04 |
| | 47 | B. A. C. 2179 | P. | 33.8 | 37.0 | 39.2 | 47.0 | 49.5 | 52.0 | 59.9 | 1.8 | 5.0 | 32 49.47 | — 0.35 | | + 0.95 | 6 32 50.07 | — 0.77 |
| | 48 | B. A. C. 2195 | P. | 28.0 | 31.4 | 33.4 | 41.0 | 43.7 | 46.4 | 54.0 | 56.0 | 59.4 | 35 43.70 | — 0.35 | | + 0.95 | 6 35 44.30 | — 0.78 |
| | 49 | a Canis Majoris | P. | 28.2 | 30.9 | 32.6 | 39.0 | 41.2 | 43.3 | 49.6 | 51.3 | 53.9 | 39 41.11 | — 0.25 | + 0.90 | + 0.95 | 6 39 41.81 | — 0.03 |
| | 50 | 51 Cephei | P. | | | | 9.9 | 52.1 | 33.0 | | | | 41 51.73 | + 8.84 | | + 0.95 | 6 42 1.52 | + 0.45 |

10, 24, 25, 33. Thread A used.

17. Bisections at threads II-VI.

19, 37, 39, 43. Bisections at sets B and D.

33. Bisections at threads V and VI.

40. Bisections at threads I, II, and III.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. |
| | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " |
| 1 | 312 56 | 10 10.2 | 13.3 | 2.5 | 9.7 | 35 | .. | .. | .. | 080 | 120 | 61.7 | 46 59 58.6 | 39.8 | + 1 3.8 | 98 7 23.6 | - 1.4 |
| 2 | 320 28 | 10.8 | 13.6 | 2.4 | 11.6 | 34 | .. | .. | .. | 135 | 070 | 61.7 | 39 27 44.0 | .. | + 49.0 | 90 34 54.2 | - 5.6 |
| 3 | 345 24 | 7.0 | 10.3 | 27.8 | 7.7 | 38 | .. | 475 | .. | 305 | .. | 61.7 | 14 32 44.7 | .. | + 15.5 | 65 39 21.4 | - 0.7 |
| 4 | 329 58 | 9.1 | 11.7 | 0.8 | 8.5 | 38 | 745 | 715 | .. | 560 | 550 | 61.7 | 29 58 50.3 | .. | + 34.4 | 81 5 45.9 | - 5.2 |
| 5 | 333 38 | 10.5 | 12.7 | 2.5 | 10.5 | 38 | 770 | 740 | .. | .. | .. | 61.7 | 26 18 52.5 | .. | + 29.5 | 77 25 43.2 | - 0.1 |
| 6 | 336 0 | 9.3 | 11.8 | 29.8 | 10.5 | 35 | 445 | 495 | .. | 380 | 275 | 61.7 | 23 56 1.1 | .. | + 26.5 | 75 2 48.8 | - 5.5 |
| 7 | 341 30 | 8.2 | 11.0 | 28.1 | 9.3 | 32 | 715 | .. | .. | .. | 560 | 61.7 | 18 25 17.8 | .. | + 19.9 | 69 31 58.9 | - 0.1 |
| 8 | 341 30 | 8.2 | 11.0 | 28.1 | 9.3 | 32 | .. | 875 | .. | 740 | .. | 61.7 | 18 25 20.2 | .. | + 19.9 | 69 32 1.3 | - 5.0 |
| 9 | 335 30 | 7.4 | 11.0 | 0.0 | 8.5 | 31 | 800 | 780 | .. | .. | .. | 61.7 | 24 25 3.5 | .. | + 27.1 | 75 31 51.8 | - 6.2 |
| 10 | 339 8 | 13.4 | 15.2 | 4.5 | 13.1 | 37 | .. | 135 | .. | 925 | .. | 61.7 | 20 45 56.2 | 38.0 | + 22.7 | 71 52 40.1 | - 1.7 |
| 11 | 319 58 | 8.0 | 9.0 | 28.7 | 8.4 | 36 | 825 | 815 | .. | .. | .. | 61.7 | 39 58 19.7 | .. | + 50.1 | 91 5 31.0 | - 8.4 |
| 12 | 344 52 | 8.2 | 11.5 | 28.8 | 8.0 | 32 | .. | 500 | .. | 380 | .. | 61.7 | 15 3 14.6 | .. | + 16.1 | 66 9 51.9 | - 6.4 |
| 13 | 329 4 | 9.3 | 12.0 | 0.7 | 8.8 | 38 | .. | 670 | .. | 515 | .. | 61.7 | 30 52 49.7 | .. | + 35.8 | 81 59 46.7 | - 9.1 |
| 14 | 289 24 | 8.0 | 10.9 | 1.7 | 8.9 | 37 | 950 | 965 | .. | .. | .. | 61.7 | 70 32 38.1 | .. | + 2 47.8 | 121 41 47.1 | - 9.0 |
| 15 | 344 48 | 12.2 | 13.4 | 2.4 | 11.3 | 32 | 215 | 235 | .. | .. | .. | 61.7 | 15 7 13.4 | .. | + 16.2 | 66 13 50.8 | - 8.9 |
| 16 | 353 16 | 11.6 | 13.9 | 4.1 | 10.2 | 35 | 580 | 600 | .. | 460 | 405 | 61.7 | 6 40 5.1 | .. | + 7.0 | 57 46 33.3 | - 8.5 |
| 17 | 325 42 | 7.7 | 11.3 | 0.0 | 9.3 | 30 | 800 | 895 | 050 | 250 | 450 | 61.7 | 34 12 51.2 | 37.7 | + 40.7 | 85 19 56.1 | .. |
| 18 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 19 | 9 24 | 10.7 | 12.9 | 3.0 | 9.0 | 35 | 520 | .. | 380 | .. | 335 | 61.7 | 350 32 2.2 | .. | - 10.0 | 41 38 13.4 | - 9.9 |
| 20 | 336 18 | 13.0 | 14.9 | 4.0 | 11.8 | 33 | 180 | .. | .. | .. | 915 | 61.7 | 23 37 28.4 | .. | + 26.2 | 74 44 15.8 | 0.0 |
| 21 | 330 10 | 11.2 | 12.9 | 2.6 | 10.9 | 32 | 380 | 335 | .. | 190 | 160 | 61.7 | 29 45 14.6 | .. | + 34.2 | 80 52 10.0 | - 11.9 |
| 22 | 343 50 | 6.6 | 8.2 | 26.4 | 6.6 | 37 | 355 | 300 | .. | 160 | 150 | 61.7 | 16 6 26.0 | .. | + 17.3 | 67 13 4.5 | - 12.5 |
| 23 | 280 34 | 11.0 | 13.7 | 5.0 | 12.2 | 31 | 800 | 705 | .. | .. | .. | 61.7 | 79 21 6.1 | .. | + 5 9.3 | 130 32 36.6 | - 7.8 |
| 24 | 322 0 | 7.3 | 10.0 | 29.1 | 8.8 | 34 | .. | 780 | .. | 795 | .. | 61.7 | 37 53 15.9 | .. | + 46.6 | 89 0 23.7 | - 2.7 |
| 25 | 314 26 | 10.3 | 12.5 | 2.4 | 11.4 | 40 | .. | .. | .. | 200 | 095 | 61.7 | 45 28 42.7 | 36.5 | + 1 0.9 | 96 36 4.8 | - 4.5 |
| 26 | 0 0 | 8.5 | 10.4 | 29.9 | 6.9 | 30 | .. | 935 | .. | 890 | .. | 61.7 | 359 54 51.1 | .. | - 0.1 | 51 1 12.2 | - 17.0 |
| 27 | 0 0 | 8.5 | 10.4 | 29.9 | 6.9 | 30 | .. | 095 | .. | 950 | .. | 61.7 | 359 54 37.4 | .. | - 0.1 | 51 0 58.5 | + 0.4 |
| 28 | 332 40 | 6.6 | 8.3 | 27.7 | 6.9 | 34 | .. | .. | .. | 785 | 760 | 61.7 | 27 15 49.7 | .. | + 30.9 | 78 22 41.8 | - 15.7 |
| 29 | 316 10 | 9.9 | 12.0 | 2.6 | 9.8 | 33 | 430 | 360 | .. | .. | .. | 61.7 | 43 45 29.8 | .. | + 57.5 | 94 52 48.5 | + 0.1 |
| 30 | 52 22 | 10.0 | 11.2 | 4.0 | 7.0 | 35 | 780 | 765 | 755 | 720 | 745 | 61.7 | 307 34 5.6 | .. | - 1 18.0 | 358 39 8.8 | 0.0 |
| 31 | 310 32 | 8.7 | 11.3 | 1.8 | 8.2 | 33 | 525 | 490 | .. | .. | .. | 61.7 | 49 23 30.4 | .. | + 1 10.0 | 100 31 1.6 | + 0.8 |
| 32 | 281 46 | 12.7 | 15.3 | 6.9 | 12.6 | 31 | 705 | 645 | .. | .. | .. | 61.7 | 78 9 7.1 | .. | + 4 39.6 | 129 20 7.9 | - 7.2 |
| 33 | 281 46 | 12.7 | 15.3 | 6.9 | 12.6 | 35 | .. | .. | .. | 785 | 840 | 61.7 | 78 7 38.4 | .. | + 4 39.0 | 129 18 38.6 | - 7.2 |
| 34 | 321 6 | 9.5 | 10.6 | 0.8 | 9.2 | 38 | .. | .. | .. | 265 | 195 | 61.7 | 38 50 45.1 | .. | + 48.4 | 89 57 54.7 | 0.0 |
| 35 | 10 58 | 11 5 | 14.2 | 3.2 | 11.2 | 36 | .. | .. | .. | 020 | 950 | 61.7 | 348 58 13.9 | .. | - 11.7 | 40 4 23.4 | - 0.3 |
| 36 | 340 4 | 7.4 | 9.1 | 27.9 | 6.6 | 37 | .. | 090 | .. | 960 | .. | 61.7 | 19 52 23.3 | .. | + 21.8 | 70 59 6.3 | + 0.3 |
| 37 | 69 10 | 9.0 | 10.0 | 27.0 | 6.0 | 34 | 620 | .. | 675 | .. | 685 | 61.7 | 290 45 47.1 | .. | - 2 37.5 | 341 49 30.8 | + 3.5 |
| 38 | 153 52 | 9.5 | 13.4 | 2.4 | 7.5 | 34 | 090 | 035 | .. | .. | .. | 61.7 | 206 3 38.5 | .. | + 29.4 | 25 2 13.3 | - 3.4 |
| 39 | 26 0 | 10.5 | 11.6 | 1.5 | 7.7 | 36 | .. | .. | .. | 815 | 835 | 61.7 | 333 56 23.3 | .. | - 29.4 | 25 2 15.1 | - 1.6 |
| 40 | 199 0 | 12.6 | 15.7 | 3.8 | 7.6 | 35 | 560 | 535 | 525 | .. | .. | 61.7 | 160 56 4.1 | .. | - 20.8 | 70 10 37.9 | + 2.2 |
| 41 | 310 52 | 7.1 | 8.4 | 27.0 | 7.5 | 35 | .. | .. | .. | 075 | 980 | 61.7 | 19 3 53.8 | 34.7 | + 20.8 | 70 10 35.8 | + 0.1 |
| 42 | 286 48 | 10.4 | 13.0 | 3.9 | 11.9 | 36 | 575 | .. | .. | .. | 415 | 63.5 | 73 8 20.9 | 35.3 | + 3 17.0 | 124 17 59.1 | - 7.6 |
| 43 | 286 18 | 9.3 | 11.2 | 3.0 | 12.7 | 34 | 905 | .. | .. | .. | 825 | 63.5 | 73 37 55.6 | .. | + 3 23.2 | 124 47 40.0 | - 7.7 |
| 44 | 54 24 | 7 4 | 8.6 | 26.1 | 5.3 | 31 | 815 | 880 | 840 | 815 | 835 | 63.5 | 305 31 4.7 | .. | - 1 24.5 | 356 36 1.4 | + 1.2 |
| 45 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 46 | 337 34 | 7.0 | 8.0 | 28.0 | 5.9 | 39 | 115 | 080 | .. | .. | .. | 63.5 | 22 22 55.2 | .. | + 24.9 | 73 29 41.3 | + 0.1 |
| 47 | 283 4 | 8.8 | 11.0 | 2.0 | 9.6 | 36 | 105 | 050 | .. | .. | .. | 63.5 | 76 52 11.5 | .. | + 4 14.3 | 128 2 47.0 | - 8.6 |
| 48 | 283 4 | 8.8 | 11.0 | 2.0 | 9.6 | 36 | 280 | 235 | .. | .. | .. | 63.5 | 76 52 14.2 | .. | + 4 14.4 | 128 2 49.8 | - 8.6 |
| 49 | 304 30 | 7.2 | 9.8 | 28.2 | 8.1 | 32 | 070 | 065 | .. | 950 | 920 | 63.5 | 55 25 8.5 | .. | + 1 27.6 | 106 32 57.3 | + 0.7 |
| 50 | 48 16 | 8.7 | 10.5 | 29.1 | 6.3 | 36 | .. | 665 | 645 | 660 | .. | 63.5 | 311 40 20.3 | .. | - 1 8.0 | 2 45 33.5 | + 0.6 |

| No. | Barom. | At. Ther | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " " | " " | " " | " " |
| 1 | 30.03 | 43.0 | 17 | - 32 25.6 | + 15 50.1 | .. | - 16 35.4 |
| 10 | 30.02 | 40.7 | | | | | |
| 17 | 30.03 | 39.9 | | | | | |
| 25 | 30.02 | 38.6 | | | | | |
| 41 | 30.03 | 38.3 | | | | | |
| 42 | 30.18 | 37.6 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. |
|------------------|---------|----------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|---------------|----------------|---------------------------|---------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't | Clock adopted. | | | |
| | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. | |
| 1876. Mar. 13 | 1 | B. A. C. 2295 . . . | P. | 38.3 | 11.3 | 13.3 | 30.7 | 53.1 | 5.5 | 2.9 | 4.8 | 7.9 | 53 53.09 | - 0.33 | . | + 0.96 | 6 53 53.72 | - 0.89 | |
| | 2 | B. A. C. 2309 . . . | P. | 33.3 | 36.0 | 37.7 | 44.9 | 47.1 | 19.5 | 56.4 | 58.0 | 0.9 | 56 47.09 | - 0.30 | . | + 0.96 | 6 56 47.75 | - 0.93 | |
| | 3 | Uranus | P. | 35.0 | 38.6 | 40.2 | 46.6 | 48.7 | 50.8 | 57.2 | 58.8 | 1.5 | 16 48.70 | 0.03 | . | + 0.97 | 9 16 49.67 | . | |
| | 4 | Hydra | P. | 18.0 | 20.6 | 22.3 | 28.4 | 30.5 | 32.5 | 38.7 | 40.2 | 42.8 | 21 30.44 | - 0.15 | + 0.95 | + 0.97 | 9 21 31.26 | - 0.01 | |
| | 5 | Durch. 15, 2184 . . | P. | 5.2 | 7.0 | 9.5 | 15.9 | 18.6 | 20.0 | 26.3 | 28.0 | 30.6 | 10 17.93 | - 0.01 | . | + 0.97 | 10 10 18.89 | - 2.05 | |
| | 6 | Anonymous | P. | 8.7 | 11.1 | 12.6 | 19.3 | 21.3 | 23.4 | 29.7 | 31.3 | 33.9 | 20 21.56 | - 0.22 | . | + 0.97 | 10 20 22.21 | - 2.06 | |
| | 7 | Pales | P. | 46.3 | 48.7 | 50.4 | . | . | . | 6.8 | 8.4 | 10.8 | 22 58.57 | - 0.11 | . | + 0.98 | 11 22 59.44 | - 2.63 | |
| | 8 | 12 ¹ Canum Venat. . . | P. | 58.0 | 1.3 | 3.2 | . | . | . | 24.3 | 26.2 | 29.6 | 50 13.77 | + 0.21 | . | + 0.99 | 12 50 14.97 | - 2.63 | |
| | 9 | 12 ² Canum Venat. . . | P. | . | . | 9.6 | 12.3 | 14.9 | 17.6 | 20.3 | . | . | 50 14.94 | + 0.21 | + 0.98 | + 0.99 | 12 50 16.14 | + 0.01 | |
| | 10 | Polaris, S. P. . . . | P. | . | . | . | 56.4 | 32.6 | 4.5 | . | . | . | 12 31.40 | - 21.15 | . | + 0.99 | 1 12 10.94 | - 0.22 | |
| | 11 | a Virginis | P. | 28.0 | 26.6 | 32.3 | 38.5 | 40.6 | 42.6 | 48.8 | 50.5 | 53.0 | 18 40.54 | - 0.17 | + 1.00 | + 0.99 | 13 18 41.36 | + 0.09 | |
| | 12 | B. A. C. 4518 . . . | P. | 33.1 | 36.4 | 38.5 | 46.4 | 49.0 | 51.6 | 59.4 | 1.5 | 4.9 | 25 48.98 | - 0.33 | . | + 0.99 | 13 25 49.64 | - 1.67 | |
| | 13 | B. A. C. 4522 . . . | P. | 19.7 | 22.0 | 25.0 | 32.8 | 35.4 | 37.9 | 46.0 | 47.8 | 51.2 | 26 35.41 | - 0.33 | . | + 0.99 | 13 26 36.07 | - 1.67 | |
| | 14 | Virginis | P. | 11.2 | 13.6 | 15.2 | 21.4 | 23.4 | 25.4 | 31.6 | 33.1 | 35.7 | 28 23.40 | - 0.11 | + 1.00 | + 0.99 | 13 18 24.25 | - 0.01 | |
| | 15 | Moon II, S. | P. | . | . | 49.3 | 51.5 | 53.9 | 56.1 | 58.3 | . | . | 38 53.82 | - 0.22 | . | + 0.99 | 14 38 54.59 | - 16.27 | |
| | 16 | a ² Librae | P. | 49.2 | 51.8 | 53.4 | 59.5 | 1.0 | 4.0 | 10.4 | 12.0 | 14.7 | 44 1.91 | - 0.10 | + 0.96 | + 1.00 | 14 44 2.72 | + 0.93 | |
| | 17 | 3 Ursae Minoris (R.) | P. | . | . | . | . | . | . | 38.3 | 43.6 | 53.4 | 51 7.16 | + 1.56 | . | + 1.00 | 14 51 9.72 | - 0.20 | |
| | 18 | 3 Ursae Minoris . . | P. | . | . | . | . | . | . | 27.9 | 30.0 | 33.4 | 57 17.15 | + 0.23 | . | + 1.00 | 14 57 18.38 | - 0.06 | |
| | 19 | 3 Bootis | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 20 | 3 Librae (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 21 | 3 Librae | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 22 | 3 ¹ Bootis | P. | 33.4 | 36.7 | 38.6 | 46.3 | 48.0 | 51.5 | 59.3 | 1.2 | 4.3 | 19 48.91 | + 0.19 | + 1.00 | + 1.00 | 15 19 50.11 | 0.00 | |
| | 23 | a Serpentis (R.) . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 24 | a Serpentis | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 25 | 3 Ursae Minoris (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 26 | 3 Ursae Minoris . . | P. | . | . | . | 22.3 | 32.4 | 42.5 | . | . | . | 48 32.37 | + 2.13 | . | + 1.00 | 15 48 35.50 | - 0.07 | |
| | 27 | 3 Scorpii | P. | 1.0 | 3.7 | 5.4 | 12.0 | 14.0 | 16.2 | 22.7 | 24.4 | 27.2 | 58 14.07 | - 0.21 | + 1.03 | + 1.00 | 15 58 14.86 | 0.00 | |
| | 28 | Jupiter I, N. . . . | P. | 9.9 | 12.5 | 14.0 | 18.5 | 20.7 | 22.8 | 24.9 | 27.0 | . | 0 22.78 | - 0.21 | . | + 1.00 | 16 0 23.57 | . | |
| | 29 | Jupiter II, S. . . . | P. | . | . | . | . | . | . | 34.2 | 35.8 | 38.5 | 0 25.51 | - 0.21 | . | + 1.00 | 16 0 26.30 | . | |
| | 30 | Moon II | P. | 33.2 | 36.1 | 37.7 | 44.4 | 46.8 | 49.1 | 55.8 | 57.4 | 0.2 | 56 46.74 | - 0.82 | . | + 1.85 | 20 56 47.77 | - 67.22 | |
| | 31 | 3 Cygni | P. | 22.9 | 25.9 | 27.7 | 34.8 | 37.1 | 39.3 | 46.3 | 48.1 | 51.0 | 7 37.01 | - 0.10 | + 1.91 | + 1.85 | 21 7 38.76 | - 0.05 | |
| | 32 | a Cephei | P. | 5.5 | 11.1 | 14.3 | 27.5 | 31.6 | 36.1 | 49.2 | 52.5 | 57.8 | 15 31.73 | + 0.99 | . | + 1.85 | 21 15 34.57 | - 0.01 | |
| | 33 | 3 Cephei | P. | . | . | 43.6 | 50.0 | 55.5 | 1.4 | 7.5 | . | . | 26 55.60 | + 1.73 | . | + 1.84 | 21 26 59.17 | + 0.04 | |
| | 34 | a Pegasi | P. | . | . | 59.8 | 1.6 | 4.0 | 6.0 | 8.1 | . | . | 38 3.96 | - 0.42 | + 1.81 | + 1.84 | 21 38 5.35 | + 0.04 | |
| | 35 | a Aquarii | P. | 11.0 | 13.6 | 15.2 | 21.3 | 23.2 | 25.3 | 31.4 | 33.0 | 35.5 | 59 23.28 | - 0.55 | + 1.81 | + 1.84 | 21 59 24.57 | + 0.06 | |
| | 36 | Sun N. | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 37 | Sun II, S. | P. | 10.2 | 12.7 | 14.3 | 20.5 | 22.5 | 24.5 | 30.6 | 32.1 | 34.8 | 6 22.47 | - 0.53 | . | + 1.80 | 0 6 23.74 | - 64.40 | |
| | 38 | Polaris | P. | 47.5 | 45.5 | 40.0 | 2.0 | 28.5 | 3.0 | 15.5 | 19.0 | 0.5 | 11 27.83 | + 36.36 | . | + 1.70 | 1 12 5.98 | - 3.07 | |
| | 39 | 3 Arctis | P. | 32.4 | 35.1 | 36.7 | 43.2 | 45.4 | 47.5 | 54.1 | 55.7 | 58.4 | 47 45.39 | - 0.26 | + 1.77 | + 1.78 | 1 47 46.91 | + 0.03 | |
| | 40 | a Arctis | P. | . | . | 4.5 | 6.7 | 9.0 | 11.2 | 13.3 | . | . | 0 8.94 | - 0.22 | + 1.79 | + 1.78 | 2 0 10.50 | 0.00 | |
| | 41 | Venus I, S. | P. | 33.3 | 36.0 | 37.6 | 44.0 | 46.2 | 48.2 | 54.7 | 56.3 | 58.9 | 38 46.13 | - 0.31 | . | + 1.77 | 2 38 47.59 | + 0.57 | |
| | 42 | 3 Geminorum | P. | 29.4 | 32.2 | 33.9 | 40.4 | 42.7 | 44.9 | 51.5 | 53.2 | 55.9 | 12 42.68 | - 0.17 | + 1.73 | + 1.77 | 7 12 44.25 | - 0.05 | |
| | 43 | Anonymous | P. | 22.3 | 24.8 | 26.4 | 33.5 | 35.5 | 38.3 | 45.0 | 46.5 | 49.5 | 20 35.79 | - 0.10 | . | + 1.74 | 7 20 37.43 | - 1.39 | |
| | 44 | a ¹ Geminorum | P. | 26.0 | 29.0 | 30.8 | . | . | . | 50.2 | 51.9 | 54.9 | 26 40.47 | + 0.01 | . | + 1.74 | 7 26 42.22 | - 1.53 | |
| | 45 | a ² Geminorum | P. | . | . | 36.1 | 38.5 | 40.9 | 43.4 | 45.8 | . | . | 26 40.94 | + 0.01 | + 1.74 | + 1.74 | 7 26 42.69 | + 0.27 | |
| | 46 | a Canis Minoris . . | P. | 36.1 | 38.6 | 40.2 | 46.4 | 48.5 | 50.5 | 56.6 | 58.1 | 0.8 | 32 48.42 | - 0.11 | + 1.73 | + 1.74 | 7 32 49.75 | - 0.15 | |
| | 47 | 3 Geminorum | P. | 29.4 | 32.4 | 34.1 | 41.1 | 43.4 | 45.7 | 52.5 | 54.4 | 57.4 | 37 43.38 | - 0.06 | + 1.77 | + 1.74 | 7 37 45.06 | - 0.06 | |
| | 48 | 3 Ursae Minoris, S. P. | P. | . | . | 46.5 | 53.2 | 6.2 | 15.4 | 27.7 | . | . | 18 5.92 | - 49.91 | . | + 1.74 | 10 47 17.75 | - 0.03 | |
| | 49 | B. A. C. 2758 . . . | P. | 11.7 | 14.8 | 16.8 | 24.5 | 27.0 | 29.6 | 37.1 | 39.1 | 42.3 | 6 26.99 | - 1.00 | . | + 1.74 | 8 6 27.73 | - 1.03 | |
| | 50 | (VIII), 2 | P. | 49.7 | 53.0 | 54.8 | 2.5 | 5.0 | 7.5 | 14.9 | 16.8 | 20.0 | 13 4.91 | - 0.98 | . | + 1.74 | 8 13 5.67 | - 1.07 | |

2, 9, 11, 15, 17, 22, 26, 33. Bisections at sets B and D.

7, 13, 27, 43. Thread A used.

13, 18, 19. Bisections at threads V and VI.

18, 19, 22, 28, 29. Thread B used.

25. Bisections at threads II and III

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Corrections. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|---------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------|----|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | | °. | " | " | " | | | | | | | | | | | | | |
| 1 | 287 8 | 10.7 | 13.4 | 4.3 | 11.0 | 32 | 225 | 160 | .. | .. | .. | 63.5 | 72 47 11.0 | .. | + 3 13.4 | 123 56 48.6 | - 8.1 | |
| 2 | 293 20 | 5.2 | 7.7 | 27.3 | 6.2 | 39 | 175 | .. | .. | .. | 170 | 63.5 | 66 36 56.7 | 34.2 | + 2 19.3 | 117 45 37.2 | - 7.0 | |
| 3 | 337 38 | 10.3 | 11.5 | 0.5 | 10.0 | 33 | 975 | 065 | .. | 920 | 830 | 63.5 | 22 17 26.2 | 33.6 | + 24.9 | 73 24 12.3 | .. | |
| 4 | 312 56 | 6.5 | 9.0 | 28.8 | 7.5 | 35 | 490 | 460 | .. | 345 | 310 | 63.5 | 47 0 0 2 | .. | + 1 5.1 | 98 7 26.5 | + 1.1 | |
| 5 | 336 0 | 3.5 | 5.2 | 23.1 | 4.0 | 35 | 950 | 900 | .. | 795 | 760 | 63.5 | 23 56 3.3 | 32.8 | + 27.0 | 75 2 51.5 | - 5.4 | |
| 6 | 3 5 30 | 2.9 | 5.2 | 23.5 | 3.9 | 32 | 090 | 030 | .. | 900 | 935 | 63.5 | 24 25 4.1 | .. | + 27.6 | 75 31 52.9 | - 6.1 | |
| 7 | 320 50 | 3.9 | 5.9 | 25.2 | 6.6 | 36 | .. | 790 | .. | 605 | .. | 63.5 | 39 3 44.1 | 31.4 | + 49.5 | 90 10 54.8 | - 2.2 | |
| 8 | 0 0 | 4.8 | 6.6 | 25.6 | 4.5 | 31 | .. | 025 | .. | 895 | .. | 63.5 | 359 54 50.0 | 29.9 | - 0.1 | 51 1 11.1 | -16.4 | |
| 9 | 0 0 | 4.8 | 6.6 | 25.6 | 4.5 | 30 | 120 | .. | .. | .. | 080 | 63.5 | 359 54 36.6 | .. | - 0.1 | 51 0 57.7 | + 0.2 | |
| 10 | 52 22 | 3.0 | 3.0 | 22.7 | 0.4 | 36 | .. | 100 | 090 | 100 | .. | 63.5 | 307 34 5.2 | .. | - 1 19.5 | 358 39 6.9 | - 0.7 | |
| 11 | 310 32 | 2.6 | 4.6 | 23.6 | 3.7 | 33 | 760 | .. | .. | .. | 675 | 63.5 | 49 23 30.2 | .. | + 1 11.4 | 100 31 2.5 | + 1.5 | |
| 12 | 281 46 | 7.1 | 9.1 | 1.1 | 7.5 | 31 | 670 | 685 | .. | .. | .. | 63.5 | 78 9 2.4 | .. | + 4 45.1 | 129 20 9.0 | - 8.2 | |
| 13 | 281 46 | 7.1 | 9.1 | 1.1 | 7.5 | 35 | .. | .. | .. | 825 | 845 | 63.5 | 78 7 34.8 | .. | + 4 44.8 | 129 18 40.5 | - 8.2 | |
| 14 | 321 6 | 9.4 | 11.4 | 1.0 | 9.5 | 38 | .. | .. | .. | 020 | 000 | 63.5 | 38 50 43.8 | 29.5 | + 49.3 | 89 57 54.3 | - 0.7 | |
| 15 | 309 44 | 6.2 | 7.0 | 28.2 | 7.7 | 32 | 275 | .. | 495 | .. | 660 | 63.5 | 59 11 14.8 | .. | + 1 42.8 | 110 19 18.8 | .. | |
| 16 | 305 32 | 5.8 | 7.5 | 27.4 | 7.6 | 35 | .. | 260 | .. | 115 | .. | 63.5 | 54 23 56.1 | .. | + 1 25.6 | 105 31 42.1 | - 0.5 | |
| 17 | 144 10 | 2.5 | 6.3 | 24.3 | 2.8 | 31 | 565 | 465 | .. | .. | .. | 63.5 | 215 44 56.2 | .. | + 44.2 | 15 20 40.8 | - 2.2 | |
| 18 | 35 42 | 1.7 | 1.8 | 21.0 | 0.1 | 29 | .. | .. | .. | 920 | 925 | 63.5 | 324 15 3.5 | .. | - 44.2 | 15 20 40.5 | - 2.5 | |
| 19 | 1 56 | 8.3 | 9.0 | 0.4 | 8.4 | 30 | .. | .. | .. | 255 | 230 | 63.5 | 358 1 15.7 | 28.5 | - 2.1 | 49 7 34.8 | - 0.4 | |
| 20 | 227 44 | 4.8 | 7.3 | 28.0 | 4.2 | 34 | 760 | .. | .. | .. | .. | 63.5 | 132 11 47.3 | .. | - 1 7.8 | 98 55 41.7 | + 1.0 | |
| 21 | 312 8 | 7.0 | 9.1 | 29.8 | 10.0 | 35 | .. | .. | .. | .. | 945 | 63.5 | 47 48 11.0 | .. | + 1 7.8 | 98 55 40.0 | - 0.7 | |
| 22 | 358 52 | 2.6 | 3.1 | 22.2 | 2.0 | 30 | 855 | .. | .. | .. | 790 | 63.5 | 1 5 17.2 | .. | + 1.2 | 52 11 39.6 | + 1.0 | |
| 23 | 212 0 | 5.7 | 9.6 | 29.1 | 3.2 | 34 | 205 | 185 | .. | .. | .. | 63.5 | 147 55 39.5 | .. | - 38.6 | 83 11 20.3 | + 2.5 | |
| 24 | 327 52 | 3.6 | 3.7 | 24.0 | 3.3 | 36 | .. | .. | .. | 790 | 740 | 63.5 | 32 4 18.1 | .. | + 38.6 | 83 11 17.9 | + 0.1 | |
| 25 | 140 40 | 6.1 | 9.6 | 28.9 | 5.6 | 33 | 785 | 670 | .. | .. | .. | 63.5 | 219 15 32.6 | .. | + 50.3 | 11 49 58.3 | - 0.2 | |
| 26 | 39 12 | 7.6 | 7.0 | 26.3 | 4.8 | 37 | .. | .. | .. | 225 | 190 | 63.5 | 320 44 27.1 | .. | - 50.3 | 11 49 58.0 | - 0.5 | |
| 27 | 301 34 | 4.6 | 5.3 | 27.0 | 6.9 | 37 | 990 | 940 | .. | 840 | 830 | 63.5 | 58 20 2.9 | .. | + 1 39.6 | 109 28 3.7 | + 0.2 | |
| 28 | 301 34 | 4.6 | 5.3 | 27.0 | 6.9 | 35 | 520 | .. | .. | .. | 270 | 63.5 | 58 24 30.4 | .. | + 1 39.9 | 109 32 31.5 | .. | |
| 29 | 301 34 | 4.6 | 5.3 | 27.0 | 6.9 | 38 | .. | 015 | .. | 905 | .. | 63.5 | 58 25 9.8 | 28.0 | + 1 39.9 | 109 33 10.9 | .. | |
| 30 | 298 48 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 31 | 350 46 | 0.2 | 1.7 | 21.0 | 29.5 | 38 | .. | .. | .. | 060 | 975 | 64.5 | 9 10 35.6 | 34.3 | + 9.5 | 69 17 6.3 | - 1.0 | |
| 32 | 23 6 | 2.0 | 3.5 | 25.0 | 1.0 | 38 | .. | 445 | .. | 360 | .. | 64.5 | 336 50 42.9 | .. | - 25.2 | 27 56 38.9 | - 2.4 | |
| 33 | 31 2 | 4.0 | 5.5 | 24.5 | 2.5 | 33 | 620 | .. | .. | .. | 615 | 64.5 | 328 53 30.5 | 34.7 | - 35.6 | 19 59 16.1 | - 2.0 | |
| 34 | 330 22 | 2.3 | 3.1 | 24.9 | 2.1 | 38 | .. | .. | .. | 770 | 755 | 64.5 | 29 34 49.2 | .. | + 33.5 | 80 41 43.9 | - 0.5 | |
| 35 | 320 8 | 4.1 | 6.3 | 26.7 | 4.9 | 36 | .. | 320 | .. | 315 | .. | 64.5 | 39 48 12.9 | 34.8 | + 49.2 | 90 55 23.3 | - 1.2 | |
| 36 | 321 54 | 13.2 | 12.0 | 2.7 | 12.9 | 36 | 020 | 145 | .. | .. | .. | 64.5 | 38 2 15.0 | .. | + 46.1 | 89 9 22.3 | .. | |
| 37 | 321 22 | 11.8 | 13.6 | 2.9 | 12.6 | 36 | .. | .. | .. | 300 | 340 | 64.5 | 38 34 21.9 | 36.1 | + 47.0 | 89 41 30.1 | .. | |
| 38 | 49 40 | 5.4 | 6.1 | 27.1 | 2.7 | 34 | 205 | 250 | 160 | 215 | .. | 64.5 | 310 15 40.6 | 35.9 | - 1 9.7 | 1 20 52.1 | - 2.4 | |
| 39 | 311 14 | 12.0 | 13.1 | 3.2 | 11.0 | 31 | 880 | 890 | .. | 800 | 760 | 64.5 | 18 41 11.3 | 36.1 | + 20.0 | 69 47 52.5 | + 0.9 | |
| 40 | 343 56 | 11.1 | 12.7 | 2.6 | 10.3 | 37 | .. | .. | .. | 890 | 920 | 64.5 | 16 0 44.8 | .. | + 17.0 | 67 7 23.0 | - 1.0 | |
| 41 | 337 52 | 29.6 | 0.4 | 18.9 | 29.1 | 39 | 910 | 915 | .. | 780 | 635 | 64.5 | 22 5 0.8 | 34.6 | + 24.1 | 73 11 46.1 | .. | |
| 42 | 343 16 | 12.6 | 11.8 | 1.0 | 10.6 | 37 | 855 | 850 | .. | 705 | 655 | 65.5 | 16 40 42.3 | 29.2 | + 18.1 | 67 47 21.6 | + 1.0 | |
| 43 | 317 6 | 10.5 | 9.8 | 29.4 | 8.5 | 30 | .. | 965 | .. | 910 | .. | 65.5 | 12 46 22.3 | .. | + 13.7 | 63 52 57.2 | + 8.1 | |
| 44 | 353 12 | 10.5 | 10.5 | 0.6 | 9.8 | 34 | 880 | .. | .. | .. | 720 | 65.5 | 6 43 56.0 | .. | + 7.1 | 57 50 24.3 | + 9.8 | |
| 45 | 353 12 | 10.5 | 10.5 | 0.6 | 9.8 | 34 | .. | 640 | .. | 520 | .. | 65.5 | 6 43 52.4 | .. | + 7.1 | 57 50 20.7 | + 0.9 | |
| 46 | 326 36 | 11.1 | 12.5 | 1.5 | 11.5 | 37 | 015 | 935 | .. | 845 | 830 | 65.5 | 33 20 29.2 | .. | + 39.7 | 84 27 30.1 | - 1.4 | |
| 47 | 349 22 | 10.1 | 9.0 | 29.6 | 10.1 | 34 | 845 | 805 | .. | 695 | 650 | 65.5 | 10 33 54.4 | .. | + 11.3 | 61 40 26.0 | + 1.5 | |
| 48 | 52 6 | 8.0 | 8.2 | 26.4 | 6.0 | 37 | 590 | 555 | 575 | 505 | 545 | 65.5 | 307 50 34.3 | .. | - 1 17.7 | 358 55 37.8 | + 1.4 | |
| 49 | 284 10 | 9.1 | 11.0 | 2.2 | 11.5 | 32 | .. | 875 | .. | 610 | .. | 65.5 | 75 45 24.4 | .. | + 3 54.4 | 126 55 40.0 | -10.5 | |
| 50 | 285 24 | 6.6 | 7.8 | 0.0 | 7.6 | 32 | .. | 210 | .. | 110 | .. | 65.5 | 74 31 12.5 | .. | + 3 35.4 | 125 41 9.1 | -13.4 | |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| 2 | 30.19 | 36.3 | 3 | - | 0.2 | .. | 0.2 |
| 3 | 30.21 | 35.1 | 15 | -17 | 23.3 | - 15 6.6 | -1 2 29.9 |
| 5 | 30.22 | 34.4 | 28 | + | 1.5 | + 19.7 | + 18.2 |
| 7 | 30.23 | 33.3 | 29 | - | 1.5 | - 19.7 | - 21.2 |
| 8 | 30.24 | 31.7 | 36 | - | 5.4 | + 16 3.9 | + 15 58.5 |
| 14 | 30.24 | 31.4 | 37 | - | 5.5 | - 16 3.9 | - 16 9.4 |
| 19 | 30.24 | 30.6 | 41 | - | 3.1 | - 8.1 | - 11.2 |
| 20 | 30.29 | 30.2 | | | | | |
| 31 | 29.42 | 34.7 | | | | | |
| 33 | 29.44 | 35.4 | | | | | |
| 35 | 29.45 | 35.6 | | | | | |
| 37 | 29.50 | 37.2 | | | | | |
| 38 | 29.52 | 37.2 | | | | | |
| 39 | 29.53 | 37.5 | | | | | |
| 41 | 29.57 | 36.8 | | | | | |
| 42 | 29.76 | 31.0 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. |
|------------------|---------|-----------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|--------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | | |
| | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. | |
| 1876. Mar. 21 | 1 | Anonymous . . . | P. | 31.8 | 35.0 | 37.1 | 44.7 | 47.2 | 49.7 | 57.2 | 59.1 | 2.3 | 14 47.12 | - 0.98 | . | + 1.74 | 8 14 47.78 | - 1.07 | |
| | 2 | Lalande 16596 . . | P. | 47.0 | 50.3 | 51.9 | 58.2 | 0.4 | 2.5 | 8.9 | 10.5 | 13.2 | 21 0.39 | - 0.25 | . | + 1.74 | 8 21 1.88 | - 1.61 | |
| | 3 | Weisse (2) 477 . . | P. | 35.7 | 38.3 | 40.1 | 46.4 | 48.5 | 50.7 | 57.0 | 58.5 | 1.3 | 21 48.50 | - 0.25 | . | + 1.74 | 8 21 49.99 | - 1.61 | |
| | 4 | Uranus | P. | 39.1 | 41.7 | 43.4 | 49.8 | 52.0 | 54.1 | 0.3 | 1.9 | 4.7 | 15 51.89 | - 0.26 | . | + 1.74 | 9 15 53.37 | . | |
| | 5 | a Hydre | P. | 17.5 | 20.1 | 21.6 | 27.9 | 30.0 | 32.0 | 38.2 | 39.7 | 42.3 | 21 29.92 | - 0.59 | + 1.84 | + 1.74 | 9 21 31.07 | - 0.13 | |
| | 6 | Una | P. | . | . | . | . | . | 52.3 | 56.8 | 58.3 | 0.8 | 57 43.18 | - 0.27 | . | + 1.73 | 9 57 49.64 | . | |
| | 7 | Durch. 15 ¹ , 2166 . | P. | . | . | 12.6 | 14.8 | 16.7 | 19.0 | 21.2 | . | . | 0 16.86 | - 0.27 | . | + 1.73 | 10 0 18.32 | - 2.00 | |
| | 8 | Leonis | P. | 55.6 | 58.2 | 59.9 | . | . | . | 17.3 | 19.0 | 21.6 | 13 8.60 | - 0.20 | + 1.76 | + 1.73 | 10 13 10.13 | - 0.05 | |
| | 9 | Leonis | P. | . | . | 4.5 | 6.7 | 8.9 | 11.2 | 13.3 | . | . | 13 8.92 | - 0.20 | . | + 1.73 | 10 13 10.45 | - 2.14 | |
| | 10 | B. A. C. 3763 . . | P. | 8.9 | 12.0 | 13.7 | 21.0 | 23.5 | 26.0 | 33.2 | 35.0 | 38.2 | 53 23.50 | - 0.94 | . | + 1.73 | 10 53 24.29 | - 1.66 | |
| | 11 | Lalande 21258 . . | P. | . | . | 14.0 | 16.9 | 19.6 | 22.5 | 25.4 | . | . | 59 19.68 | + 0.31 | . | + 1.73 | 10 59 21.72 | - 3.05 | |
| | 12 | B. A. C. 3822 . . | P. | 42.4 | 45.4 | 47.2 | 51.6 | 50.9 | 59.3 | 6.4 | 8.3 | 11.3 | 3 56.87 | - 0.91 | . | + 1.73 | 11 3 57.69 | - 1.68 | |
| | 13 | B. A. C. 3838 . . | P. | 31.8 | 34.4 | 36.0 | 42.5 | 44.6 | 46.7 | 53.1 | 54.7 | 57.3 | 7 44.57 | - 0.20 | . | + 1.73 | 11 7 46.04 | - 2.16 | |
| | 14 | Ilpis | P. | 39.7 | 39.2 | 40.6 | 46.8 | 49.0 | 51.1 | 57.1 | 58.7 | 1.4 | 57 48.06 | - 0.45 | . | + 1.73 | 11 57 50.24 | . | |
| | 15 | Ausonia | P. | 35.0 | 37.5 | 39.1 | 45.1 | 47.2 | 49.1 | 55.2 | 56.9 | 59.5 | 11 47.21 | - 0.56 | . | + 1.73 | 12 11 48.38 | . | |
| | 16 | Hestia | P. | 5.6 | 8.0 | 9.7 | 15.8 | 17.8 | 20.0 | 26.0 | 27.5 | 30.0 | 36 17.82 | - 0.53 | . | + 1.73 | 12 36 19.02 | . | |
| | 17 | Juno | P. | 48.2 | 51.0 | 52.5 | 58.6 | 0.6 | 2.8 | 8.6 | 10.3 | 12.9 | 41 0.61 | - 0.47 | . | + 1.73 | 12 41 1.87 | . | |
| | 18 | 12 Canum Venat. . | P. | . | . | 14.2 | 17.9 | 19.6 | 25.0 | 27.0 | 30.1 | . | 50 14.38 | + 0.17 | + 1.69 | + 1.73 | 12 50 16.28 | + 0.04 | |
| | 19 | Vesta | P. | 47.9 | 48.5 | 50.1 | 56.4 | 58.3 | 0.4 | 6.6 | 8.2 | 10.6 | 57 58.33 | - 0.39 | . | + 1.73 | 12 57 59.67 | . | |
| | 20 | Polaris, S. P. . . | P. | 23.6 | 35.2 | 37.4 | 9.4 | 44.9 | 15.3 | 52.5 | 51.3 | 3.6 | 12 43.72 | - 39.98 | . | + 1.73 | 1 12 5.47 | - 3.41 | |
| | 21 | B. A. C. 4629 ¹ , S. . | P. | 51.1 | 54.0 | 55.9 | . | . | 14.9 | 16.8 | 19.7 | . | 46 5.40 | - 0.91 | . | + 1.73 | 13 46 6.22 | - 1.77 | |
| | 22 | B. A. C. 4629 ² , N. . | P. | . | . | 0.6 | 3.2 | 5.4 | 7.9 | 10.3 | . | . | 46 5.48 | - 0.91 | . | + 1.73 | 13 46 6.30 | - 1.77 | |
| | 23 | Bootis | P. | 34.3 | 37.1 | 38.7 | 45.2 | 47.4 | 49.5 | 56.0 | 57.6 | 0.3 | 48 47.34 | - 0.22 | + 1.77 | + 1.73 | 13 48 48.85 | - 0.09 | |
| | 24 | B. A. C. 4758 . . | P. | 26.9 | 30.2 | 32.3 | 40.3 | 42.8 | 45.4 | 53.3 | 55.3 | 58.7 | 11 42.80 | + 0.18 | . | + 1.73 | 14 14 44.71 | - 2.39 | |
| | 25 | Pallas | P. | 39.2 | 41.8 | 43.4 | 49.7 | 51.8 | 53.8 | 0.1 | 1.6 | 4.3 | 17 51.74 | - 0.31 | . | + 1.73 | 14 17 53.16 | . | |
| | 26 | B. A. C. 4812 . . | P. | 49.7 | 53.1 | 55.0 | 3.0 | 5.5 | 8.2 | 15.9 | 17.9 | 21.4 | 27 5.52 | + 0.17 | . | + 1.73 | 14 27 7.42 | - 2.30 | |
| | 27 | B. A. C. 4818 . . | P. | 42.7 | 45.8 | 47.8 | 55.8 | 58.5 | 1.2 | 9.0 | 11.1 | 14.5 | 23 58.40 | - 1.05 | . | + 1.73 | 14 28 59.17 | - 1.76 | |
| | 28 | e Bootis | P. | 20.8 | 23.6 | 25.4 | 32.4 | 34.6 | 37.0 | 43.8 | 45.4 | 48.5 | 39 34.62 | - 0.07 | + 1.74 | + 1.73 | 14 39 36.28 | - 0.03 | |
| | 29 | a ² Libre | P. | 49.0 | 51.7 | 53.4 | 59.8 | 1.8 | 3.9 | 10.3 | 11.9 | 14.5 | 44 1.81 | - 0.68 | + 1.74 | + 1.73 | 14 44 2.86 | - 0.02 | |
| | 30 | Lalande 27173 ¹ . | P. | 0.2 | 3.0 | 4.6 | . | . | 22.2 | 23.7 | 26.5 | . | 50 13.37 | - 0.75 | . | + 1.73 | 14 50 14.35 | - 1.62 | |
| | 31 | Lalande 27173 ² . | P. | . | . | 10.0 | 12.2 | 14.3 | 16.5 | 18.6 | . | . | 50 14.32 | - 0.75 | . | + 1.73 | 14 50 15.30 | - 1.62 | |
| | 32 | Ceres | P. | 29.2 | 31.6 | 33.3 | 39.4 | 41.5 | 43.5 | 49.5 | 51.0 | 53.6 | 54 41.40 | - 0.53 | . | + 1.73 | 14 54 42.60 | . | |
| | 33 | B. A. C. 4996 . . | P. | 4.4 | 7.6 | 9.5 | 17.1 | 19.7 | 22.3 | 29.7 | 31.6 | 34.8 | 5 19.63 | - 0.98 | . | + 1.73 | 15 5 20.38 | - 1.65 | |
| | 34 | Lalande 28165 . . | P. | 15.1 | 17.7 | 19.2 | . | . | 35.8 | 37.3 | 39.0 | . | 21 27.50 | - 0.60 | . | + 1.73 | 15 21 28.63 | - 1.52 | |
| | 35 | Lalande 28167 . . | P. | . | . | 25.9 | 28.0 | 30.0 | 32.2 | 34.3 | . | . | 21 30.08 | - 0.60 | . | + 1.73 | 15 21 31.21 | - 1.52 | |
| | 36 | (XV), 16 | P. | 27.2 | 30.0 | 31.8 | 38.6 | 40.8 | 43.1 | 49.9 | 51.7 | 54.3 | 29 40.82 | - 0.85 | . | + 1.73 | 15 29 41.72 | - 1.52 | |
| | 37 | (XV), 25 | P. | . | . | . | 36.8 | 39.1 | 41.4 | 46.1 | 47.9 | 50.8 | 49 36.73 | - 0.88 | . | + 1.73 | 15 49 37.58 | - 1.48 | |
| | 38 | Anonymous | P. | . | . | . | . | . | 42.9 | 46.0 | . | . | 51 31.82 | - 0.88 | . | + 1.73 | 15 51 32.67 | - 1.47 | |
| | 39 | β ¹ Scorpii | P. | 1.0 | 3.7 | 5.4 | 12.0 | 14.1 | 16.2 | 22.7 | 24.4 | 27.2 | 58 14.08 | - 0.74 | + 1.79 | + 1.73 | 15 58 15.07 | - 0.03 | |
| | 40 | Jupiter J, N. . . . | P. | 7.0 | 9.7 | 11.2 | . | . | 28.6 | 30.3 | 33.0 | . | 0 19.97 | - 0.74 | . | + 1.73 | 16 0 20.96 | . | |
| | 41 | Jupiter II, S. . . . | P. | . | . | 18.5 | 20.7 | 22.8 | 25.0 | 27.0 | . | . | 0 22.84 | - 0.74 | . | + 1.73 | 16 0 23.83 | . | |
| | 42 | δ Ophiuchi | P. | 35.8 | 41.4 | 43.0 | 49.1 | 51.2 | 53.1 | 59.2 | 0.9 | 3.4 | 7 51.12 | - 0.52 | + 1.65 | + 1.73 | 16 7 52.33 | + 0.10 | |
| | 43 | σ Scorpii | P. | 26.0 | 28.8 | 30.5 | 37.3 | 39.6 | 41.9 | 48.7 | 50.4 | 53.2 | 13 39.60 | - 0.82 | . | + 1.73 | 16 13 40.51 | - 1.37 | |
| | 44 | a Scorpii | P. | . | . | 44.3 | 46.6 | 48.9 | 51.2 | 53.5 | . | . | 21 48.90 | - 0.83 | + 1.68 | + 1.73 | 16 21 49.80 | + 0.04 | |
| | 45 | ζ Ophiuchi | P. | 7.5 | 10.2 | 11.7 | 18.0 | 20.0 | 22.1 | 28.3 | 29.8 | 32.4 | 30 20.00 | - 0.62 | + 1.70 | + 1.73 | 16 30 21.11 | - 0.06 | |
| 22 | 46 | Sun I, N. | E. | 39.5 | 42.0 | 43.7 | 49.8 | 51.9 | 53.9 | 59.9 | 1.6 | 4.3 | 7 51.84 | - 0.55 | . | + 1.81 | 0 7 53.10 | . | |
| | 47 | Sun II, S. | E. | 48.6 | 51.0 | 52.6 | 58.8 | 0.9 | 2.9 | 9.0 | 10.6 | 13.2 | 10 0.84 | - 0.52 | . | + 1.81 | 0 10 2.10 | . | |
| | 48 | Polaris | E. | 40.0 | 43.0 | 36.0 | 5.0 | 32.0 | 59.0 | 20.0 | 17.0 | 22.0 | 11 31.11 | + 37.73 | . | + 1.81 | 1 12 10.65 | + 1.95 | |
| | 49 | β Arietis | E. | 32.2 | 35.0 | 36.7 | 43.2 | 45.3 | 47.5 | 53.9 | 55.7 | 58.5 | 47 45.33 | - 0.27 | + 1.83 | + 1.81 | 1 47 46.87 | 0.00 | |
| | 50 | a Arietis | E. | 55.6 | 58.4 | 0.0 | 6.8 | 8.9 | 11.1 | 17.8 | 19.5 | 22.3 | 0 8.93 | - 0.23 | + 1.80 | + 1.81 | 2 0 10.51 | + 0.02 | |

7, 30, 31, 34, 35, 43, 44. Thread B used.
11. Bisections at sets B and D.
14, 15, 16, 17, 19, 25, 27, 32, 39. Thread A used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom. r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|----------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | |
| | ° ' " | r. " | " " | " " | " " | | | | | | | ° ' " | ° ' " | " " | ° ' " | " " |
| 1 | 285 24 | 10 6.6 | 7.8 | 0.0 | 7.6 | 37 | .. | 845 | .. | 700 | .. | 65.5 | 74 32 38.5 | .. + 3 | 35.7 | 125 42 35.4 |
| 2 | 337 46 | 9.6 | 10.2 | 29.2 | 9.0 | 36 | 075 | 085 | .. | .. | .. | 65.5 | 22 10 13.3 | .. + | 24.7 | 73 16 59.2 |
| 3 | 337 46 | 9.6 | 10.2 | 29.2 | 9.0 | 31 | .. | .. | .. | 645 | 650 | 65.5 | 22 9 7.8 | 28.9 + | 24.6 | 73 15 53.6 |
| 4 | 337 42 | 7.7 | 9.0 | 29.0 | 7.6 | 32 | 905 | 895 | .. | 765 | 725 | 65.5 | 22 13 23.4 | .. + | 24.8 | 73 20 9.4 |
| 5 | 312 56 | 9.1 | 9.9 | 0.9 | 9.5 | 35 | 195 | 165 | .. | 025 | 000 | 65.5 | 46 50 50.5 | 28.1 + 1 | 5.0 | 98 7 25.7 |
| 6 | 336 26 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 7 | 336 26 | 9.6 | 10.5 | 29.9 | 10.2 | 36 | .. | .. | .. | 345 | 330 | 65.5 | 23 32 52.7 | .. + | 26.5 | 74 39 40.4 |
| 8 | 341 30 | 4.6 | 4.2 | 23.0 | 5.5 | 32 | 810 | .. | .. | .. | 655 | 65.5 | 18 25 18.1 | .. + | 20.3 | 69 31 59.6 |
| 9 | 341 30 | 4.6 | 4.2 | 23.0 | 5.5 | 32 | .. | 845 | .. | 770 | .. | 65.5 | 18 25 19.2 | 27.1 + | 20.3 | 69 32 0.7 |
| 10 | 288 0 | 7.3 | 7.2 | 29.1 | 8.0 | 31 | .. | 610 | .. | 550 | .. | 65.5 | 71 55 3.6 | .. + 3 | 4.7 | 123 4 29.5 |
| 11 | 5 12 | 9.6 | 9.5 | 1.5 | 8.8 | 35 | 175 | .. | .. | .. | 140 | 65.5 | 354 44 0.6 | .. - | 5.6 | 45 50 16.2 |
| 12 | 289 24 | 7.4 | 7.6 | 29.2 | 7.5 | 37 | 905 | 820 | .. | .. | .. | 65.5 | 70 32 38.5 | .. + 2 | 51.0 | 121 41 50.7 |
| 13 | 337 10 | 6.4 | 6.0 | 26.0 | 5.9 | 39 | 100 | 095 | .. | 950 | 910 | 65.5 | 22 46 56.0 | 26.6 + | 25.6 | 73 53 42.8 |
| 14 | 323 30 | 6.6 | 6.1 | 25.6 | 7.5 | 31 | .. | 390 | .. | 220 | .. | 65.5 | 36 22 24.9 | .. + | 44.9 | 87 29 31.0 |
| 15 | 314 58 | 10.1 | 11.1 | 1.5 | 10.4 | 35 | .. | 180 | .. | 075 | .. | 65.5 | 44 56 13.4 | 26.4 + 1 | 0.8 | 96 3 35.4 |
| 16 | 317 28 | 11.2 | 11.4 | 2.6 | 12.3 | 36 | .. | 015 | .. | 935 | .. | 65.5 | 42 25 41.6 | .. + | 55.7 | 93 32 58.5 |
| 17 | 322 24 | 8.0 | 8.5 | 29.3 | 8.6 | 37 | .. | 980 | .. | 870 | .. | 65.5 | 37 30 8.2 | .. + | 46.8 | 88 37 16.2 |
| 18 | 0 0 | 6.5 | 6.8 | 27.3 | 5.9 | 29 | .. | .. | .. | 735 | 720 | 65.5 | 359 54 35.8 | .. - | 0.1 | 51 0 56.9 |
| 19 | 328 26 | 10.7 | 10.7 | 29.5 | 10.9 | 32 | 260 | 230 | .. | 150 | 075 | 65.5 | 31 26 42.1 | .. + | 37.3 | 82 33 40.6 |
| 20 | 52 22 | 9.5 | 8.4 | 29.4 | 7.5 | 35 | 415 | 415 | 420 | 350 | 410 | 65.5 | 307 34 2.9 | 26.3 - 1 | 19.2 | 358 39 4.9 |
| 21 | 289 46 | 9.6 | 10.3 | 1.7 | 10.7 | 35 | .. | 705 | .. | 630 | .. | 65.5 | 70 10 8.9 | .. + 2 | 47.9 | 121 19 18.0 |
| 22 | 289 46 | 9.6 | 10.3 | 1.7 | 10.7 | 34 | 780 | .. | .. | .. | 640 | 65.5 | 70 9 54.0 | .. + 2 | 47.8 | 121 19 3.0 |
| 23 | 340 4 | 6.6 | 6.6 | 26.2 | 7.1 | 36 | 920 | .. | .. | .. | 725 | 65.5 | 19 52 23.0 | .. + | 22.1 | 70 59 6.3 |
| 24 | 0 24 | 5.6 | 6.1 | 26.3 | 4.4 | 35 | 990 | 980 | .. | .. | .. | 65.5 | 359 32 8.2 | .. - | 0.5 | 50 38 28.9 |
| 25 | 333 54 | 8.2 | 8.5 | 28.7 | 9.2 | 34 | .. | 580 | .. | 365 | .. | 65.5 | 25 59 15.1 | .. + | 29.8 | 77 6 6.4 |
| 26 | 359 54 | 6.5 | 7.7 | 28.0 | 5.7 | 38 | 975 | 970 | .. | .. | .. | 65.5 | 0 2 55.3 | .. + | 0.1 | 51 9 16.6 |
| 27 | 281 26 | 12.2 | 13.0 | 4.3 | 13.0 | 41 | .. | 295 | .. | 205 | .. | 65.5 | 78 29 3.3 | .. + 4 | 51.8 | 129 40 16.3 |
| 28 | 348 38 | 10.1 | 9.5 | 29.5 | 9.6 | 34 | 905 | 920 | .. | 830 | 730 | 65.5 | 11 17 56.1 | .. + | 12.2 | 62 24 29.5 |
| 29 | 305 32 | 11.0 | 10.3 | 1.6 | 11.0 | 35 | .. | 025 | .. | 930 | .. | 65.5 | 54 23 58.8 | .. + 1 | 25.1 | 103 31 45.1 |
| 30 | 300 14 | 8.3 | 8.7 | 0.2 | 9.6 | 30 | 525 | .. | .. | .. | 180 | 65.5 | 59 43 18.4 | .. + 1 | 44.1 | 110 51 23.7 |
| 31 | 300 14 | 8.3 | 8.7 | 0.2 | 9.6 | 30 | .. | 780 | .. | 610 | .. | 65.5 | 59 43 23.8 | .. + 1 | 44.1 | 110 51 29.1 |
| 32 | 317 18 | 10.0 | 10.5 | 3.0 | 10.9 | 37 | 790 | 765 | .. | 630 | 635 | 65.5 | 42 36 7.3 | .. + | 50.1 | 93 43 24.6 |
| 33 | 285 28 | 8.2 | 9.0 | 0.4 | 9.8 | 33 | 310 | 260 | .. | 130 | 115 | 65.5 | 74 27 20.8 | 25.6 + 3 | 36.2 | 125 37 27.2 |
| 34 | 312 10 | 9.1 | 10.5 | 0.6 | 11.9 | 29 | 010 | .. | .. | .. | 785 | 65.5 | 47 46 57.6 | .. + 1 | 7.2 | 98 54 26.0 |
| 35 | 312 10 | 9.1 | 10.5 | 0.6 | 11.9 | 31 | .. | 300 | .. | 155 | .. | 65.5 | 47 47 33.4 | .. + 1 | 7.2 | 98 55 1.8 |
| 36 | 295 0 | 5.7 | 5.7 | 26.9 | 7.2 | 37 | .. | 150 | .. | 010 | .. | 65.5 | 64 56 26.3 | .. + 2 | 9.9 | 116 4 57.4 |
| 37 | 291 26 | 9.9 | 9.8 | 1.0 | 9.5 | 31 | .. | .. | .. | 615 | .. | 65.5 | 68 29 7.2 | .. + 2 | 33.8 | 110 38 2.2 |
| 38 | 291 26 | 9.9 | 9.8 | 1.0 | 9.5 | 28 | .. | .. | .. | .. | 770 | 65.5 | 68 28 23.9 | .. + 2 | 33.7 | 119 37 18.8 |
| 39 | 301 32 | 8.5 | 8.9 | 29.8 | 8.7 | 29 | .. | 800 | .. | 635 | .. | 65.5 | 58 20 3.1 | .. + 1 | 33.7 | 109 23 3.0 |
| 40 | 301 32 | 8.5 | 8.9 | 29.8 | 8.7 | 33 | 375 | .. | .. | .. | 120 | 65.5 | 58 23 30.2 | .. + 1 | 33.0 | 109 31 31.4 |
| 41 | 301 32 | 8.5 | 8.9 | 29.8 | 8.7 | 35 | .. | 940 | .. | 830 | .. | 65.5 | 58 24 10.7 | .. + 1 | 39.0 | 109 32 10.9 |
| 42 | 317 40 | 5.5 | 5.5 | 25.7 | 7.0 | 33 | .. | 125 | .. | 980 | .. | 65.5 | 42 15 24.3 | .. + | 55.5 | 93 22 41.0 |
| 43 | 295 48 | 9.0 | 9.3 | 0.5 | 10.0 | 30 | 455 | 415 | .. | .. | .. | 65.5 | 64 9 19.0 | .. + 2 | 5.5 | 115 17 45.7 |
| 44 | 294 56 | 7.5 | 7.2 | 28.9 | 7.8 | 28 | .. | 930 | .. | .. | .. | 65.5 | 65 0 54.4 | .. + 2 | 10.4 | 116 9 26.0 |
| 45 | 310 44 | 5.9 | 5.5 | 25.5 | 6.2 | 33 | .. | 785 | .. | 615 | .. | 65.5 | 49 11 31.1 | 26.9 + 1 | 10.7 | 107 19 6.0 |
| 46 | 322 18 | 10.8 | 10.8 | 0.8 | 12.5 | 37 | 410 | 380 | .. | .. | .. | 65.3 | 37 38 34.3 | .. + | 46.6 | 83 43 42.1 |
| 47 | 321 46 | 8.7 | 7.3 | 28.7 | 10.2 | 37 | .. | .. | .. | 785 | 780 | 65.3 | 38 10 41.0 | 34.5 + | 47.5 | 89 17 49.7 |
| 48 | 49 40 | 13.0 | 11.5 | 3.4 | 10.1 | 33 | 900 | .. | 925 | .. | 860 | 65.3 | 310 15 43.4 | .. - 1 | 11.1 | 1 20 53.5 |
| 49 | 341 14 | 9.0 | 8.7 | 0.0 | 10.7 | 32 | .. | 000 | .. | 870 | .. | 65.3 | 18 41 10.8 | .. + | 29.4 | 69 47 52.4 |
| 50 | 343 56 | 9.3 | 9.6 | 0.5 | 9.6 | 38 | 230 | 215 | .. | 075 | 055 | 65.3 | 16 0 46.2 | .. + | 17.3 | 67 7 21.7 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " " | " " | " " | " " |
| 3 | 29.82 | 30.3 | 4 | — 0.2 | .. | .. | — 0.2 |
| 5 | 29.84 | 29.5 | 40 | — 2.8 | + 19.8 | .. | + 17.0 |
| 9 | 29.86 | 28.6 | 41 | — 2.8 | — 19.8 | .. | — 22.6 |
| 13 | 29.88 | 28.4 | 46 | — 5.4 | + 16 3.8 | .. | + 15 58.4 |
| 15 | 29.89 | 28.2 | 47 | — 5.4 | — 16 3.8 | .. | — 16 9.2 |
| 20 | 29.91 | 27.5 | | | | | |
| 33 | 29.84 | 27.5 | | | | | |
| 45 | 29.97 | 27.8 | | | | | |
| 47 | 30.13 | 34.5 | | | | | |

OBSERVATIONS WITH THE TRANSIT CIRCLE

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. | | |
|---------|---------|---------------------------------|-----------|--------------------------------|------|------|-------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|----------------------------|-------|--------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| 1876. | | | | | | | | | | | | m. | s. | s. | s. | s. | h. | m. | s. | s. |
| Mar. 22 | 1 | Ceti | E. | 38.8 | 41.3 | 42.9 | 49.0 | 51.0 | 53.0 | 59.0 | 0.7 | 3.3 | 36 | 51.00 | - 0.52 | + 1.80 | + 1.81 | 2 36 | 52.29 | + 0.01 |
| | 2 | Venus I, S. . . . | F. | 4.3 | 7.0 | 8.6 | 15.0 | 17.1 | 19.3 | 25.8 | 27.4 | 30.0 | 43 | 17.17 | - 0.32 | . | + 1.81 | 2 43 | 18.66 | + 0.57 |
| | 3 | Anonymous | E. | 22.2 | 25.0 | 27.1 | 33.8 | 36.0 | 38.1 | 45.0 | 46.8 | 49.5 | 20 | 35.94 | - 0.18 | . | + 1.82 | 7 20 | 37.58 | - 1.37 |
| | 4 | a ² Geminorum . . . | E. | 26.4 | 29.4 | 31.3 | 38.4 | 40.8 | 43.3 | 50.5 | 52.4 | 55.4 | 26 | 40 88 | - 0.06 | + 1.82 | + 1.82 | 7 20 | 42.64 | + 0.24 |
| | 5 | Durch. 26°, 1602 . | E. | . | . | 46.5 | 48.8 | 51.1 | 53.4 | 55.5 | . | . | 27 | 51.06 | - 0.17 | . | + 1.82 | 7 27 | 52.71 | - 1.42 |
| | 6 | Anonymous | E. | . | . | 56.0 | 58.3 | 0.6 | 3.0 | 5.2 | . | . | 28 | 0.62 | - 0.17 | . | + 1.82 | 7 28 | 2.27 | - 1.42 |
| | 7 | a Canis Minoris . . | E. | 35.8 | 38.4 | 40.0 | 46.3 | 48.4 | 50.5 | 56.6 | 58.0 | 0.7 | 32 | 48.30 | - 0.48 | + 1.91 | + 1.82 | 7 32 | 49.64 | - 0.25 |
| | 8 | β Geminorum . . . | E. | 29.6 | 32.4 | 34 | 241.0 | 43.5 | 45.9 | 52.8 | 54.4 | 57.5 | 37 | 43.48 | - 0.13 | + 1.73 | + 1.82 | 7 37 | 45.17 | + 0.06 |
| | 9 | λ Ursæ Minoris, S. P. | E. | . | . | 48.0 | 57.0 | 1.5 | 21.0 | 29.5 | . | . | 48 | 9.52 | - 48.97 | . | + 1.83 | 19 47 | 22.38 | + 2.59 |
| | 10 | ε Hydræ (R.) . . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 11 | ε Hydræ | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 12 | κ Cancri (R.) . . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 13 | κ Cancri | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 14 | 1 Draconis (R.) . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 15 | 1 Draconis | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 16 | Una | E. | 5.7 | 10.1 | 14.1 | 16.5 | 18.4 | 20.6 | 22.5 | 26.7 | 31.0 | 57 | 18.40 | - 0.34 | . | + 1.90 | 9 57 | 19.96 | . |
| | 17 | Durch. 15°, 2166 . | E. | 4.1 | 6.9 | 8.6 | 14.8 | 17.0 | 19.0 | 25.1 | 27.0 | 29.6 | 0 | 16.90 | - 0.35 | . | + 1.90 | 10 0 | 18.45 | - 1.99 |
| | 18 | γ ¹ Leonis | E. | 55.6 | 58.2 | 59.9 | . | . | . | 17.2 | 18.9 | 21.7 | 13 | 8.58 | - 0.27 | + 1.84 | + 1.91 | 10 13 | 10.22 | + 0.05 |
| | 19 | γ ² Leonis | E. | . | . | 4.4 | 6.8 | 8.9 | 11.1 | 13.4 | . | . | 13 | 8.92 | - 0.27 | . | + 1.91 | 10 13 | 10.56 | - 2.14 |
| | 20 | 226 Cephei, S. P. . | E. | 49.9 | 39 5 | 33.6 | 8.9 | 0.6 | 52.5 | 27.8 | 21.6 | 11.6 | 29 | 0.67 | - 4.27 | . | + 1.91 | 22 29 | 58.31 | - 0.51 |
| | 21 | ι Cephei, S. P. . . | E. | 43.0 | 36.7 | 33.0 | 18.2 | 13.5 | 8.4 | 53.5 | 49.9 | 43.8 | 45 | 13.33 | - 2.74 | . | + 1.92 | 22 45 | 12.51 | + 0.95 |
| | 22 | B. A. C. 3822 . . . | E. | 42.4 | 45.4 | 47.2 | 54.5 | 50.9 | 59.2 | 6.4 | 8.2 | 11.2 | 3 | 56.82 | - 0.99 | . | + 1.94 | 11 3 | 57.77 | - 1.68 |
| | 23 | δ Leonis | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 24 | δ Crateris | E. | 56.5 | 59.0 | 0.7 | 7.0 | 9.6 | 11.3 | 17.5 | 19.0 | 21.8 | 13 | 9.09 | - 0.74 | + 1.97 | + 1.94 | 11 13 | 10.29 | - 0.05 |
| | 25 | Pales | E. | 15.8 | 18.5 | 19.9 | 26.0 | 28.1 | 30.4 | 36.1 | 37.9 | 40.5 | 16 | 28.13 | - 0.55 | . | + 1.94 | 11 16 | 29.52 | . |
| | 26 | 47 Geminorum . . . | F. | 27.0 | 30.0 | 31.7 | 38.6 | 40.7 | 43.0 | 50.0 | 51.7 | 54.6 | 3 | 40.81 | - 0.23 | . | + 2.24 | 7 3 | 42.82 | - 1.25 |
| | 27 | Anonymous | F. | . | . | . | . | . | 40.3 | 44.6 | 46.4 | . | 20 | 35.62 | - 0.24 | . | + 2.24 | 7 20 | 37.62 | - 1.35 |
| | 28 | Durch. 26°, 1602 . | F. | 37.1 | 39.9 | 41.8 | 46.5 | 48.6 | 51.0 | 53.2 | 55.4 | . | 27 | 50.88 | - 0.24 | . | + 2.24 | 7 27 | 52.88 | - 1.41 |
| | 29 | Anonymous | F. | . | . | 58.4 | 0.5 | 2.6 | 4.9 | 9.2 | 10.9 | 13.7 | 28 | 0.30 | - 0.24 | . | + 2.24 | 7 28 | 2.30 | - 1.41 |
| | 30 | B. A. C. 2519 . . . | F. | 5.4 | 8.0 | 9.8 | 16.2 | 18.4 | 20.6 | 26.9 | 28.6 | 31.2 | 32 | 18.34 | - 0.38 | . | + 2.24 | 7 32 | 20.20 | - 1.32 |
| | 31 | λ Ursæ Minoris, S. P. | F. | . | . | 44.0 | 53.0 | 3.0 | 12.0 | . | . | . | 48 | 3.65 | - 47.69 | . | + 2.24 | 19 47 | 18.20 | - 2.66 |
| | 32 | B. A. C. 2664 . . . | F. | 12.8 | 15.5 | 17.0 | 23.6 | 25.7 | 27.8 | 34.2 | 35.8 | 38.5 | 54 | 25.66 | - 0.39 | . | + 2.24 | 7 54 | 27.51 | - 1.44 |
| | 33 | 15 Argus | F. | . | . | . | . | . | 18.0 | 20.1 | 24.6 | 29.0 | 2 | 15.65 | - 0.93 | + 2.16 | + 2.24 | 8 2 | 16.06 | + 0.02 |
| | 34 | B. A. C. 2789 . . . | F. | 55.9 | 58.7 | 0.4 | 7.0 | 9.2 | 11.5 | 18.5 | 20.0 | 22.7 | 13 | 9.32 | - 0.27 | . | + 2.25 | 8 13 | 11.30 | - 1.67 |
| | 35 | Una | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 36 | γ ¹ Leonis | F. | 55.1 | 57.9 | 59.5 | . | . | . | 16.9 | 18.6 | 21.3 | 13 | 8.22 | - 0.34 | + 2.27 | + 2.27 | 10 13 | 10.15 | - 0.02 |
| | 37 | γ ² Leonis | F. | . | . | 4.2 | 6.4 | 8.6 | 10.7 | 12.9 | . | . | 13 | 8.56 | - 0.34 | . | + 2.27 | 10 13 | 10.49 | - 2.13 |
| | 38 | ρ Leonis | F. | 4.5 | 7.0 | 8.7 | 15.0 | 17.0 | 19.0 | 25.2 | 26.7 | 29.5 | 26 | 16.96 | - 0.49 | + 2.35 | + 2.27 | 10 26 | 18.74 | - 0.15 |
| | 39 | B. A. C. 3663 . . . | F. | 53.6 | 56.2 | 57.7 | 3.8 | 6.0 | 8.0 | 14.0 | 15.5 | 17.9 | 35 | 5.86 | - 0.64 | . | + 2.27 | 10 35 | 7.49 | - 1.83 |
| | 40 | B. A. C. 3671 . . . | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 41 | ν Leonis (R.) . . . | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 42 | ν Leonis | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 43 | β Leonis (R.) . . . | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 44 | β Leonis | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 45 | Hestia | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 46 | 12 Canum Venat. . . | F. | 58.3 | 1.4 | 3.5 | 11.4 | 14.1 | 16.6 | 24.4 | 26.5 | 29.9 | 50 | 14.01 | + 0.02 | + 2.23 | + 2.29 | 12 50 | 16.32 | + 0.06 |
| | 47 | θ Virginis | F. | 19.8 | 22.4 | 23.9 | 30.2 | 32.1 | 34.1 | 40.3 | 41.8 | 44.4 | 3 | 32.11 | - 0.68 | + 2.32 | + 2.30 | 13 3 | 33.73 | - 0.06 |
| | 48 | Polaris, S. P. . . . | F. | . | . | 37.0 | . | . | 45.0 | 19.0 | 52.0 | . | 12 | 44.85 | - 38.07 | . | + 2.30 | 1 12 | 9.08 | + 0.83 |
| | 49 | a Virginis | F. | 27.6 | 30.1 | 31.7 | 37.9 | 39.9 | 42.0 | 48.4 | 49 9 | 52.4 | 18 | 39.99 | - 0.75 | + 2.34 | + 2.30 | 13 18 | 41.54 | - 0.06 |
| | 50 | a Piscis Australis . | F. | 31.6 | 34.3 | 36.2 | 43.3 | 45.6 | 48.1 | 55.1 | 56.9 | 59.8 | 50 | 45.66 | - 0.64 | + 2.57 | . | . | . | . |
| | 51 | Mercury II, N. . . . | F. | 6.1 | 8.5 | 10.3 | 16.4 | 18.4 | 20.5 | 26.7 | 28.3 | 30.9 | 8 | 18.46 | - 0.44 | . | + 2.58 | 23 8 | 20.60 | - 0.20 |

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom ^r . | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------------------|-------------|--------------------------------|----------------------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | | | | | | |
| 1 | 323 46 | 10 12.0 | 13.0 | 3.8 | 14.0 | 35 | .. | 550 | .. | 455 | .. | 65.3 | 36 10 9.0 | .. | + | 43.9 | 87 17 14.1 | + 0.2 |
| 2 | 338 16 | 12.3 | 13.5 | 4.2 | 13.7 | 36 | .. | 490 | .. | 170 | .. | 65.3 | 21 40 21.9 | .. | + | 23.8 | 72 47 6.9 | .. |
| 3 | 347 6 | 15.5 | 13.5 | 4.3 | 13.0 | 30 | .. | 720 | .. | 700 | .. | 66.1 | 12 46 23.9 | .. | + | 13.8 | 63 52 58.9 | + 8.1 |
| 4 | 353 12 | 11.3 | 10.5 | 0.5 | 10.8 | 34 | 535 | 480 | .. | .. | .. | 66.1 | 6 43 51.2 | .. | + | 7.2 | 57 50 19.6 | - 0.1 |
| 5 | 347 14 | 10.2 | 10.3 | 29.3 | 8.9 | 32 | .. | .. | .. | 580 | .. | 66.1 | 12 38 49.2 | .. | + | 13.7 | 63 45 24.1 | + 7.8 |
| 6 | 347 14 | 10.2 | 10.3 | 29.3 | 8.9 | 32 | .. | .. | .. | 350 | .. | 66.1 | 12 38 45.6 | .. | + | 13.7 | 63 45 20.5 | + 7.8 |
| 7 | 326 36 | 10.5 | 10.6 | 29.7 | 9.7 | 37 | .. | 070 | .. | 960 | .. | 66.1 | 33 20 29.8 | .. | + | 40.0 | 84 27 31.0 | - 0.5 |
| 8 | 349 22 | 11.5 | 10.3 | 1.5 | 10.5 | 34 | .. | 670 | .. | 590 | .. | 66.1 | 10 33 54.3 | 31.5 | + | 11.4 | 61 40 26.9 | + 1.6 |
| 9 | 52 6 | 15.0 | 14.0 | 3.7 | 11.7 | 37 | 145 | .. | 045 | .. | 990 | 66.1 | 307 50 33.6 | .. | - | 18.2 | 358 55 36.6 | + 0.4 |
| 10 | 211 56 | 14.5 | 16.0 | 7.5 | 11.8 | 31 | 920 | .. | .. | .. | .. | 66.1 | 147 59 15.1 | .. | - | 38.1 | 53 7 44.2 | + 4.2 |
| 11 | 327 56 | 8.2 | 8.0 | 27.2 | 8.0 | 37 | .. | .. | .. | 850 | 800 | 66.1 | 32 0 41.2 | .. | + | 38.1 | 83 7 40.5 | + 0.5 |
| 12 | 207 38 | 14.3 | 15.6 | 7.2 | 11.7 | 30 | 125 | 100 | .. | .. | .. | 66.1 | 152 16 47.4 | .. | - | 32.0 | 75 50 5.8 | + 2.6 |
| 13 | 332 14 | 11.3 | 12.5 | 3.5 | 11.9 | 29 | .. | .. | .. | 415 | 355 | 66.1 | 27 43 8.9 | .. | + | 32.0 | 78 50 2.1 | - 1.1 |
| 14 | 136 58 | 7.8 | 11.3 | 29.5 | 8.2 | 35 | 096 | 050 | .. | .. | .. | 66.1 | 222 57 56.9 | .. | + | 56.7 | 8 7 27.6 | + 0.4 |
| 15 | 42 54 | 10.5 | 9.3 | 0.3 | 7.6 | 35 | 340 | .. | 310 | .. | .. | 66.1 | 317 2 3.2 | .. | - | 56.7 | 8 7 27.7 | + 0.5 |
| 16 | 336 32 | 12.6 | 12.3 | 2.7 | 11.2 | 33 | .. | 010 | .. | 820 | .. | 66.1 | 23 20 55.7 | .. | + | 26.7 | 74 27 43.6 | .. |
| 17 | 336 26 | 12.5 | 12.7 | 3.5 | 11.8 | 36 | .. | .. | .. | 250 | 225 | 66.1 | 23 32 51.2 | .. | + | 26.6 | 74 39 42.0 | - 4.3 |
| 18 | 341 30 | 8.2 | 7.2 | 27.0 | 7.8 | 32 | .. | 550 | .. | 500 | .. | 66.1 | 18 25 18.6 | .. | + | 20.3 | 69 32 0.1 | + 2.0 |
| 19 | 341 30 | 8.2 | 7.2 | 27.0 | 7.8 | 32 | 695 | .. | .. | .. | 550 | 66.1 | 18 25 20.2 | .. | + | 20.3 | 69 32 1.7 | - 4.2 |
| 20 | 65 26 | 9.8 | 9.5 | 29.0 | 6.2 | 38 | 960 | .. | .. | .. | 890 | 66.1 | 294 30 57.5 | .. | - | 13.0 | 345 35 5.7 | + 0.6 |
| 21 | 75 26 | 14.6 | 12.0 | 2.7 | 10.8 | 36 | .. | 020 | .. | 960 | .. | 66.1 | 284 30 15.8 | .. | - | 3 52.1 | 335 32 44.9 | - 0.8 |
| 22 | 289 24 | 6.8 | 8.2 | 0.9 | 9.0 | 37 | .. | 750 | .. | 680 | .. | 66.1 | 70 32 38.9 | 31.0 | + | 51.2 | 121 41 51.2 | - 12.0 |
| 23 | 342 14 | 9.2 | 8.8 | 29.7 | 8.8 | 32 | .. | .. | .. | 275 | 200 | 66.1 | 17 41 17.0 | .. | + | 19.5 | 68 47 57.7 | + 0.6 |
| 24 | 306 58 | 7.8 | 9.5 | 0.0 | 9.1 | 35 | .. | 935 | .. | 840 | .. | 66.1 | 52 58 57.3 | .. | + | 1 20.8 | 104 6 39.3 | + 0.6 |
| 25 | 321 32 | 9.7 | 9.1 | 29.6 | 8.7 | 41 | .. | 020 | .. | 100 | .. | 66.1 | 38 22 57.4 | .. | + | 48.3 | 89 30 6.9 | - 2.1 |
| 26 | 348 6 | 17.8 | 14.1 | 3.6 | 15.1 | 33 | .. | 888 | .. | 838 | .. | 65.4 | 11 49 46.0 | 39.2 | + | 12.5 | 62 56 19.7 | + 9.2 |
| 27 | 347 6 | 11.0 | 8.8 | 28.6 | 10.1 | 30 | .. | 632 | .. | 630 | .. | 65.4 | 12 46 17.5 | .. | + | 13.6 | 63 52 52.3 | + 8.1 |
| 28 | 347 14 | 11.2 | 10.3 | 29.9 | 10.4 | 32 | 620 | 600 | .. | .. | .. | 65.4 | 12 38 47.4 | .. | + | 13.8 | 63 45 22.4 | + 7.8 |
| 29 | 347 14 | 11.2 | 10.3 | 29.9 | 10.4 | 32 | .. | .. | .. | 616 | 608 | 65.4 | 12 38 50.1 | .. | + | 13.8 | 63 45 25.1 | + 7.8 |
| 30 | 339 0 | 6.0 | 4.1 | 23.0 | 5.2 | 34 | .. | 930 | .. | 884 | .. | 65.4 | 20 55 51.4 | .. | + | 23.0 | 72 2 35.6 | + 4.8 |
| 31 | 52 6 | 5.7 | 3.8 | 23.3 | 4.3 | 37 | 622 | 628 | 632 | .. | .. | 65.4 | 307 51 32.3 | .. | - | 1 17.3 | 358 55 36.2 | + 0.2 |
| 32 | 337 50 | 4.4 | 3.2 | 23.1 | 5.1 | 33 | .. | 204 | .. | 126 | .. | 65.4 | 22 5 24.1 | 37.0 | + | 24.4 | 73 12 9.7 | + 3.4 |
| 33 | 297 8 | 10.3 | 9.2 | 0.3 | 10.7 | 37 | .. | 816 | .. | 820 | .. | 65.4 | 62 48 41.2 | .. | + | 56.7 | 113 56 59.1 | - 1.1 |
| 34 | 345 28 | 12.7 | 11.1 | 0.2 | 10.7 | 38 | .. | 430 | .. | 430 | .. | 65.4 | 14 28 36.7 | .. | + | 15.6 | 65 35 13.5 | + 4.9 |
| 35 | 336 32 | 12.7 | 11.0 | 1.7 | 11.5 | 31 | .. | .. | .. | .. | 248 | 65.4 | 23 20 30.7 | 33.8 | - | 26.1 | 74 27 18.0 | .. |
| 36 | 341 30 | 8.7 | 7.6 | 25.7 | 8.6 | 32 | 572 | 560 | .. | .. | .. | 65.4 | 18 25 17.5 | .. | + | 20.2 | 69 31 58.9 | + 0.9 |
| 37 | 341 30 | 8.7 | 7.6 | 25.7 | 8.6 | 32 | .. | .. | .. | 626 | 604 | 65.4 | 18 25 20.6 | .. | + | 20.2 | 69 32 2.0 | - 4.1 |
| 38 | 331 0 | 4.5 | 3.8 | 23.4 | 5.1 | 37 | .. | 708 | .. | 630 | .. | 65.4 | 28 56 33.2 | .. | + | 33.5 | 80 3 27.9 | 0.0 |
| 39 | 319 58 | 8.0 | 6.1 | 27.6 | 8.1 | 36 | 738 | 720 | .. | .. | .. | 65.4 | 39 58 20.8 | .. | + | 50.8 | 91 5 32.8 | - 9.1 |
| 40 | 344 52 | 5.8 | 5.7 | 24.4 | 5.2 | 31 | .. | 412 | .. | 312 | .. | 65.4 | 15 3 13.1 | .. | + | 16.3 | 66 9 50.6 | - 5.2 |
| 41 | 218 58 | 16.4 | 16.6 | 6.1 | 13.3 | 37 | 280 | 238 | .. | .. | .. | 65.4 | 140 58 37.1 | .. | - | 49.2 | 90 8 33.3 | + 1.1 |
| 42 | 320 54 | 13.1 | 13.5 | 3.3 | 13.6 | 32 | .. | .. | .. | .. | 170 | 65.4 | 39 1 19.6 | .. | + | 49.2 | 90 8 30.0 | - 2.2 |
| 43 | 203 34 | 17.4 | 15.8 | 5.3 | 13.2 | 36 | 896 | 884 | .. | .. | .. | 65.4 | 156 22 31.2 | .. | - | 26.6 | 74 44 16.6 | + 1.4 |
| 44 | 336 18 | 12.7 | 12.0 | 1.1 | 12.4 | 32 | .. | .. | .. | 806 | 796 | 65.4 | 23 37 27.8 | .. | + | 26.6 | 74 44 15.6 | + 0.4 |
| 45 | 317 40 | 5.8 | 4.1 | 24.5 | 6.5 | 35 | .. | .. | .. | .. | 525 | 65.4 | 42 13 29.4 | .. | + | 55.3 | 93 20 45.9 | - 3.1 |
| 46 | 0 0 | 5.4 | 3.7 | 23.1 | 4.2 | 29 | .. | 886 | .. | 826 | .. | 65.4 | 359 54 33.7 | 31.0 | - | 0.1 | 51 0 54.8 | - 1.0 |
| 47 | 316 10 | 9.1 | 8.1 | 29.3 | 11.3 | 33 | .. | 252 | .. | 080 | .. | 65.4 | 43 45 29.4 | .. | + | 57.6 | 94 52 48.2 | - 1.3 |
| 48 | 52 22 | 8.7 | 7.5 | 27.5 | 6.0 | 35 | 395 | .. | 380 | 360 | 340 | 65.4 | 307 34 1.0 | 31.0 | - | 1 19.1 | 358 39 3.1 | - 1.5 |
| 49 | 310 32 | 8.7 | 7.6 | 28.4 | 9.1 | 33 | 374 | 334 | .. | 264 | 248 | 65.4 | 49 23 30.5 | .. | + | 1 11.0 | 100 31 2.7 | + 0.4 |
| 50 | 290 48 | 8.2 | 10.0 | 0.4 | 10.5 | 34 | .. | 450 | .. | 426 | .. | 62.5 | 69 7 46.3 | 45.0 | + | 2 33.2 | 126 16 40.7 | - 3.6 |
| 51 | 312 58 | 7.4 | 9.0 | 28.7 | 10.8 | 34 | .. | 740 | .. | 548 | .. | 62.5 | 46 57 48.8 | .. | + | 1 2.9 | 98 5 12.9 | .. |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|------|
| | in. | ° | | " " | " " | " " | " " |
| 8 | 30.16 | 34.0 | | | | | |
| 22 | 30.19 | 33.0 | 2 | - 3.1 | - 8.2 | .. | 11.3 |
| 26 | 30.15 | 40.8 | 51 | - 5.7 | + 2.9 | .. | 2.8 |
| 32 | 30.15 | 39.5 | | | | | |
| 35 | 30.17 | 37.0 | | | | | |
| 46 | 30.18 | 35.5 | | | | | |
| 48 | 30.17 | 35.3 | | | | | |
| 50 | 30.00 | 43.5 | | | | | |

For summary of the elements of reduction see page 3.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. | | | |
|---------|---------|-----------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|-------|--------------|----------|----------------|---------------------------|----------------------------|----------------|--------|---|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | | | Clock adopted. | | |
| 1876. | | | | | | | | | | | m. | s. | s. | s. | s. | h. | m. | s. | s. | |
| Mar. 27 | 1 | Sun I, S. | F. | 49.3 | 51.9 | 53.5 | 59.7 | 1.8 | 3.8 | 9.8 | 11.4 | 13.9 | 26 1.68 | - 0.39 | . | + 2.63 | 0 26 3.92 | . | . | |
| | 2 | Sun II, N. | F. | 58.4 | 1.0 | 2.6 | 8.6 | 10.7 | 12.7 | 18.8 | 20.4 | 23.0 | 28 10.69 | - 0.39 | . | + 2.63 | 0 28 12.93 | . | . | |
| | 3 | Polaris | F. | . | . | . | 16.0 | 43.0 | 9.0 | . | . | . | 11 42.43 | +23.47 | . | + 2.66 | 1 12 8.56 | + 0.83 | . | |
| | 4 | η Piscium | F. | 35.2 | 37.8 | 39.5 | 45.8 | 47.9 | 50.3 | 56.6 | 58.0 | 0.6 | 24 47.97 | - 0.28 | + 2.65 | + 2.66 | 1 24 50.35 | + 0.08 | . | |
| | 5 | η Piscium | F. | . | . | 43.8 | 46.0 | 48.0 | 50.1 | 52.2 | . | . | 38 48.02 | - 0.34 | + 2.64 | + 2.67 | 1 38 50.35 | 0.00 | . | |
| | 6 | B. A. C. 569 | F. | 43.4 | 46.6 | 48.2 | 55.2 | 57.5 | 59.9 | 6.9 | 8.7 | 11.7 | 45 57.57 | - 0.14 | . | + 2.68 | 1 46 0.11 | + 0.86 | . | |
| | 7 | β Arietis | F. | 31.4 | 34.0 | 35.7 | 42.3 | 44.4 | 46.6 | 53.0 | 54.7 | 57.4 | 47 44.39 | - 0.23 | + 2.72 | + 2.68 | 1 47 46.84 | - 0.02 | . | |
| | 8 | α Arietis | F. | . | . | . | 7.9 | 10 | 3 | 12.5 | 16.9 | 18.5 | 0 8.03 | - 0.20 | + 2.66 | + 2.69 | 2 0 10.52 | + 0.04 | . | |
| | 9 | Durch. 26, 1602 | F. | 36.7 | 39.5 | 41.2 | 45.7 | 48.0 | . | 52.6 | 54.8 | . | 27 50.30 | - 0.36 | . | + 2.76 | 7 27 52.70 | - 1.34 | . | |
| | 10 | Anonymous | F. | . | . | 57.7 | . | 2.0 | 4.1 | . | 10.9 | 13.5 | 27 59.83 | - 0.36 | . | + 2.76 | 7 28 2.23 | - 1.34 | . | |
| | 11 | B. A. C. 2519 | F. | 4.9 | 7.4 | 9.1 | 15.5 | 17.7 | 19.9 | 26.3 | 27.8 | 30.6 | 32 17.69 | - 0.43 | . | + 2.76 | 7 32 20.02 | - 1.26 | . | |
| | 12 | λ Ursæ Minoris, S. P. | F. | . | . | . | . | 51.0 | 59.0 | 11.0 | . | . | 47 49.30 | -25.37 | . | + 2.77 | 19 47 26.70 | + 1.24 | . | |
| | 13 | ε Hydre | F. | 59.4 | 1.9 | 3.5 | 9.7 | 11.7 | 13.9 | 20.0 | 21.5 | 24.0 | 40 11.73 | - 0.50 | + 2.78 | . | . | . | . | |
| 28 | 14 | α Aquarii | P. | 9.9 | 12.6 | 14.2 | 20.2 | 22.2 | 24.3 | 30.4 | 31.8 | 34.5 | 59 22.23 | - 0.39 | + 2.87 | . | . | . | . | |
| | 15 | η Aquarii | P. | 44.2 | 46.7 | 48.3 | 52.4 | 54.4 | 56.5 | 58.6 | . | . | 28 56.47 | - 0.38 | + 2.67 | . | . | . | . | |
| | 16 | Polans. | P. | . | . | . | . | . | . | . | . | . | 11 48.87 | +17.15 | . | + 2.80 | 1 12 8.82 | + 1.11 | . | |
| 29 | 17 | Moon I, S. | P. | 1.6 | 4.5 | 6.4 | 13.3 | 15.6 | 17.8 | 24.7 | 26.6 | 29.4 | 54 15.54 | - 0.24 | . | + 2.85 | 3 54 18.15 | +74.89 | . | |
| | 18 | γ Tauri | P. | 29.0 | 31.7 | 33.3 | 39.6 | 41.8 | 43.9 | 50.2 | 51.8 | 54.4 | 12 41.74 | - 0.30 | + 2.82 | + 2.84 | 4 12 44.28 | + 0.03 | . | |
| | 19 | α Tauri | P. | 33.1 | 35.8 | 37.5 | 43 | 45.9 | 48.0 | 54.4 | 56.0 | 58.6 | 28 45.90 | - 0.30 | + 2.81 | + 2.83 | 4 28 48.43 | - 0.03 | . | |
| | 20 | ι Aurigæ. | P. | 38.0 | 41.1 | 43.0 | 50.2 | 52.6 | 55.0 | 2.4 | 4.3 | 7.2 | 48 52.64 | - 0.18 | + 2.83 | + 2.82 | 4 48 55.28 | - 0.05 | . | |
| | 21 | 47 Geminorum | P. | 26.3 | 29.2 | 31.0 | 37.8 | 40.1 | 42.4 | 49.3 | 51.0 | 53.9 | 3 40.11 | - 0.11 | . | + 2.74 | 7 3 42.74 | - 1.14 | . | |
| | 22 | δ Geminorum | P. | 28.4 | 31 | 0 | 32.7 | 39.3 | 41.6 | 43.8 | 50.4 | 52.0 | 12 41.56 | - 0.16 | + 2.72 | + 2.74 | 7 12 41.18 | - 0.04 | . | |
| | 23 | B. A. C. 2452 | P. | 32.2 | 35 | 3 | 37.1 | 44.3 | 46.8 | 49.3 | 56 | 458.2 | 1.3 | 18 46.77 | - 0.51 | . | + 2.74 | 7 18 49.00 | - 0.66 | . |
| | 24 | B. A. C. 2471 | P. | 49.5 | 52.6 | 54.4 | 1.9 | 4.3 | 6.7 | 14.2 | 15.9 | 19.0 | 22 4.28 | - 0.52 | . | + 2.74 | 7 22 6.50 | - 0.66 | . | |
| | 25 | B. A. C. 2478 | P. | 1.8 | 4.8 | 6.6 | 13.8 | 16.2 | 18.6 | 25.6 | 27.4 | 30.5 | 24 16.14 | - 0.50 | . | + 2.74 | 7 24 18.38 | - 0.70 | . | |
| | 26 | α² Geminorum | P. | . | . | . | . | . | 44.7 | 49.5 | 51.4 | 54.4 | 26 39.90 | - 0.06 | + 2.68 | + 2.74 | 7 26 42.58 | + 0.30 | . | |
| | 27 | α Canis Minoris. | P. | 31.7 | 37.3 | 38.9 | 45.1 | 47.2 | 49.2 | 55.3 | 56.9 | 59.4 | 32 47.11 | - 0.28 | + 2.80 | + 2.74 | 7 32 49.57 | - 0.22 | . | |
| | 28 | β Geminorum | P. | 28.4 | 31.4 | 33.0 | 40.0 | 42.4 | 44.7 | 51.5 | 53.3 | 56.3 | 37 42.33 | - 0.10 | + 2.73 | + 2.73 | 7 37 44.96 | - 0.03 | . | |
| | 29 | λ Ursæ Minoris, S. P. | P. | . | 28.9 | . | 30.9 | . | . | . | . | . | 47 51.80 | -26 25 | . | + 2.73 | 19 47 28.28 | + 0.65 | . | |
| 30 | 30 | α Pegasi | F. | 19.1 | 21.9 | 23.5 | 29.9 | 31.9 | 34.1 | 40.4 | 44.1 | 49.4 | 58 31.91 | - 0.21 | + 2.89 | + 2.81 | 22 58 34.51 | - 0.05 | . | |
| | 31 | Mercury II, N. | F. | . | . | 45.5 | 47.5 | 49.5 | 51.6 | 53.7 | . | . | 31 49.56 | - 0.38 | . | + 2.82 | 23 31 52.00 | - 0.19 | . | |
| | 32 | α Andromedæ | F. | 41.2 | 44.2 | 45.9 | 53.0 | 55.1 | 57.5 | 4.5 | 6.2 | 9.1 | 1 55.19 | - 0.07 | + 2.75 | + 2.82 | 0 1 57.94 | + 0.09 | . | |
| | 33 | γ Pegasi | F. | 37.8 | 39.4 | 43.6 | 45.8 | 47.9 | 49.9 | 52.0 | 56.3 | 57.8 | 6 47.83 | - 0.21 | + 2.82 | + 2.82 | 0 6 50.44 | 0.00 | . | |
| 31 | 34 | Moon, N. | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 35 | ε Canis Majoris. | F. | 29.5 | 32.4 | 34.2 | 41.0 | 43.4 | 45.7 | 52.7 | 54.5 | 57.3 | 53 43.41 | - 0.58 | + 2.89 | + 2.88 | 6 53 45.71 | - 0.06 | . | |
| | 36 | δ Canis Majoris. | F. | 5.6 | 8.4 | 10.2 | 17.0 | 19.3 | 21.5 | 28.4 | 30.0 | 33.0 | 3 19.27 | - 0.56 | + 2.88 | + 2.89 | 7 3 21.60 | - 0.04 | . | |
| | 37 | δ Geminorum | F. | 28.2 | 30.9 | 32.5 | 39.1 | 41.4 | 43.5 | 50.2 | 51.8 | 54.6 | 12 41.36 | - 0.17 | + 2.89 | + 2.89 | 7 12 44.08 | - 0.06 | . | |
| | 38 | B. A. C. 2446 | F. | . | . | 45.2 | 47.6 | 50.0 | 52.5 | 54.9 | . | . | 17 50.01 | - 0.61 | . | + 2.89 | 7 17 52.32 | - 0.62 | . | |
| | 39 | B. A. C. 2449 | F. | 0.1 | 3.1 | 5.0 | 12.1 | 14.6 | 17.0 | 24.3 | 26.0 | 29.0 | 18 14.58 | - 0.61 | . | + 2.89 | 7 18 16.86 | - 0.62 | . | |
| | 40 | B. A. C. 2519 | F. | . | . | 13.2 | 15.2 | 17.5 | 19 | 6 | 21.8 | . | 32 17.46 | - 0.21 | . | + 2.90 | 7 32 20.15 | - 1.19 | . | |
| | 41 | α Canis Minoris | F. | . | . | . | 47.0 | 49.1 | 51.2 | 55.3 | 56.8 | 59.4 | 32 47.06 | - 0.32 | + 2.85 | + 2.90 | 7 32 49.64 | - 0.11 | . | |
| | 42 | β Geminorum | F. | 28.2 | 31.2 | 32.9 | 39.9 | 42.2 | 44.6 | 51.4 | 53.2 | 56.1 | 37 42.19 | - 0.10 | + 2.83 | + 2.90 | 7 37 44.99 | + 0.04 | . | |
| | 43 | λ Ursæ Minoris, S. P. | F. | . | . | 35.0 | 45.0 | 57.0 | . | . | . | . | 47 56.87 | -31.54 | . | + 2.90 | 19 47 28.23 | - 1.34 | . | |
| | 44 | β Leonis | F. | . | . | . | . | . | . | 52.0 | 53.6 | 56.2 | 42 43.53 | - 0.23 | + 2.91 | + 2.97 | 11 42 46.27 | + 0.04 | . | |
| | 45 | Elpis | F. | 7.2 | 9.7 | 11.4 | 17.4 | 19.5 | 21.5 | 27.5 | 29.1 | 31.6 | 50 19.43 | - 0.33 | . | + 2.97 | 11 50 22.07 | . | . | |
| | 46 | B. A. C. 4056 | F. | 12.2 | 13.8 | 18.3 | 20.6 | 22.8 | 25.0 | 27.1 | 31.6 | 33.2 | 55 22.73 | - 0.16 | . | + 2.98 | 11 55 25.55 | - 2.37 | . | |
| | 47 | Ausonia | F. | 29.6 | 32.1 | 33.7 | 39.9 | 41.8 | 43.9 | 50.2 | 51.7 | 54.3 | 1 41.91 | - 0.40 | . | + 2.98 | 12 1 44.49 | . | . | |
| | 48 | Hestia | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |

2. Telescope micrometer reading decreased one revolution in reduction.
 9, 10, 39, 45, 47, 48. Thread A used.
 16. Three transits on micrometer thread.
 17. Bisections at threads II-VI.
 22, 23, 38. Thread B used.
 40. Bisections at threads II and III.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | I. | 2. | 3. | 4. | 5. | | | | | |
| | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " |
| 1 | 323 42 | 6.1 | 8.9 | 28.0 | 8.5 | 31 | 514 | 496 | .. | .. | .. | 62.5 | 36 12 58.0 | 47.9 | + 42.8 | 87 20 2.0 |
| 2 | 324 14 | 10.5 | 13.6 | 3.2 | 13 7 | 31 | .. | .. | .. | 608 | 558 | 62.5 | 35 40 52.1 | .. | + 42.0 | 86 47 55.3 |
| 3 | 49 40 | 5.8 | 5 7 | 24.3 | 6.3 | 34 | .. | .. | 382 | .. | .. | 62.5 | 310 15 41.3 | .. | - 1 8.6 | 1 20 53.9 |
| 4 | 335 46 | 10.2 | 9.2 | 29.5 | 9.7 | 38 | .. | 866 | .. | 756 | .. | 62.5 | 24 10 53.4 | .. | + 26.1 | 75 17 40.7 |
| 5 | 52 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 6 | 350 2 | 9.5 | 9.6 | 29.2 | 10.5 | 39 | 206 | 192 | .. | .. | .. | 62.5 | 9 54 58.4 | .. | + 10.1 | 61 1 29.7 |
| 7 | 341 14 | 11.2 | 11.8 | 0.7 | 13.2 | 32 | .. | .. | .. | 008 | 990 | 62.5 | 18 11 12.4 | .. | + 19.6 | 69 47 53.2 |
| 8 | 343 56 | 9.0 | 11.1 | 20.1 | 11.5 | 38 | .. | 430 | .. | 414 | .. | 62.5 | 16 0 48.0 | 53.6 | + 16.6 | 67 7 25.8 |
| 9 | 347 14 | 11.2 | 9.5 | 0.7 | 9.8 | 32 | 816 | 800 | .. | .. | .. | 63.1 | 12 38 48.0 | .. | + 13.0 | 63 45 22.2 |
| 10 | 347 14 | 11.2 | 9.5 | 0.7 | 9.8 | 32 | .. | .. | .. | 782 | 774 | 63.1 | 12 38 50.2 | .. | + 13.0 | 63 45 24.4 |
| 11 | 339 0 | 8.2 | 6.7 | 23.7 | 6.7 | 34 | .. | .. | .. | 964 | 934 | 63.1 | 20 55 52.7 | .. | + 22.2 | 72 2 36.1 |
| 12 | 329 36 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 13 | 327 56 | 12.1 | 11.5 | 28.1 | 9.4 | 37 | .. | 958 | .. | 900 | .. | 63.1 | 32 0 41.0 | 45.3 | + 36.8 | 83 7 39.0 |
| 14 | 320 8 | 11.6 | 13.5 | 3.7 | 13.3 | 36 | 115 | 090 | .. | 000 | 950 | 63.2 | 39 48 14.8 | 41.2 | + 48.5 | 90 55 24.5 |
| 15 | 320 18 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 16 | 49 40 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 17 | 345 42 | 7.1 | 9.5 | 27.3 | 8.5 | 32 | 480 | 150 | 090 | 865 | 720 | 63.2 | 14 13 9.1 | 43.0 | + 14.8 | 65 19 45.1 |
| 18 | 336 22 | 9.1 | 11.9 | 0.1 | 10.0 | 33 | 460 | 425 | .. | 315 | 255 | 63.2 | 23 33 31.2 | .. | + 25.4 | 74 40 17.8 |
| 19 | 337 18 | 9.7 | 12.9 | 0.5 | 9.6 | 33 | .. | 800 | .. | 755 | .. | 63.2 | 22 37 38.0 | 43.7 | + 24.2 | 73 44 23.4 |
| 20 | 354 0 | 4.5 | 7.5 | 26.0 | 5.4 | 32 | 850 | 795 | .. | 715 | 635 | 63.2 | 5 55 17.5 | .. | + 6.0 | 57 1 44.7 |
| 21 | 348 6 | 8.8 | 10.4 | 0.1 | 8.0 | 34 | 535 | 540 | .. | 400 | 310 | 63.2 | 11 49 47.0 | 38.8 | + 12.3 | 62 56 20.5 |
| 22 | 343 16 | 10.2 | 11.5 | 29.1 | 9.0 | 28 | 065 | 055 | .. | 930 | 880 | 63.2 | 16 40 41.0 | .. | + 17.6 | 67 47 19.8 |
| 23 | 289 8 | 14.5 | 16.1 | 5.6 | 13.4 | 28 | .. | 040 | .. | 905 | .. | 63.2 | 70 48 45.4 | .. | + 2 47.7 | 121 57 54.3 |
| 24 | 287 12 | 12.5 | 14.3 | 5.3 | 11.6 | 36 | .. | 035 | .. | 890 | .. | 63.2 | 72 44 13.8 | .. | + 3 7.4 | 123 53 41.4 |
| 25 | 289 52 | 12.0 | 14.0 | 3.6 | 10.9 | 32 | 000 | 990 | .. | .. | .. | 63.2 | 70 3 11.0 | .. | + 2 41.0 | 121 12 13.2 |
| 26 | 353 12 | 9.3 | 10.4 | 0.2 | 7.9 | 34 | .. | .. | .. | 665 | 645 | 63.2 | 6 43 51.6 | .. | + 7.0 | 57 50 19.8 |
| 27 | 326 36 | 9.9 | 13.3 | 0.3 | 10.1 | 37 | 215 | 210 | .. | 090 | 035 | 63.2 | 33 20 29.6 | .. | + 38.8 | 84 27 29.6 |
| 28 | 349 22 | 8.1 | 9.5 | 29.6 | 8.1 | 34 | 965 | 950 | .. | 855 | 825 | 63.2 | 10 33 53.4 | .. | + 11.0 | 61 40 25.6 |
| 29 | 52 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 30 | 335 36 | 10.5 | 10.6 | 29.2 | 11.0 | 39 | .. | 320 | .. | 196 | .. | 63.3 | 24 21 1.7 | 43.2 | + 26.8 | 75 27 49.7 |
| 31 | 315 24 | 4.6 | 6.2 | 25.8 | 9.5 | 36 | .. | 696 | .. | 574 | .. | 63.3 | 44 32 17.6 | .. | + 58.0 | 95 39 36.8 |
| 32 | 349 28 | 7.5 | 7.6 | 27.8 | 8.8 | 39 | .. | 930 | .. | 815 | .. | 63.3 | 10 29 8.8 | .. | + 11.0 | 61 35 41.0 |
| 33 | 335 32 | 3.8 | 1.8 | 20.8 | 4.3 | 34 | .. | 160 | .. | 040 | .. | 63.3 | 24 23 35.1 | 45.0 | + 26.7 | 75 30 23.0 |
| 34 | 349 50 | 8.6 | 9.7 | 28.2 | 10.1 | 32 | .. | 124 | 128 | 148 | .. | 64.3 | 10 5 12.4 | 46.8 | + 10.5 | 61 11 44.1 |
| 35 | 292 16 | 11.2 | 11.3 | 1.3 | 12.2 | 33 | .. | .. | .. | 755 | 712 | 64.3 | 67 39 40.1 | .. | + 2 22.8 | 118 48 24.1 |
| 36 | 294 52 | 6.9 | 6.3 | 26.4 | 8.2 | 33 | .. | 676 | .. | 578 | .. | 64.3 | 65 3 32.8 | .. | + 2 6.6 | 116 12 0.6 |
| 37 | 343 16 | 8.3 | 8.4 | 26.8 | 8.9 | 38 | .. | 106 | .. | 064 | .. | 64.3 | 16 40 42.5 | .. | + 17.7 | 67 47 21.4 |
| 38 | 289 20 | 5.4 | 5.7 | 26.3 | 9.5 | 39 | .. | .. | .. | 592 | 615 | 64.3 | 70 39 37.6 | .. | + 2 47.2 | 121 48 46.0 |
| 39 | 289 20 | 5.4 | 5.7 | 26.3 | 9.5 | 30 | .. | .. | .. | 632 | 588 | 64.3 | 70 32 14.0 | 43.0 | + 2 46.2 | 121 41 21.4 |
| 40 | 339 0 | 2.5 | 1.6 | 20.7 | 2.3 | 35 | 198 | 176 | .. | .. | .. | 64.3 | 20 55 51.0 | .. | + 22.7 | 72 2 34.9 |
| 41 | 326 36 | 8.9 | 10.4 | 26.9 | 7.4 | 37 | .. | .. | .. | 142 | 114 | 64.3 | 33 20 29.3 | .. | + 39.0 | 84 27 29.5 |
| 42 | 349 22 | 4.0 | 3.5 | 24.2 | 5.2 | 35 | .. | 185 | .. | .. | 113 | 64.3 | 10 33 54.1 | 42.0 | + 11.1 | 61 40 26.4 |
| 43 | 52 6 | 8.7 | 9.6 | 27.8 | 8.8 | 37 | 358 | 334 | 304 | .. | .. | 64.3 | 307 50 31.2 | .. | - 1 16.4 | 358 55 36.0 |
| 44 | 336 18 | 5.5 | 7.1 | 25.3 | 5.8 | 33 | .. | .. | .. | 508 | 476 | 64.3 | 23 37 31.2 | .. | + 26.4 | 74 44 18.8 |
| 45 | 324 44 | 10.1 | 10.4 | 0.3 | 12.0 | 37 | .. | 922 | .. | 946 | .. | 64.3 | 35 10 9.2 | 35.2 | + 42.5 | 86 17 12.9 |
| 46 | 343 50 | 5.5 | 5.0 | 23.7 | 5.0 | 37 | .. | .. | .. | 056 | 016 | 64.3 | 16 6 24.4 | .. | + 17.4 | 67 13 3.0 |
| 47 | 315 36 | 9.3 | 11.2 | 29.2 | 10.2 | 44 | .. | 345 | .. | 327 | .. | 64.3 | 44 19 46.5 | .. | + 58.9 | 95 27 6.6 |
| 48 | 318 30 | 2.5 | 3.9 | 22.2 | 3.2 | 37 | .. | 400 | .. | 346 | .. | 64.3 | 41 23 52.8 | .. | + 53.2 | 92 31 7.2 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | ' " | ' " | ' " | ' " |
| 1 | 29.99 | 46.8 | 1 | - 5.2 | - 16 3.3 | .. | - 16 8.5 |
| 8 | 29.97 | 52.8 | 2 | - 5.1 | + 16 3.3 | .. | + 15 58.2 |
| 13 | 29.98 | 47.5 | 31 | - 5.2 | + 2.8 | .. | - 2.4 |
| 14 | 29.44 | 41.6 | 34 | - 10 11.4 | + 16 11.8 | .. | + 6 0.4 |
| 17 | 29.53 | 43.4 | | | | | |
| 19 | 29.54 | 43.9 | | | | | |
| 21 | 29.60 | 40.6 | | | | | |
| 30 | 30.01 | 41.0 | | | | | |
| 33 | 30.02 | 43.5 | | | | | |
| 34 | 30.05 | 47.5 | | | | | |
| 39 | 30.07 | 45.5 | | | | | |
| 42 | 30.07 | 44.5 | | | | | |
| 45 | 30.13 | 38.8 | | | | | |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. |
|------------------|---------|----------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|--------------|---------|----------------|---------------------------|-------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. m. s. | |
| 1876. Mar. 31 | 1 | 12 Canum Venat. | F. | 57.5 | 0.8 | 2.8 | 10.8 | 13.2 | 15.8 | 23.9 | 26.0 | 29.0 | m. s. | s. | s. | s. | 12 50 16.34 | 0.00 |
| | 2 | Polaris, S. P. | F. | | | 23.0 | 56.0 | 29.5 | 3.0 | 36.0 | | | 12 29.58 | - 25.18 | | + 3.00 | 1 12 7.40 | - 0.30 |
| | 3 | a Virginis | F. | 26.0 | 29.2 | 30.8 | 37.0 | 39.1 | 41.1 | 47.4 | 49.0 | 51.6 | 18 39.09 | - 0.44 | + 3.03 | + 3.00 | 13 18 41.65 | - 0.05 |
| | 4 | η Bootis | F. | 33.3 | 36.0 | 37.5 | 44.2 | 46.2 | 48.4 | 55.0 | 56.4 | 59.2 | 45 46.24 | - 0.20 | + 2.99 | + 3.01 | 13 48 49.05 | - 0.03 |
| | 5 | γ Cephei | Sk. | | | | | | | | | | | | | | | |
| | 6 | a Andromedæ | Sk. | 41.0 | 43.9 | 45.6 | 52.7 | 55.1 | 57.4 | 4.2 | 6.0 | 8.8 | 1 54.97 | - 0.13 | + 3.03 | | | |
| Apr. 1 | 7 | Sun I, S. | Sk. | 0.0 | 2.5 | 4.2 | 10.2 | 12.4 | 14.4 | 20.5 | 22.3 | 24.6 | 44 12.34 | - 0.34 | | + 3.10 | 0 44 15.10 | |
| | 8 | Sun II, N. | Sk. | 9.0 | 11.6 | 13.2 | 19.4 | 21.2 | 23.2 | 29.4 | 31.2 | 33.8 | 46 21.33 | - 0.34 | | + 3.10 | 0 46 24.09 | |
| | 9 | a Arietis | Sk. | 54.0 | 56.9 | 58.5 | 5.1 | 7.3 | 9.6 | 16.4 | 18.0 | 20.7 | 0 7.39 | - 0.19 | + 3.28 | | | |
| | 10 | 51 Cephei | Sk. | | | | 57.0 | 38.5 | 21.5 | 4.0 | | | 41 38.98 | + 10.94 | | + 3.16 | 6 41 53.08 | - 0.26 |
| | 11 | ε Canis Majoris | Sk. | 29.0 | 32.0 | 33.7 | 40.9 | 43.2 | 45.5 | 52.5 | 54.2 | 57.1 | 53 43.12 | - 0.56 | + 3.14 | | | |
| | 12 | δ Canis Majoris. | Sk. | 5.3 | 8.2 | 9.8 | 16.7 | 19.0 | 21.3 | 28.0 | 29.7 | 32.5 | 3 18.94 | - 0.54 | + 3.17 | | | |
| | 13 | Moon I, N. | Sk. | 39.7 | 42.4 | 44.2 | 51.3 | 53.8 | 56.1 | 3.1 | 5.0 | 8.0 | 13 53.73 | - 0.11 | | + 3.16 | 7 13 56.78 | + 76.01 |
| | 14 | B. A. C. 2639 | Sk. | 42.4 | 45.2 | 46.7 | 53.3 | 55.3 | 57.5 | 3.8 | 5.4 | 8.2 | 49 55.31 | - 0.22 | | + 3.17 | 7 49 58.26 | - 1.26 |
| | 15 | 3 Ursæ Majoris (R.) | Sk. | | | | | | | | | | | | | | | |
| | 16 | 3 Ursæ Majoris | Sk. | | | | | | | | | | | | | | | |
| | 17 | B. A. C. 2789 | Sk. | 54.8 | 57.6 | 59.3 | 6.0 | 8.2 | 10.5 | 17.2 | 18.0 | 21.7 | 13 8.24 | - 0.15 | | + 3.18 | 8 13 11.27 | - 1.53 |
| | 18 | B. A. C. 3094 | Sk. | | | | | | 25.0 | 30.3 | 32.2 | 35.6 | 57 19.78 | - 0.65 | | + 3.19 | 8 57 22.32 | - 1.04 |
| | 19 | B. A. C. 3117 | Sk. | | | | | | 17.0 | 21.3 | 23.0 | 25.8 | 2 12.52 | - 0.16 | | + 3.19 | 9 2 15.55 | - 1.79 |
| | 20 | Uranus. | Sk. | 38.5 | 41.3 | 42.8 | 49.2 | 51.3 | 53.4 | 59.8 | 1.4 | 4.2 | 14 51.32 | - 0.22 | | + 3.19 | 9 14 54.29 | |
| | 21 | B. A. C. 3238 | Sk. | 57.5 | 2.7 | 7.6 | 10.0 | 12.4 | 14.9 | 17.5 | 22.3 | 27.3 | 23 12.47 | - 0.04 | | + 3.19 | 9 23 15.62 | - 2.18 |
| | 22 | B. A. C. 3452 | Sk. | 57.0 | 59.9 | 1.7 | 9.0 | 11.2 | 13.6 | 20.8 | 22.6 | 25.6 | 6 11.27 | - 0.57 | | + 3.20 | 10 0 13.90 | - 1.41 |
| | 23 | B. A. C. 3494 | Sk. | | | 50.3 | 52.7 | 55.0 | 57.6 | 59.8 | | | 7 55.08 | - 0.59 | | + 3.20 | 10 7 57.69 | - 1.43 |
| | 24 | B. A. C. 3671 | Sk. | 26.1 | 29.0 | 30.7 | 37.2 | 39.4 | 41.7 | 48.4 | 50.2 | 53.0 | 36 39.52 | - 0.15 | | + 3.21 | 10 36 42.58 | - 2.23 |
| | 25 | Cephei, S. P. | Sk. | 34.6 | 31.0 | 21.2 | 16.0 | 11.6 | 6.4 | 1.7 | 51.3 | 47.8 | 45 11.29 | - 1.65 | | + 3.21 | 22 45 12.85 | + 0.09 |
| | 26 | B. A. C. 3763 | Sk. | 7.2 | 10.1 | 12.0 | 19.5 | 21.8 | 24.4 | 31.5 | 33.4 | 36.4 | 53 21.81 | - 0.60 | | + 3.21 | 10 53 24.42 | - 1.61 |
| | 27 | B. A. C. 3788 | Sk. | 24.0 | 26.5 | 28.0 | 34.3 | | 35.3 | 44.6 | 46.0 | 48.6 | 58 36.29 | - 0.29 | | + 3.21 | 10 58 39.21 | - 1.99 |
| | 28 | δ Leonis | Sk. | 17.0 | 19.6 | 21.3 | 27.8 | 29.9 | 32.2 | 38.7 | 40.3 | 43.1 | 7 29.99 | - 0.18 | + 3.15 | + 3.21 | 11 7 33.02 | 0.00 |
| | 29 | δ Crateris | Sk. | 55.0 | 57.6 | 59.3 | 5.5 | 7.5 | 9.8 | 16.0 | 17.6 | 20.2 | 13 7.61 | - 0.45 | + 3.15 | + 3.21 | 11 13 10.37 | + 0.04 |
| | 30 | B. A. C. 3891 | Sk. | | | 27.2 | 29.8 | 32.2 | 34.9 | 37.4 | | | 19 32.30 | - 0.63 | | + 3.22 | 11 19 34.89 | - 1.70 |
| | 31 | B. A. C. 3934 | Sk. | 12.8 | 15.7 | 17.7 | 22.4 | 27.2 | 32.0 | 36.8 | 38.7 | 41.7 | 28 27.22 | - 0.59 | | + 3.22 | 11 28 29.85 | - 1.73 |
| | 32 | B. A. C. 3948 | Sk. | 37.0 | 40.2 | 42.0 | 49.2 | 51.5 | 54.1 | 1.2 | 3.0 | 6.2 | 30 51.60 | - 0.59 | | + 3.22 | 11 30 54.23 | - 1.74 |
| | 33 | β Leonis | Sk. | 30.6 | 33.3 | 34.9 | 41.1 | 43.2 | 45.4 | 51.6 | 53.2 | 55.9 | 42 43.24 | - 0.23 | + 3.20 | + 3.22 | 11 42 46.23 | 0.00 |
| | 34 | Elpis | Sk. | 24.4 | 27.0 | 28.7 | 34.7 | 36.7 | 38.9 | 44.9 | 46.7 | 49.2 | 49 36.80 | - 0.32 | | + 3.23 | 11 49 39.71 | |
| | 35 | Ausonia | Sk. | 30.2 | 33.0 | 34.7 | 40.9 | 42.9 | 44.9 | 51.1 | 52.7 | 55.2 | 0 42.84 | - 0.39 | | + 3.23 | 12 0 45.68 | |
| | 36 | Juno | Sk. | 7.3 | 9.8 | 11.5 | 17.6 | 19.7 | 21.7 | 27.5 | 29.5 | 32.0 | 32 19.62 | - 0.33 | | + 3.24 | 12 32 22.53 | |
| | 37 | Vesta | Sk. | 58.2 | 0.7 | 2.3 | 8.5 | 10.5 | 12.6 | 18.9 | 20.5 | 22.9 | 48 10.57 | - 0.28 | | + 3.24 | 12 48 13.53 | |
| | 38 | Polaris, S. P. | Sk. | | | | | | | 41.5 | 38.5 | 43.5 | 12 27.40 | - 23.82 | | + 3.24 | 1 12 6.82 | - 0.84 |
| | 39 | a Virginis | Sk. | 26.4 | 28.7 | 30.6 | 36.8 | 38.9 | 41.0 | 47.2 | 48.6 | 51.3 | 18 38.83 | - 0.42 | + 3.28 | + 3.24 | 13 18 41.65 | - 0.06 |
| | 40 | ζ Virginis | Sk. | 9.4 | 11.9 | 13.5 | 19.7 | 21.7 | 23.8 | 29.9 | 31.3 | 34.0 | 28 21.69 | - 0.35 | + 3.22 | + 3.24 | 13 28 24.58 | + 0.02 |
| | 41 | η Bootis | Sk. | 33.0 | 35.8 | 37.4 | 43.9 | 46.0 | 48.2 | 54.7 | 56.2 | 59.0 | 48 46.02 | - 0.20 | + 3.23 | + 3.25 | 13 48 49.07 | - 0.03 |
| | 42 | a Bootis (R.) | Sk. | | | | | | | | | | | | | | | |
| | 43 | a Bootis | Sk. | | | | | | | | | | | | | | | |
| 2 | 44 | 15 Argus | P. | 0.4 | 3.2 | 5.0 | 11.7 | 14.0 | 16.3 | 22.8 | 24.5 | 27.3 | 2 13.91 | - 0.50 | + 3.30 | + 3.35 | 8 2 16.76 | - 0.01 |
| | 45 | Moon, N. | P. | | | | | | | | | | | | | | | |
| | 46 | B. A. C. 2889 ¹ | P. | 1.3 | 4.0 | 5.5 | | | | | | 26.0 | 29 13.70 | - 0.30 | | + 3.37 | 8 29 16.77 | - 1.35 |
| | 47 | B. A. C. 2889 ² | P. | | | 9.9 | 12.0 | 14.0 | 16.1 | 18.2 | 22.2 | 23.7 | 29 14.03 | - 0.30 | | + 3.37 | 8 29 17.10 | - 1.35 |
| | 48 | B. A. C. 2937 | P. | 51.8 | 54.5 | 56.2 | 2.7 | 4.9 | 7.1 | 13.7 | 15.3 | 18.1 | 36 4.92 | - 0.19 | | + 3.37 | 8 36 8.10 | - 1.61 |

5. Bisection at B₃ and VI.
 13, 16, 45. Bisections at sets B and D.
 25. Bisection at set C.
 29. Telescope micrometer reading increased one revolutions in reduction.
 31, 34, 37. Thread A used.
 31. Thread B used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Dis- tance, South. | | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | | Miscellan'us Corrections. |
|---------|------------------|---------------------|------|------|-------|-----------------------|----|-----|-----|-----|-----|--------------------------|------------------------------------|-------------|---------------------|-------------|--------------------------------|-------------|---------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | " | " | | | " | " | |
| 1 | 0 0 | 10 | 2.0 | 2.0 | 20.7 | 1.1 | 29 | .. | .. | .. | 994 | 944 | 64.3 | 359 54 33.1 | .. | — | 0.1 | 51 0 54.2 | — 0.1 |
| 2 | 52 22 | | 6.5 | 7.0 | 26.8 | 4.7 | 35 | 332 | 330 | 320 | 320 | 312 | 64.3 | 307 33 58.0 | 34.5 | — | 1 18.5 | 358 39 0.7 | — 1.5 |
| 3 | 310 32 | | 6.3 | 8.0 | 25.6 | 7.2 | 33 | .. | 668 | .. | 592 | .. | 64.3 | 49 23 32.8 | .. | + | 1 10.5 | 100 31 4.5 | + 1.5 |
| 4 | 340 4 | | 9.3 | 9.7 | 29.3 | 9.5 | 36 | .. | 758 | .. | 660 | .. | 64.3 | 19 52 22.8 | 34.0 | + | 21.9 | 70 59 5.9 | + 1.3 |
| 5 | 37 58 | | 7.3 | 9.4 | 29.8 | 8.3 | 35 | .. | 410 | .. | 380 | .. | 62.6 | 321 58 1.7 | 41.2 | — | 46.8 | 23 3 36.1 | — 2.7 |
| 6 | 349 28 | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 7 | 325 40 | | 6.1 | 7.7 | 27.0 | 7.1 | 38 | 210 | 080 | .. | .. | .. | 62.6 | 34 16 38.8 | .. | + | 40.5 | 85 23 40.5 | .. |
| 8 | 326 12 | | 10.2 | 14.2 | 2.2 | 11.5 | 37 | .. | .. | .. | 440 | 230 | 62.6 | 33 44 34.8 | 43.5 | + | 39.7 | 84 51 35.7 | .. |
| 9 | 343 56 | | 5.5 | 6.5 | 23.7 | 5.0 | 38 | .. | .. | .. | 580 | 520 | 62.6 | 16 0 46.3 | .. | + | 17.0 | 67 7 24.5 | — 0.3 |
| 10 | 48 16 | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 11 | 292 16 | | 9.3 | 12.1 | 1.0 | 9.0 | 33 | .. | 920 | .. | 830 | .. | 63.3 | 67 39 39.0 | 45.4 | + | 2 23.5 | 118 48 23.7 | — 0.4 |
| 12 | 294 52 | | 8.1 | 10.0 | 29.6 | 7.7 | 33 | 540 | 162 | .. | .. | .. | 63.3 | 65 3 28.2 | .. | + | 2 7.2 | 116 11 56.6 | — 0.6 |
| 13 | 348 30 | | 7.7 | 6.5 | 25.4 | 3.6 | 32 | 430 | .. | 570 | .. | 640 | 63.3 | 11 25 14.4 | .. | + | 12.0 | 62 31 47.6 | .. |
| 14 | 337 10 | | 7.1 | 7.5 | 25.0 | 6.3 | 35 | 340 | 325 | .. | .. | .. | 63.3 | 22 45 56.6 | .. | + | 25.0 | 73 52 42.8 | + 3.7 |
| 15 | 150 0 | | 2.3 | 6.0 | 25.0 | 3.6 | 36 | 950 | 100 | .. | .. | .. | 63.3 | 209 56 18.7 | .. | + | 34.4 | 21 9 28.1 | — 2.5 |
| 16 | 29 52 | | 11.8 | 11.8 | 0.2 | 8.0 | 34 | .. | .. | .. | 092 | 080 | 63.3 | 330 3 43.1 | .. | — | 34.4 | 21 9 29.9 | — 0.7 |
| 17 | 345 28 | | 12.7 | 14.0 | 0.9 | 9.8 | 37 | .. | 505 | .. | .. | .. | 63.3 | 14 28 35.5 | .. | + | 15.4 | 65 35 12.1 | + 5.4 |
| 18 | 282 12 | | 8.8 | 9.2 | 29.3 | 7.8 | 36 | .. | .. | .. | 490 | .. | 63.3 | 77 44 18.3 | .. | + | 29.8 | 128 55 9.3 | — 13.0 |
| 19 | 343 36 | | 9.0 | 11.5 | 28.0 | 7.8 | 37 | .. | .. | .. | 440 | .. | 63.3 | 16 20 33.6 | 40.8 | + | 17.6 | 67 27 12.6 | + 1.9 |
| 20 | 337 48 | | 9.0 | 11.3 | 29.2 | 8.2 | 40 | .. | 110 | .. | .. | .. | 63.3 | 22 9 12.9 | .. | + | 24.5 | 73 15 58.6 | .. |
| 21 | 355 14 | | 8.1 | 10.2 | 28.0 | 7.5 | 33 | .. | 510 | .. | 460 | .. | 63.3 | 4 41 31.5 | .. | + | 4.9 | 55 47 57.6 | + 4.0 |
| 22 | 290 48 | | 14.0 | 15.0 | 3.6 | 11.8 | 37 | .. | 250 | .. | 002 | .. | 63.3 | 69 8 32.0 | .. | + | 2 37.0 | 120 17 30.2 | — 13.0 |
| 23 | 288 40 | | 4.6 | 5.4 | 25.5 | 4.9 | 36 | .. | 150 | .. | .. | .. | 63.3 | 71 16 7.6 | .. | + | 2 56.1 | 122 25 24.9 | — 13.4 |
| 24 | 344 52 | | 8.7 | 10.6 | 27.5 | 6.5 | 32 | .. | .. | .. | 140 | .. | 63.3 | 15 3 11.7 | .. | + | 16.3 | 66 9 49.2 | — 4.3 |
| 25 | 75 26 | | 8.6 | 7.8 | 26.0 | 4.7 | 36 | 150 | .. | .. | .. | .. | 63.3 | 284 30 10.3 | .. | — | 3 50.0 | 335 32 41.5 | — 1.9 |
| 26 | 288 0 | | 8.0 | 8.5 | 28.5 | 7.5 | 31 | .. | .. | .. | 850 | .. | 63.3 | 71 55 6.7 | .. | + | 3 3.4 | 123 4 31.3 | — 14.0 |
| 27 | 329 4 | | 7.0 | 8.2 | 25.9 | 4.5 | 38 | 762 | 750 | .. | .. | .. | 63.3 | 30 52 48.8 | .. | + | 36.2 | 81 59 46.2 | — 8.9 |
| 28 | 342 14 | | 8.5 | 10.0 | 27.7 | 7.3 | 32 | 580 | 520 | .. | .. | .. | 63.3 | 17 41 15.9 | .. | + | 19.3 | 68 47 56.4 | + 0.2 |
| 29 | 306 58 | | 11.0 | 11.5 | 0.9 | 9.5 | 38 | 080 | 980 | .. | .. | .. | 63.3 | 52 58 57.2 | .. | + | 1 20.2 | 104 6 38.6 | — 1.2 |
| 30 | 284 2 | | 11.0 | 11.5 | 1.7 | 10.4 | 34 | 510 | 570 | .. | .. | .. | 63.3 | 75 53 48.6 | 36.3 | + | 3 57.2 | 127 4 7.0 | — 14.3 |
| 31 | 288 50 | | 8.3 | 10.5 | 28.0 | 7.5 | 27 | 610 | 470 | .. | .. | .. | 63.3 | 71 1 25.3 | .. | + | 2 54.5 | 122 10 41.0 | — 14.1 |
| 32 | 288 50 | | 8.3 | 10.5 | 28.0 | 7.5 | 36 | 540 | 860 | .. | .. | .. | 63.3 | 71 8 51.5 | .. | + | 2 56.0 | 122 18 8.7 | — 14.2 |
| 33 | 336 18 | | 12.3 | 14.5 | 1.7 | 10.6 | 32 | 980 | 960 | .. | .. | .. | 63.3 | 23 37 26.2 | .. | + | 26.5 | 74 44 13.9 | — 0.8 |
| 34 | 324 50 | | 6.0 | 6.0 | 23.5 | 3.7 | 35 | .. | .. | .. | 100 | 030 | 63.3 | 35 3 19.7 | .. | + | 42.6 | 86 10 23.5 | — 2.5 |
| 35 | 315 40 | | 4.8 | 5.0 | 23.7 | 3.6 | 35 | .. | 210 | .. | .. | .. | 63.3 | 44 15 52.6 | .. | + | 59.2 | 95 23 13.0 | — 4.6 |
| 36 | 323 58 | | 13.3 | 13.3 | 1.5 | 12.3 | 37 | .. | 130 | .. | 960 | .. | 63.3 | 35 55 56.5 | .. | + | 44.1 | 87 3 1.8 | — 2.5 |
| 37 | 329 42 | | 8.0 | 9.0 | 25.5 | 5.6 | 39 | .. | 750 | .. | 645 | .. | 63.3 | 30 12 31.6 | .. | + | 35.4 | 81 19 28.2 | — 3.5 |
| 38 | 52 22 | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 39 | 310 32 | | 9.1 | 10.4 | 28.1 | 7.7 | 33 | .. | .. | .. | 200 | 235 | 63.3 | 40 23 28.7 | .. | + | 1 11.1 | 100 31 1.0 | — 2.1 |
| 40 | 321 6 | | 9.1 | 10.0 | 28.0 | 7.7 | 38 | .. | .. | .. | 160 | 150 | 63.3 | 38 50 44.3 | .. | + | 49.1 | 89 57 54.6 | — 0.9 |
| 41 | 340 4 | | 6.5 | 8.0 | 26.0 | 4.5 | 36 | .. | 840 | .. | .. | .. | 63.3 | 19 52 19.6 | .. | + | 22.1 | 70 59 2.9 | — 1.6 |
| 42 | 199 0 | | 6.5 | 9.7 | 26.0 | 1.0 | 35 | 978 | 010 | .. | .. | .. | 63.3 | 160 56 5.7 | 33.2 | — | 21.1 | 70 10 36.6 | + 2.4 |
| 43 | 340 52 | | 6.5 | 6.5 | 26.0 | 5.9 | 34 | .. | .. | .. | .. | 908 | 63.3 | 19 3 52.6 | .. | + | 21.1 | 70 10 34.9 | + 0.7 |
| 44 | 297 8 | | 8.9 | 11.5 | 0.0 | 8.9 | 38 | .. | 150 | .. | 115 | .. | 64.2 | 62 48 44.6 | 41.3 | + | 1 56.1 | 113 57 1.9 | + 1.1 |
| 45 | 345 16 | | 7.0 | 8.6 | 26.5 | 6.6 | 31 | 880 | .. | 005 | .. | 035 | 64.2 | 14 39 7.8 | .. | + | 15.7 | 65 45 44.7 | .. |
| 46 | 328 6 | | 8.5 | 10.9 | 29.2 | 8.6 | 35 | .. | 075 | .. | 970 | .. | 64.2 | 31 49 56.6 | .. | + | 37.2 | 82 56 55.0 | — 1.2 |
| 47 | 328 6 | | 8.5 | 10.9 | 29.2 | 8.6 | 34 | .. | 525 | .. | 350 | .. | 64.2 | 31 49 47.7 | .. | + | 37.2 | 82 56 46.1 | — 1.2 |
| 48 | 342 58 | | 9.9 | 10.9 | 28.9 | 9.2 | 37 | 260 | 215 | .. | .. | .. | 64.2 | 16 58 29.9 | .. | + | 18.3 | 68 5 9.4 | + 3.3 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " | " | " | " |
| 2 | 30.15 | 38.0 | 7 | — 5.0 | — 16 2.4 | .. | — 16 7.4 |
| 4 | 30.15 | 37.5 | 8 | — 4.9 | + 16 2.4 | .. | + 15 57.5 |
| 5 | 30.24 | 42.2 | 13 | — 11 30.4 | + 16 8.5 | .. | + 4 38.1 |
| 8 | 30.22 | 45.0 | 20 | — 0.2 | .. | .. | — 0.2 |
| 11 | 30.29 | 46.0 | 45 | — 14 41.1 | + 16 3.9 | .. | + 1 22.8 |
| 19 | 30.32 | 42.6 | | | | | |
| 30 | 30.34 | 39.0 | | | | | |
| 42 | 30.40 | 37.0 | | | | | |
| 44 | 30.30 | 43.1 | | | | | |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|--------|---------|--------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | |
| 1876. | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| Apr. 2 | 1 | ϵ Hydræ | P. | 58.4 | 1.0 | 2.6 | 8.9 | 10.9 | 13.0 | 19.0 | 20.6 | 23.2 | 40 10.84 | - 0.30 | + 3.39 | + 3.37 | 8 40 13.91 | - 0.06 |
| | 2 | σ^2 Ursæ Majoris (R.) | P. | .. | .. | 16.5 | 22.0 | 27.5 | 32.9 | 38.1 | .. | .. | 40 27.40 | + 0.78 | .. | + 3.38 | 8 59 31.56 | + 0.01 |
| | 3 | σ^2 Ursæ Majoris . . . | P. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 40 27.40 | + 0.78 | .. | + 3.38 | 8 59 31.56 | + 0.01 |
| | 4 | Uranus. | P. | 31.0 | 36.7 | 38.3 | 44.7 | 46.9 | 49.0 | 55.3 | 56.9 | 59.5 | 14 46.81 | - 0.23 | .. | + 3.39 | 9 14 49.97 | .. |
| | 5 | α Hydræ | P. | 15.6 | 18.2 | 19.8 | 26.0 | 28.1 | 30.1 | 36.3 | 37.8 | 40.3 | 21 28.02 | - 0.40 | + 3.43 | + 3.40 | 9 21 31.02 | - 0.06 |
| | 6 | ϵ Leonis (R.) | P. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 7 | ϵ Leonis | P. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 8 | α Leonis | P. | 32.2 | 34.8 | 36.3 | 42.7 | 44.7 | 46.8 | 53.0 | 54.7 | 57.3 | 1 44.72 | - 0.26 | + 3.42 | + 3.42 | 10 1 47.88 | - 0.06 |
| | 9 | B. A. C. 3500 | P. | 50.3 | 59.3 | 1.0 | 8.2 | 10.6 | 12.9 | 20.0 | 21.8 | 24.7 | 9 10.53 | - 0.12 | .. | + 3.42 | 10 9 13.83 | - 2.27 |
| | 10 | γ^1 Leonis | P. | 53.7 | 56.5 | 58.2 | .. | .. | .. | 15.6 | 17.2 | 19.9 | 13 6.85 | - 0.20 | + 3.43 | + 3.43 | 10 13 10.08 | - 0.02 |
| | 11 | γ^2 Leonis | P. | .. | .. | 2.7 | 5.0 | 7.2 | 9.4 | 11.6 | .. | .. | 13 7.18 | - 0.20 | .. | + 3.43 | 10 13 10.41 | - 2.06 |
| 4 | 12 | Polaris | F. | .. | .. | .. | .. | 41.5 | 8.0 | 27.5 | .. | .. | 11 41.33 | + 21.69 | .. | + 3.48 | 1 12 6.50 | - 0.92 |
| | 13 | μ Leonis | F. | 27.5 | 30.4 | 32.0 | 39.0 | 41.2 | 43.4 | 50.3 | 52.0 | 55.0 | 45 41.20 | - 0.14 | + 3.45 | .. | .. | .. |
| | 14 | Una | F. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 15 | Moon, N. | F. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 16 | ρ Leonis | F. | 3.0 | 5.7 | 7.2 | 13.4 | 15.4 | 17.6 | 23.8 | 25.3 | 27.9 | 26 15.48 | - 0.29 | + 3.57 | .. | .. | .. |
| | 17 | B. A. C. 3666 | F. | 58.2 | 1.1 | 2.9 | 9.6 | 11.9 | 14.3 | 21.2 | 22.8 | 25.7 | 36 11.97 | - 0.14 | .. | + 3.59 | 10 36 15.42 | - 2.28 |
| | 18 | Elpis | F. | 21.4 | 24.0 | 25.4 | 31.5 | 33.6 | 35.6 | 41.6 | 43.3 | 45.9 | 47 33.59 | - 0.34 | .. | + 3.61 | 11 47 36.86 | .. |
| | 19 | Ausonia | F. | 38.5 | 41.3 | 42.8 | 49.1 | 51.0 | 53.0 | 59.3 | 0.9 | 3.3 | 57 51.02 | - 0.40 | .. | + 3.61 | 11 57 54.23 | .. |
| | 20 | η Virginis | F. | 20.2 | 22.9 | 24.3 | 30 | 32.5 | 34.6 | 40.8 | 42.2 | 44.7 | 13 32.52 | - 0.37 | + 3.61 | + 3.62 | 12 13 35.77 | - 0.01 |
| | 21 | Althæa | F. | 51.1 | 52.6 | 56.6 | 58.7 | 0.9 | 3.1 | 5.2 | 9.0 | 10.6 | 18 0.87 | - 0.40 | .. | + 3.62 | 12 18 4.09 | .. |
| | 22 | Hestia | F. | 10.5 | 12.6 | 14.5 | 20.5 | 22.5 | 24.6 | 30.6 | 32.3 | 34.5 | 24 22.51 | - 0.38 | .. | + 3.62 | 12 24 25.75 | .. |
| | 23 | Polaris, S. P. . . . | F. | .. | .. | 21.0 | 53.5 | 27.0 | 0.0 | 33.0 | .. | .. | 12 26.98 | - 24.05 | .. | + 3.63 | 1 12 6.56 | - 0.82 |
| | 24 | α Virginis | F. | .. | .. | .. | .. | .. | .. | 46.8 | 48.4 | 51.0 | 18 38.52 | - 0.44 | + 3.64 | + 3.63 | 13 18 41.71 | - 0.03 |
| | 25 | Peitho | F. | 53.6 | 56.3 | 57.8 | 3.8 | 6.0 | 8.0 | 14.2 | 15.9 | 18.2 | 24 5.98 | - 0.38 | .. | + 3.63 | 13 24 9.23 | .. |
| | 26 | η Bootis | F. | 32.8 | 35.4 | 37.0 | 43.5 | 45.7 | 47.9 | 54.3 | 55.8 | 58.7 | 48 45.68 | - 0.21 | + 3.62 | + 3.63 | 13 48 49.10 | - 0.04 |
| | 27 | ϵ Bootis | F. | 19.3 | 22.1 | 23.8 | 30.9 | 33.1 | 35.4 | 42.3 | 44.0 | 46.9 | 39 33.09 | - 0.13 | + 3.60 | + 3.64 | 14 39 36.60 | + 0.02 |
| | 28 | α^2 Libræ | F. | 47.4 | 50.0 | 51.5 | 55.8 | 57.9 | 0.0 | 2.2 | .. | .. | 44 0.04 | - 0.48 | + 3.60 | + 3.64 | 14 44 3.20 | + 0.03 |
| | 29 | β Libræ | F. | 6.4 | 9.0 | 10.6 | 16.8 | 18.8 | 20.9 | 27.1 | 28.6 | 31.3 | 10 18.83 | - 0.43 | + 3.63 | + 3.65 | 15 10 22.05 | + 0.02 |
| | 30 | μ^1 Bootis | F. | 31.5 | 34.8 | 36.7 | 44.5 | 47.0 | 49.6 | 57.4 | 59.2 | 2.4 | 19 47.01 | 0.00 | + 3.67 | + 3.65 | 15 19 50.66 | - 0.03 |
| | 31 | α Serpentis | F. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 32 | β^1 Scorpii | F. | 59.5 | .. | 8.2 | 10.3 | 12.4 | 14.6 | 16.8 | 21.0 | .. | 58 12.45 | - 0.50 | + 3.56 | + 3.66 | 15 58 15.61 | + 0.13 |
| | 33 | Jupiter I, N. . . . | F. | 1.8 | 4.4 | 6.2 | .. | .. | .. | .. | .. | .. | 58 14.79 | - 0.50 | .. | + 3.66 | 15 58 17.95 | .. |
| | 34 | Jupiter II, S. . . . | F. | .. | .. | .. | .. | .. | 26.5 | 28.1 | 30.0 | .. | 58 17.85 | - 0.50 | .. | + 3.66 | 15 58 21.01 | .. |
| | 35 | α Piscis Australis . | S. | 30.3 | 33.3 | 34.9 | 42.2 | 44.5 | 47.0 | 54.0 | 55.8 | 58.8 | 50 44.53 | - 0.71 | + 3.95 | .. | .. | .. |
| | 36 | α Pegasi | S. | 18.6 | .. | .. | 31.1 | 33.4 | 35.5 | 39.6 | 41.3 | 43.9 | 58 31.23 | - 0.33 | + 3.78 | .. | .. | .. |
| 5 | 37 | Sun I, S. | S. | 34.2 | 36.8 | 38.5 | 44.4 | 46.6 | 48.7 | 54.7 | 56.3 | 58.9 | 58 46.57 | - 0.42 | .. | + 3.84 | 0 58 50.01 | .. |
| | 38 | Sun II, N. | S. | 43.4 | 45.9 | 47.5 | 53.5 | 55.6 | 57.6 | 3.9 | 5.3 | 8.0 | 0 55.63 | - 0.42 | .. | + 3.84 | 1 0 59.07 | .. |
| | 39 | Polaris | S. | .. | .. | .. | .. | .. | .. | .. | 31.5 | 16.0 | 11 37.55 | + 22.90 | .. | + 3.84 | 1 12 4.29 | - 3.04 |
| | 40 | ϵ Hydræ (R.) | S. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 41 | ϵ Hydræ | S. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 42 | σ^2 Ursæ Majoris . . | S. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 43 | Uranus | S. | 22.2 | 25.0 | 26.6 | 33.0 | 35.0 | 37.3 | 43.6 | 45.2 | 47.9 | 14 35.09 | - 0.28 | .. | + 3.70 | 9 14 38.51 | .. |
| | 44 | B. A. C. 3303 | S. | 17.4 | 19.9 | 21.4 | 27.6 | 29.8 | 31.7 | 37.9 | 39.3 | 41.9 | 33 29.66 | - 0.44 | .. | + 3.71 | 9 33 32.93 | - 1.53 |
| | 45 | ϵ Leonis | S. | 33.7 | 36.4 | 38.1 | 44.9 | 47.1 | 49.3 | 56.0 | 57.7 | 0.5 | 38 47.08 | - 0.20 | + 3.66 | + 3.71 | 9 38 50.99 | - 0.01 |
| | 46 | B. A. C. 3407 | S. | 19.4 | 21.9 | 23.4 | 29.7 | 31.8 | 33.9 | 40.1 | 41.6 | 44.2 | 51 31.78 | - 0.36 | .. | + 3.72 | 9 51 35.14 | - 1.74 |
| | 47 | B. A. C. 3417 | S. | 16.2 | 19.4 | 26.4 | 28.9 | 31.3 | 34.0 | 36.5 | 43.5 | 46.4 | 53 31.40 | - 0.76 | .. | + 3.72 | 9 53 34.36 | - 1.29 |
| | 48 | α Leonis | S. | 31.9 | 34.4 | 36.1 | 42.3 | 44.5 | 46.5 | 52.8 | 54.3 | 57.0 | 1 44.42 | - 0.32 | + 3.75 | + 3.72 | 10 1 47.82 | - 0.07 |
| | 49 | B. A. C. 3500 | S. | 50.2 | 59.0 | 0.8 | 7.9 | 10.3 | 12.6 | 19.6 | 21.3 | 24.4 | 9 10.23 | - 0.14 | .. | + 3.73 | 10 9 13.82 | - 2.24 |
| | 50 | γ^1 Leonis | S. | 53.5 | 56.2 | 57.7 | .. | .. | .. | 15.2 | 16.9 | 19.7 | 13 6.53 | - 0.24 | + 3.76 | + 3.73 | 10 13 10.02 | - 0.05 |

3. Bisections at set D.
 14, 18, 19, 21, 22, 25. Thread A used.
 32. Thread B used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | | | | | | |
| 1 | 327 59 | 10 8.4 | 10.1 | 26.8 | 5.5 | 38 | .. | 030 | .. | 840 | .. | 64.2 | 32 0 39.6 | .. | + | 37.5 | 83 7 38.3 | - 1.7 |
| 2 | 151 12 | 9.0 | 12.5 | 29.0 | 8.6 | 36 | 250 | 190 | .. | .. | .. | 64.2 | 208 44 12.9 | .. | + | 32.9 | 22 21 35.4 | - 2.2 |
| 3 | 28 40 | 4.9 | 4.3 | 22.8 | 1.7 | 34 | .. | .. | .. | 870 | 850 | 64.2 | 331 15 48.0 | .. | - | 32.9 | 22 21 36.3 | - 1.2 |
| 4 | 337 46 | 9.5 | 10.5 | 26.0 | 7.1 | 31 | 290 | 300 | .. | 120 | 115 | 64.2 | 22 8 57.3 | .. | + | 24.5 | 73 15 43.0 | .. |
| 5 | 312 56 | 7.0 | 9.0 | 26.7 | 6.3 | 35 | 610 | 580 | .. | 410 | 360 | 64.2 | 47 0 1.6 | 39.4 | + | 1 4.4 | 98 7 27.2 | + 0.6 |
| 6 | 194 28 | 8.6 | 13.0 | 0.0 | 4.8 | 32 | 390 | 380 | .. | .. | .. | 64.2 | 165 27 14.6 | .. | - | 15.6 | 65 39 22.2 | + 2.2 |
| 7 | 345 24 | 6.0 | 7.5 | 24.3 | 4.3 | 38 | .. | .. | .. | 185 | 140 | 64.2 | 14 32 42.3 | .. | + | 15.6 | 65 39 19.1 | - 0.9 |
| 8 | 333 38 | 8.0 | 9.4 | 27.0 | 6.8 | 38 | 810 | 805 | .. | 665 | 660 | 64.2 | 26 18 52.2 | .. | + | 29.7 | 77 25 43.1 | + 0.5 |
| 9 | 350 58 | 10.8 | 12.8 | 29.5 | 8.6 | 34 | 630 | 570 | .. | 490 | 420 | 64.2 | 8 57 50.3 | .. | + | 6.5 | 60 4 21.0 | - 0.6 |
| 10 | 341 30 | 8.5 | 9.9 | 27.0 | 7.9 | 32 | 650 | .. | .. | .. | 430 | 64.2 | 18 25 17.9 | .. | + | 20.0 | 69 31 59.1 | + 1.8 |
| 11 | 341 30 | 8.5 | 9.9 | 27.0 | 7.9 | 32 | .. | 735 | .. | 590 | .. | 64.2 | 18 25 19.6 | 38.9 | + | 20.0 | 69 32 0.8 | - 3.3 |
| 12 | 49 40 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 13 | 347 38 | 12.7 | 12.5 | 0.0 | 10.6 | 35 | 354 | 340 | .. | .. | .. | 64.2 | 12 18 0.0 | .. | + | 12.9 | 63 24 34.1 | - 1.0 |
| 14 | 336 30 | 4.3 | 2.3 | 22.3 | 2.2 | 36 | 812 | .. | .. | .. | .. | 61.4 | 23 23 39.8 | .. | + | 25.6 | 74 30 26.6 | .. |
| 15 | 334 46 | 11.2 | 12.1 | 28.8 | 10.7 | 34 | .. | .. | .. | .. | 568 | 61.4 | 25 9 49.9 | .. | + | 27.8 | 76 16 38.9 | .. |
| 16 | 331 0 | 7.2 | 7.0 | 25.2 | 7.2 | 37 | .. | 876 | .. | 810 | .. | 61.4 | 28 56 34.4 | 41.4 | + | 32.7 | 80 3 28.3 | + 0.8 |
| 17 | 348 2 | 7.5 | 7.2 | 25.8 | 5.5 | 39 | 216 | 210 | .. | .. | .. | 61.4 | 11 54 54.2 | .. | + | 12.5 | 63 1 27.9 | - 3.2 |
| 18 | 325 10 | 10.6 | 10.5 | 28.5 | 10.3 | 36 | .. | 280 | .. | 274 | .. | 61.4 | 34 43 40.2 | .. | + | 41.0 | 85 50 42.4 | - 2.4 |
| 19 | 315 50 | 6.1 | 6.4 | 25.1 | 6.7 | 39 | .. | 806 | .. | 762 | .. | 61.4 | 44 4 30.0 | .. | + | 57.3 | 95 11 48.5 | - 4.7 |
| 20 | 321 4 | 11.0 | 10.7 | 28.9 | 9.7 | 34 | 326 | 280 | .. | .. | .. | 61.4 | 38 51 42.4 | .. | + | 47.7 | 89 58 51.3 | - 0.8 |
| 21 | 316 36 | 13.8 | 13.5 | 2.7 | 14.9 | 32 | .. | .. | .. | 968 | 954 | 61.4 | 43 16 54.4 | .. | + | 55.8 | 94 24 11.4 | - 3.4 |
| 22 | 318 54 | 5.2 | 5.0 | 23.1 | 4.7 | 35 | .. | .. | .. | 206 | 194 | 61.4 | 40 59 19.5 | 40.0 | + | 51.5 | 92 6 32.2 | - 3.0 |
| 23 | 52 22 | 6.1 | 6.1 | 23.8 | 3.3 | 35 | 490 | 490 | 490 | 494 | 470 | 61.4 | 307 33 56.2 | .. | - | 1 17.0 | 358 39 0.4 | - 0.8 |
| 24 | 310 32 | 9.0 | 10.0 | 28.3 | 8.5 | 33 | .. | .. | .. | 708 | 686 | 61.4 | 49 23 31.9 | .. | + | 9.1 | 100 31 2.2 | - 1.1 |
| 25 | 318 48 | 4.4 | 4.2 | 23.6 | 4.1 | 36 | .. | .. | .. | 254 | .. | 61.4 | 41 5 35.0 | .. | + | 51.7 | 92 12 47.9 | - 3.6 |
| 26 | 340 4 | 10.1 | 11.2 | 29.3 | 9.4 | 36 | .. | .. | .. | 860 | .. | 61.4 | 19 52 23.7 | .. | + | 21.5 | 70 59 6.4 | + 2.2 |
| 27 | 348 38 | 10.6 | 11.1 | 29.5 | 9.8 | 35 | .. | 084 | .. | 986 | .. | 61.4 | 11 17 55.1 | .. | + | 11.9 | 62 24 28.2 | + 1.1 |
| 28 | 305 32 | 12.2 | 12.3 | 1.2 | 12.4 | 35 | .. | 506 | .. | 388 | .. | 61.4 | 54 24 2.9 | 38.8 | + | 1 22.9 | 105 31 47.0 | + 1.6 |
| 29 | 312 8 | 7.6 | 9.7 | 28.8 | 9.5 | 36 | .. | 558 | .. | 460 | .. | 61.4 | 47 48 16.1 | .. | + | 1 5.6 | 98 55 42.9 | + 1.0 |
| 30 | 358 52 | 9.2 | 9.4 | 25.8 | 8.8 | 40 | .. | .. | .. | 234 | 166 | 61.4 | 1 5 13.7 | .. | + | 1.1 | 52 11 36.0 | + 0.4 |
| 31 | 327 52 | 5.2 | 4.8 | 22.9 | 5.6 | 36 | .. | .. | .. | 908 | 882 | 61.4 | 32 4 19.0 | .. | + | 37.3 | 83 11 17.5 | + 0.1 |
| 32 | 301 38 | 8.5 | 8.6 | 28.4 | 10.0 | 33 | .. | .. | .. | .. | 810 | 61.4 | 58 20 8.4 | .. | + | 1 36.3 | 109 28 5.9 | + 0.7 |
| 33 | 301 38 | 8.5 | 8.6 | 28.4 | 10.0 | 29 | 040 | 026 | .. | .. | .. | 61.4 | 58 16 20.3 | 38.0 | + | 1 36.1 | 109 24 17.6 | .. |
| 34 | 301 38 | 8.5 | 8.6 | 28.4 | 10.0 | 31 | .. | .. | .. | 755 | 690 | 61.4 | 58 17 3.8 | .. | + | 1 36.1 | 109 25 1.1 | .. |
| 35 | 290 48 | 9.4 | 12.1 | 1.4 | 11.2 | 34 | .. | 404 | .. | 352 | .. | 61.8 | 69 7 45.8 | 48.6 | + | 2 32.1 | 120 16 39.1 | - 3.4 |
| 36 | 335 36 | 7.8 | 9.8 | 28.6 | 7.0 | 39 | .. | .. | .. | 378 | 308 | 61.8 | 24 21 0.6 | .. | + | 26.4 | 75 27 48.2 | + 0.2 |
| 37 | 327 12 | 8.4 | 12.8 | 1.0 | 9.6 | 39 | 750 | 748 | .. | .. | .. | 61.8 | 32 45 6.0 | .. | + | 37.1 | 83 52 4.3 | .. |
| 38 | 327 42 | 3.7 | 7.5 | 27.0 | 6.3 | 32 | .. | .. | .. | 190 | 200 | 61.8 | 32 13 9.4 | 53.8 | + | 36.4 | 83 20 7.0 | .. |
| 39 | 49 40 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 40 | 211 56 | 11.5 | 15.5 | 5.5 | 11.2 | 32 | 308 | 212 | .. | .. | .. | 61.9 | 147 59 14.8 | .. | - | 36.2 | 83 7 42.6 | + 2.7 |
| 41 | 327 56 | 11.2 | 12.5 | 0.0 | 11.0 | 37 | .. | .. | .. | 918 | 892 | 61.9 | 32 0 41.5 | 50.8 | + | 36.2 | 83 7 38.9 | - 1.0 |
| 42 | 28 40 | 3.5 | 2.6 | 24.3 | 1.0 | 34 | .. | .. | .. | 830 | 802 | 61.9 | 331 15 47.2 | .. | - | 31.8 | 22 21 36.6 | - 0.6 |
| 43 | 337 48 | 10.8 | 11.2 | 1.4 | 8.2 | 36 | .. | 062 | .. | 910 | .. | 61.9 | 22 8 10.2 | .. | + | 23.7 | 73 14 55.1 | .. |
| 44 | 320 28 | 11.2 | 13.2 | 1.4 | 9.2 | 34 | 500 | 410 | .. | .. | .. | 61.9 | 39 27 46.5 | .. | + | 47.9 | 90 34 55.0 | - 6.5 |
| 45 | 345 24 | 8.0 | 9.5 | 28.1 | 8.2 | 38 | .. | 430 | .. | 228 | .. | 61.9 | 14 32 44.2 | .. | + | 15.1 | 65 39 20.5 | + 0.7 |
| 46 | 329 58 | 13.0 | 16.0 | 2.5 | 12.3 | 38 | 402 | 460 | .. | .. | .. | 61.9 | 29 58 49.5 | .. | + | 33.7 | 81 5 44.4 | - 4.8 |
| 47 | 285 48 | 14.3 | 15.3 | 3.4 | 11.7 | 36 | .. | .. | .. | 512 | 522 | 61.9 | 74 8 22.4 | .. | + | 3 22.6 | 125 18 6.2 | - 14.1 |
| 48 | 333 38 | 11.6 | 11.4 | 29.4 | 8.4 | 38 | .. | 825 | .. | 610 | .. | 61.9 | 26 18 51.8 | .. | + | 28.9 | 77 25 41.9 | - 0.5 |
| 49 | 350 58 | 11.5 | 13.5 | 3.4 | 10.6 | 34 | .. | 540 | .. | 436 | .. | 61.9 | 8 57 49.2 | .. | + | 9.2 | 60 4 19.6 | - 0.2 |
| 50 | 341 30 | 5.4 | 4.7 | 23.2 | 3.2 | 32 | 939 | 941 | .. | .. | .. | 61.9 | 18 25 16.2 | .. | + | 19.5 | 69 31 56.9 | - 0.1 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " " | " " | " " | " " |
| 5 | 30.28 | 42.2 | 4 | - 0.2 | .. | .. | - 0.2 |
| 11 | 30.26 | 41.1 | 15 | - 24 30.9 | + 15 52.0 | .. | - 8 38.9 |
| 16 | 29.91 | 43.5 | 33 | - 1.6 | + 21.8 | .. | + 20.2 |
| 22 | 29.90 | 42.0 | 34 | - 1.6 | - 21.8 | .. | - 23.4 |
| 28 | 29.91 | 41.5 | 37 | - 4.8 | - 15 58.6 | .. | - 16 3.4 |
| 33 | 29.93 | 40.8 | 38 | - 4.7 | + 15 58.6 | .. | + 15 53.9 |
| 35 | 29.98 | 45.6 | 43 | - 0.2 | .. | .. | - 0.2 |
| 38 | 29.95 | 52.0 | | | | | |
| 41 | 29.88 | 53.0 | | | | | |

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|--------|---------|----------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | |
| 1876. | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| Apr. 5 | 1 | Leonis | S. | 6.6 | 9.7 | 11.4 | 18.7 | 21.1 | 23.7 | 30.9 | 32.7 | 35.8 | 53 21.18 | - 0.24 | . | + 3.73 | 10 13 10.35 | - 2.03 |
| | 2 | B. A. C. 3763 . . . | S. | 47.9 | 50.5 | 52.1 | 58.4 | 0.5 | 2.6 | 8.7 | 10.3 | 13.0 | 2 0.44 | - 0.73 | . | + 3.75 | 10 53 24.20 | - 1.58 |
| | 3 | Moon I, N. | S. | 18.3 | 21.3 | 23.2 | 30.5 | 32.9 | 35.2 | 42.3 | 44.3 | 47.3 | 11 32.51 | - 0.37 | . | + 3.75 | 11 2 3.82 | + 65.69 |
| | 4 | B. A. C. 3851 . . . | S. | . | . | . | . | . | . | . | . | . | 19 31.66 | - 0.11 | . | + 3.76 | 11 11 36.46 | - 2.54 |
| | 5 | B. A. C. 3891 . . . | S. | . | . | . | . | . | . | . | . | . | . | - 0.78 | . | + 3.76 | 11 19 34.64 | - 1.68 |
| | 6 | B. A. C. 3934 . . . | S. | 12.2 | 15.3 | 17.3 | 24.5 | 26.9 | 29.4 | 36.4 | 38.2 | 41.3 | 28 26.83 | - 0.72 | . | + 3.76 | 11 28 29.87 | - 1.72 |
| | 7 | B. A. C. 3948 . . . | S. | 36.3 | 39.6 | 41.3 | 48.5 | 50.9 | 53.4 | 0.6 | 2.4 | 5.6 | 30 50.96 | - 0.72 | . | + 3.77 | 11 30 54.01 | - 1.73 |
| | 8 | Ausonia | S. | 42.6 | 45.2 | 46.9 | 53.2 | 55.2 | 57.3 | 3.8 | 5.0 | 7.5 | 56 55.16 | - 0.48 | . | + 3.78 | 11 56 58.46 | . |
| | 9 | B. A. C. 4113 . . . | S. | 41.6 | 44.9 | 46.7 | 54.4 | 57.0 | 59.7 | 7.6 | 9.5 | 12.9 | 6 57.14 | - 0.79 | . | + 3.78 | 12 7 0.13 | - 1.85 |
| | 10 | Althæa | S. | 1.7 | 4.1 | 5.6 | 10.0 | 13.8 | 17.9 | 22.0 | 23.9 | 26.3 | 17 13.92 | - 0.47 | . | + 3.79 | 12 17 17.24 | . |
| | 11 | Juno | S. | 2.6 | 5.3 | 6.7 | 13.0 | 15.0 | 17.1 | 23.3 | 24.7 | 27.3 | 29 15.00 | - 0.40 | . | + 3.79 | 12 29 18.39 | . |
| | 12 | Vesta | S. | 17.8 | 20.3 | 21.7 | 28.0 | 30.1 | 32.2 | 38.3 | 40.0 | 42.6 | 45 30.11 | - 0.36 | . | + 3.80 | 12 45 33.55 | . |
| | 13 | Canum Venat. . . . | S. | 56.9 | 0.1 | 2.1 | 10.1 | 12.6 | 15.5 | 23.2 | 25.0 | 28.4 | 50 12.66 | - 0.01 | + 3.71 | + 3.81 | 12 50 16.46 | + 0.10 |
| | 14 | Polaris (S.P.) . . . | S. | . | . | . | 20.5 | 50.0 | 26.0 | 57.0 | 32.0 | . | 12 25.18 | - 24.92 | . | + 3.82 | 1 12 4.08 | - 3.22 |
| | 15 | Virginis | S. | 26.0 | 28.6 | 30.2 | 36.3 | 38.4 | 40.5 | 46.7 | 48.3 | 50.9 | 18 38.43 | - 0.52 | + 3.82 | + 3.82 | 13 18 41.73 | - 0.02 |
| | 16 | Virginis | S. | 8.9 | 11.6 | 13.0 | 19.2 | 21.2 | 23.2 | 29.4 | 31.0 | 33.5 | 28 21.22 | - 0.43 | + 3.82 | + 3.83 | 13 28 24.62 | + 0.01 |
| | 17 | Bootis | S. | 32.6 | 35.2 | 36.9 | 43.4 | 45.5 | 47.6 | 54.1 | 55.8 | 58.5 | 48 45.51 | - 0.26 | + 3.85 | + 3.84 | 13 48 49.09 | - 0.06 |
| | 18 | Pegasi | P. | 0.6 | 3.0 | 4.6 | 11.0 | 13.0 | 15.2 | 21.3 | 22.7 | 25.4 | 35 12.98 | - 0.39 | + 3.77 | + 3.79 | 22 35 16.38 | + 0.08 |
| | 19 | B. A. C. 7923 . . . | P. | . | . | . | 2.5 | 4.8 | 7.2 | 9.5 | 11.9 | . | 37 7.18 | - 0.26 | . | + 3.79 | 22 37 10.77 | + 0.72 |
| | 20 | Piscis Australis . . | P. | 30.4 | 33.4 | 35.2 | 42.5 | 44.8 | 47.2 | 54.2 | 55.9 | 59.0 | 50 44.73 | - 0.71 | + 3.78 | + 3.79 | 22 50 47.81 | + 0.05 |
| | 21 | B. A. C. 8032 . . . | P. | . | . | . | 37.0 | 39.4 | 41.6 | 43.9 | 46.3 | . | 57 41.64 | - 0.22 | . | + 3.79 | 22 57 45.21 | + 0.73 |
| | 22 | Pegasi | P. | 21.1 | 22.8 | 27.0 | 29.1 | 31.2 | 33.3 | 35.5 | 39.6 | 41.2 | 58 31.20 | - 0.35 | + 3.82 | + 3.79 | 22 58 34.64 | 0.00 |
| | 23 | Andromedæ | P. | 40.6 | 43.4 | 45.2 | 52.1 | 54.4 | 56.7 | 3.6 | 5.4 | 8.4 | 1 54.42 | - 0.21 | + 3.73 | + 3.79 | 0 1 58.00 | + 0.08 |
| | 24 | Pegasi | P. | 34.4 | 37.0 | 38.7 | 45.0 | 47.1 | 49.3 | 55.6 | 57.1 | 59.8 | 6 47.11 | - 0.35 | + 3.76 | + 3.79 | 0 6 50.55 | + 0.03 |
| | 25 | Mercury II, C. . . . | P. | 54.5 | 57.0 | 58.5 | 4.6 | 6.8 | 8.9 | 14.9 | 16.4 | 19.0 | 9 6.73 | - 0.48 | . | + 3.79 | 0 9 10.04 | - 0.18 |
| | 26 | Cassiopeæ | P. | . | . | . | 15.3 | 18.9 | 22.6 | 26.2 | 29.9 | . | 33 22.58 | + 0.27 | . | + 3.79 | 0 33 26.64 | + 0.03 |
| | 27 | Sun I, N. | P. | 13.3 | 15.9 | 17.4 | 23.7 | 25.7 | 27.7 | 34.0 | 35.6 | 38.0 | 2 25.70 | - 0.43 | . | + 3.79 | 1 2 29.06 | . |
| | 28 | Sun II, S. | P. | 22.3 | 24.9 | 26.5 | 32.7 | 34.7 | 36.8 | 42.9 | 44.4 | 47.0 | 4 34.69 | - 0.43 | . | + 3.79 | 1 4 38.05 | . |
| | 29 | Polaris | P. | . | . | . | 45.0 | 14.0 | 39.0 | 5.0 | 33.0 | . | 11 39.12 | + 21.96 | . | + 3.79 | 1 12 4.87 | - 2.40 |
| | 30 | Cassiopeæ | P. | . | . | . | 30.6 | 37.0 | 43.7 | 50.3 | 56.7 | . | 52 43.65 | + 1.02 | . | + 3.80 | 1 52 48.47 | 0.00 |
| | 31 | Ceti | P. | 31.8 | 34.4 | 35.9 | 42.1 | 44.3 | 46.3 | 52.3 | 53.9 | 56.4 | 55 44.16 | - 0.47 | + 3.90 | + 3.80 | 2 55 47.49 | - 0.08 |
| | 32 | Persei | P. | . | . | . | 17.6 | 20.7 | 23.6 | 27.0 | 30.1 | . | 15 23.80 | + 0.06 | . | + 3.80 | 3 15 27.66 | + 0.09 |
| | 33 | Persei | P. | . | . | . | 55.5 | 58.5 | 1.6 | 4.5 | 7.6 | . | 34 1.54 | + 0.02 | . | + 3.80 | 3 34 5.36 | + 0.17 |
| | 34 | Tauri | P. | 40.6 | 52.6 | 54.2 | 0.8 | 3.0 | 5.4 | 12.0 | 13.6 | 16.5 | 40 3.08 | - 0.29 | + 3.80 | + 3.80 | 3 40 6.59 | 0.00 |
| | 35 | Persei | P. | 2.0 | 5.0 | 6.8 | 14.1 | 16.5 | 18.9 | 26.0 | 27.8 | 30.8 | 46 16.43 | - 0.21 | + 3.80 | + 3.80 | 3 46 20.02 | - 0.01 |
| | 36 | Venus I, N. | P. | 55.2 | 57.9 | 59.6 | 6.2 | 8.5 | 10.7 | 17.3 | 19.0 | 21.8 | 52 8.47 | - 0.30 | . | + 3.80 | 3 52 11.97 | + 0.66 |
| | 37 | Venus S. | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 38 | B. A. C. 2889 ¹ . . . | P. | 0.9 | 3.6 | 5.0 | . | . | . | 21.5 | 23.2 | 25.7 | 29 13.32 | - 0.40 | . | + 3.78 | 8 29 16.70 | - 1.30 |
| | 39 | B. A. C. 2889 ² . . . | P. | . | . | . | 9.6 | 11.7 | 13.7 | 15.8 | 17.8 | . | 29 13.72 | - 0.40 | . | + 3.78 | 8 29 17.10 | - 1.30 |
| | 40 | B. A. C. 2937 . . . | P. | 51.3 | 54.0 | 55.7 | 2.4 | 4.7 | 6.8 | 13.4 | 15.0 | 17.7 | 36 4.56 | - 0.27 | . | + 3.79 | 8 36 8.08 | - 1.55 |
| | 41 | Hydræ | P. | 58.1 | 0.7 | 2.3 | 8.4 | 10.5 | 12.5 | 18.8 | 20.2 | 23.0 | 40 10.50 | - 0.40 | + 3.77 | + 3.79 | 8 40 13.89 | - 0.02 |
| | 42 | B. A. C. 2987 . . . | P. | . | . | . | 5.7 | 7.8 | 9.9 | 14.0 | 15.4 | 18.0 | 43 5.75 | - 0.48 | . | + 3.79 | 8 43 9.06 | - 1.25 |
| | 43 | B. A. C. 3013 . . . | P. | 36.9 | 39.5 | 41.0 | 47.2 | 49.2 | 51.2 | 57.4 | 59.0 | 1.6 | 45 49.22 | - 0.41 | . | + 3.79 | 8 45 52.60 | - 1.37 |
| | 44 | B. A. C. 3081 . . . | P. | 9.5 | 12.7 | 14.9 | 22.9 | 25.6 | 28.3 | 36.4 | 38.5 | 42.0 | 55 25.64 | - 0.83 | . | + 3.79 | 8 55 28.60 | - 0.91 |
| | 45 | B. A. C. 3094 . . . | P. | 3.6 | 6.9 | 8.8 | 16.7 | 19.4 | 21.9 | 29.8 | 31.7 | 35.2 | 57 19.34 | - 0.81 | . | + 3.79 | 8 57 22.32 | - 0.94 |
| | 46 | B. A. C. 3158 . . . | P. | 43.0 | 46.4 | 48.3 | 56.0 | 58.6 | 1.1 | 8.8 | 10.7 | 13.7 | 9 58.51 | - 0.79 | . | + 3.80 | 9 10 1.52 | - 1.03 |
| | 47 | Uranus. | P. | 18.7 | 21.4 | 23.0 | 29.4 | 31.5 | 33.7 | 40.1 | 41.6 | 44.4 | 14 31.53 | - 0.32 | . | + 3.80 | 9 14 35.01 | . |
| | 48 | Hydræ | P. | 15.2 | 17.9 | 19.5 | 25.7 | 27.7 | 29.8 | 36.0 | 37.5 | 40.0 | 21 27.70 | - 0.52 | + 3.82 | + 3.80 | 9 21 30.98 | - 0.05 |
| | 49 | Durch. 15°, 2166 . . | P. | . | . | . | 10.6 | 12.7 | 14.8 | 17.0 | 19.1 | . | 0 14.84 | - 0.32 | . | + 3.81 | 10 0 18.33 | - 1.87 |

2, 6, 8, 10. Thread A used.
 3, 20, 22, 27, 31, 33, 34, 50. Bisections at sets B and D.
 7, 20, 23, 31, 32, 50. Thread B used.
 30. Bisections at threads D₂ and D₃.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | | | | | | |
| 1 | 341 30 | 10 5.4 | 4.7 | 23.2 | 3.2 | 32 | .. | .. | .. | 920 | 870 | 61.9 | 18 25 17.9 | 46.0 | + | 19.5 | 69 31 58.6 | - 3.1 |
| 2 | 288 0 | 8.7 | 9.5 | 28.8 | 6.8 | 42 | .. | .. | .. | 310 | 340 | 61.9 | 71 55 12.7 | .. | + 2 | 57.4 | 123 4 31.3 | -14.7 |
| 3 | 328 22 | 9.5 | 10.2 | 29.0 | 8.0 | 32 | 830 | .. | 040 | .. | 250 | 61.9 | 31 33 23.8 | .. | + | 35.9 | 82 40 20.9 | .. |
| 4 | 353 16 | 11.1 | 11.9 | 1.5 | 8.6 | 35 | .. | .. | .. | 315 | 228 | 61.9 | 6 40 1.1 | .. | + | 6.8 | 57 46 29.1 | - 4.7 |
| 5 | 284 2 | 11.2 | 12.0 | 1.6 | 10.6 | 35 | .. | 340 | .. | 270 | .. | 61.9 | 75 54 0.4 | .. | + 3 | 48.8 | 127 4 10.4 | -15.1 |
| 6 | 288 50 | 4.2 | 7.0 | 23.4 | 4.5 | 28 | 230 | 180 | .. | .. | .. | 61.9 | 71 1 30.2 | .. | + 2 | 48.3 | 122 10 39.7 | -14.9 |
| 7 | 288 50 | 4.2 | 7.0 | 23.4 | 4.5 | 37 | .. | 400 | .. | 320 | .. | 61.9 | 71 8 57.7 | .. | + 2 | 49.4 | 122 18 8.3 | -14.9 |
| 8 | 315 54 | 11.6 | 11.7 | 0.0 | 9.7 | 40 | .. | 170 | .. | 960 | .. | 61.9 | 44 0 39.4 | .. | + | 56.3 | 95 7 56.9 | - 3.6 |
| 9 | 282 52 | 11.8 | 13.2 | 1.5 | 10.5 | 35 | .. | 490 | .. | 430 | .. | 61.9 | 77 4 3.2 | .. | + 4 | 8.5 | 128 14 32.9 | -15.0 |
| 10 | 316 44 | 10.0 | 13.0 | 0.4 | 10.3 | 36 | .. | 040 | .. | 130 | .. | 61.9 | 43 9 38.6 | .. | + | 54.6 | 94 16 54.4 | - 3.3 |
| 11 | 324 32 | 10.7 | 12.0 | 29.0 | 9.8 | 35 | .. | 975 | .. | 865 | .. | 61.9 | 35 24 9.3 | 49.8 | + | 41.4 | 86 31 11.9 | - 2.5 |
| 12 | 330 6 | 8.5 | 10.7 | 28.5 | 6.5 | 36 | .. | 960 | .. | 854 | .. | 61.9 | 29 50 22.4 | .. | + | 33.4 | 80 57 17.0 | - 3.5 |
| 13 | 0 0 | 4.7 | 7.7 | 23.5 | 2.7 | 29 | .. | .. | .. | 900 | 840 | 61.9 | 359 54 32.3 | .. | - | 0.1 | 51 0 53.4 | + 0.2 |
| 14 | 52 22 | 6.5 | 8.5 | 27.4 | 4.0 | 35 | 150 | .. | 090 | .. | 100 | 61.9 | 307 33 52.7 | .. | - 1 | 15.7 | 358 38 58.2 | - 2.6 |
| 15 | 310 32 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 16 | 321 6 | 10.8 | 12.1 | 29.3 | 9.0 | 38 | .. | 502 | .. | 342 | .. | 61.9 | 38 50 47.3 | .. | + | 47.0 | 89 57 55.5 | 0.0 |
| 17 | 340 4 | 8.5 | 10.3 | 27.5 | 5.8 | 36 | .. | 920 | .. | 820 | .. | 61.9 | 19 52 21.4 | 49.0 | + | 21.1 | 70 59 3.7 | - 0.4 |
| 18 | 331 14 | 6.0 | 8.9 | 25.0 | 7.2 | 36 | 265 | 235 | .. | .. | .. | 60.9 | 28 42 8.4 | 47.2 | + | 32.3 | 79 49 1.9 | - 0.8 |
| 19 | 350 38 | 6.5 | 7.9 | 24.9 | 7.0 | 30 | .. | .. | .. | 545 | 540 | 60.9 | 9 19 14.8 | .. | + | 9.7 | 60 25 45.7 | -11.1 |
| 20 | 290 48 | 9.9 | 13.0 | 1.0 | 10.5 | 34 | .. | 500 | .. | 430 | .. | 60.9 | 69 7 46.3 | .. | + 2 | 23.1 | 120 16 40.6 | - 1.6 |
| 21 | 348 26 | 8.5 | 11.0 | 26.6 | 8.1 | 31 | 4 0 | 475 | .. | .. | .. | 60.9 | 11 28 58.7 | .. | + | 12.0 | 62 35 31.9 | - 9.3 |
| 22 | 335 36 | 5.9 | 8.5 | 24.5 | 6.0 | 29 | .. | .. | .. | 585 | 545 | 60.9 | 24 21 0.4 | 48.3 | + | 26.6 | 75 27 48.2 | + 0.2 |
| 23 | 349 26 | 7.5 | 9.5 | 26.8 | 7.1 | 32 | 425 | 395 | .. | .. | .. | 60.9 | 10 29 10.8 | 50.3 | + | 10.8 | 61 35 42.8 | + 0.1 |
| 24 | 335 32 | 8.1 | 10.8 | 27.6 | 7.7 | 34 | 030 | 015 | .. | .. | .. | 60.9 | 24 23 36.1 | .. | + | 26.5 | 75 30 23.8 | + 0.1 |
| 25 | 319 36 | 4.9 | 8.0 | 24.5 | 6.6 | 36 | 620 | 590 | .. | 355 | 310 | 60.9 | 40 20 12.1 | 50.4 | + | 49.7 | 91 27 23.0 | .. |
| 26 | 16 54 | 6.7 | 10.1 | 27.0 | 6.9 | 37 | 620 | 595 | .. | 555 | 520 | 60.9 | 343 2 30.8 | 51.3 | - | 17.8 | 34 8 34.2 | - 1.5 |
| 27 | 328 6 | 8.7 | 12.8 | 0.3 | 10.7 | 37 | 790 | 720 | .. | .. | .. | 60.9 | 31 50 34.8 | 52.1 | + | 36.2 | 82 57 32.2 | .. |
| 28 | 327 34 | 9.6 | 12.7 | 29.3 | 10.9 | 37 | .. | .. | .. | 475 | 385 | 60.9 | 32 22 33.1 | .. | + | 37.0 | 83 29 31.3 | .. |
| 29 | 49 40 | 4.0 | 2.3 | 23.0 | 2.5 | 34 | .. | .. | .. | 680 | 660 | 60.9 | 310 15 45.7 | 52.6 | - 1 | 8.6 | 1 20 58.3 | - 1.1 |
| 30 | 32 52 | 9.0 | 11.1 | 27.5 | 7.6 | 29 | 015 | 020 | .. | 015 | 985 | 60.9 | 327 4 53.2 | 53.8 | - | 37.6 | 18 10 36.8 | - 3.0 |
| 31 | 324 40 | 10.9 | 13.4 | 0.5 | 13.0 | 28 | .. | 420 | .. | 360 | .. | 60.9 | 35 16 46.7 | 56.2 | + | 40.8 | 86 23 48.7 | - 0.8 |
| 32 | 10 28 | 5.9 | 8.7 | 25.2 | 8.0 | 37 | 695 | 660 | .. | 640 | 635 | 60.9 | 349 28 31.7 | 56.6 | - | 10.7 | 40 34 42.2 | - 0.9 |
| 33 | 8 26 | 9.7 | 12.1 | 29.4 | 8.7 | 36 | 375 | 310 | .. | 250 | 205 | 60.9 | 351 30 13.3 | 57.0 | - | 8.6 | 42 36 25.9 | - 0.7 |
| 34 | 344 46 | 8.1 | 11.5 | 27.1 | 10.0 | 35 | 670 | 675 | .. | 500 | 515 | 60.9 | 15 10 2.0 | .. | + | 15.6 | 66 16 38.8 | - 0.5 |
| 35 | 352 34 | 7.6 | 10.3 | 26.0 | 8.0 | 37 | 670 | 680 | .. | 540 | 525 | 60.9 | 7 22 31.8 | .. | + | 7.5 | 58 29 0.5 | - 0.2 |
| 36 | 343 32 | 9.0 | 12.1 | 28.1 | 9.7 | 34 | 390 | .. | .. | .. | 130 | 60.9 | 16 23 42.3 | .. | + | 17.0 | 67 30 20.5 | .. |
| 37 | 343 32 | 9.0 | 12.1 | 28.1 | 9.7 | 35 | .. | 560 | .. | 345 | .. | 60.9 | 16 24 0.4 | 56.8 | + | 17.0 | 67 30 38.6 | .. |
| 38 | 328 6 | 12.3 | 13.3 | 2.0 | 10.4 | 35 | 255 | .. | .. | .. | 995 | 60.5 | 31 49 57.2 | 48.8 | + | 36.4 | 82 56 54.8 | - 1.1 |
| 39 | 328 6 | 12.3 | 13.3 | 2.0 | 10.4 | 34 | .. | 630 | .. | 430 | .. | 60.5 | 31 49 48.0 | .. | + | 36.4 | 82 56 45.6 | - 1.1 |
| 40 | 342 58 | 12.2 | 13.3 | 20.6 | 9.5 | 37 | .. | 325 | .. | 160 | .. | 60.5 | 16 58 28.8 | .. | + | 17.9 | 68 5 7.9 | + 3.5 |
| 41 | 327 56 | 12.2 | 11.7 | 27.0 | 8.1 | 38 | .. | 175 | .. | 020 | .. | 60.5 | 32 0 40.4 | .. | + | 36.6 | 83 7 38.2 | - 1.7 |
| 42 | 318 4 | 11.0 | 12.3 | 29.9 | 10.1 | 34 | .. | .. | .. | 820 | 800 | 60.5 | 41 51 52.3 | .. | + | 52.5 | 92 59 6.0 | - 4.9 |
| 43 | 326 52 | 11.3 | 14.0 | 29.1 | 8.0 | 38 | 280 | 240 | .. | .. | .. | 60.5 | 33 4 42.6 | .. | + | 38.2 | 84 11 42.0 | - 2.3 |
| 44 | 280 22 | 12.1 | 13.0 | 2.0 | 12.5 | 39 | 375 | 310 | .. | .. | .. | 60.5 | 79 35 0.4 | .. | + 5 | 8.7 | 130 46 30.3 | -13.9 |
| 45 | 282 12 | 14.4 | 12.7 | 2.3 | 11.6 | 36 | .. | 910 | .. | 820 | .. | 60.5 | 77 44 24.2 | .. | + 4 | 23.5 | 128 55 8.9 | -13.6 |
| 46 | 284 0 | 14.2 | 15.4 | 4.0 | 11.4 | 32 | .. | 615 | .. | 435 | .. | 60.5 | 75 55 18.8 | .. | + 3 | 49.7 | 127 5 29.7 | -13.7 |
| 47 | 337 48 | 12.0 | 13.7 | 29.9 | 9.1 | 35 | 215 | 185 | .. | 085 | 025 | 60.5 | 22 7 56.5 | .. | + | 23.8 | 73 14 41.5 | .. |
| 48 | 312 56 | 11.1 | 11.4 | 29.4 | 8.3 | 35 | 630 | 600 | .. | 500 | 415 | 60.5 | 47 0 1.4 | 48.4 | + 1 | 2.8 | 98 7 25.4 | - 1.4 |
| 49 | 336 24 | 9.7 | 10.5 | 27.6 | 6.0 | 28 | 990 | .. | .. | .. | 835 | 60.5 | 23 32 50.8 | 45.1 | + | 25.7 | 74 39 37.7 | - 3.5 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " | " | " | " |
| 1 | 29.92 | 48.8 | 3 | -29 59.4 | + 15 44.6 | .. | - 14 14.8 |
| 11 | 29.96 | 48.2 | 26 | - 4.5 | .. | + 0.2 | - 4.3 |
| 17 | 30.00 | 48.2 | 28 | - 4.6 | + 15 59.5 | .. | + 15 54.9 |
| 18 | 30.15 | 46.5 | 29 | - 4.7 | - 15 59.5 | .. | - 16 4.2 |
| 22 | 30.15 | 47.9 | 37 | - 2.6 | + 9.2 | 0.3 | + 6.7 |
| 23 | 30.14 | 49.5 | 38 | - 2.6 | - 9.2 | .. | 11.8 |
| 25 | 30.14 | 49.6 | 48 | - 0.2 | .. | .. | 0.2 |
| 26 | 30.13 | 50.3 | | | | | |
| 27 | 30.12 | 51.0 | | | | | |
| 29 | 30.11 | 51.6 | | | | | |
| 30 | 30.10 | 52.9 | | | | | |
| 31 | 30.09 | 54.5 | | | | | |
| 32 | 30.08 | 55.3 | | | | | |
| 33 | 30.08 | 55.4 | | | | | |
| 37 | 30.07 | 55.4 | | | | | |
| 38 | 30.09 | 51.3 | | | | | |
| 48 | 30.11 | 50.3 | | | | | |
| 49 | 30.10 | 47.4 | | | | | |

| DATE. | Number | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|--------|--------|----------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|------------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar. nt. | Clock adopted. | | |
| 1876. | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| Apr. 6 | 1 | Anonymous . . . | P. | | | | | 25.0 | 27.2 | 31.3 | 33.0 | 35.7 | 0 22.92 | - 0.32 | . | + 3.81 | 10 0 26.41 | - 1.87 |
| | 2 | B. A. C. 3494 . . . | P. | 39.9 | 42.9 | 44.8 | 52.0 | 54.4 | 56.9 | 4.1 | 6.0 | 9.0 | 7 54.44 | - 0.72 | . | + 3.81 | 10 7 57.53 | - 1.37 |
| | 3 | B. A. C. 3500 . . . | P. | 56.1 | 59.2 | 0.9 | 7.9 | 10.3 | 12.6 | 19.7 | 21.4 | 24.5 | 9 10.29 | - 0.17 | . | + 3.82 | 10 9 13.92 | - 2.23 |
| | 4 | Leonis . . . | P. | 53.5 | 56.3 | 57.9 | . | . | . | . | . | . | 13 6 60 | - 0.26 | + 3.70 | + 3.82 | 10 13 10.16 | - 0.10 |
| | 5 | Leonis . . . | P. | . | . | 2.5 | 4.8 | 6.8 | 9.0 | 11.2 | . | . | 13 6.86 | - 0.26 | . | + 3.82 | 10 13 10.42 | - 2.02 |
| | 6 | Ursæ Majoris (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | 10 56 8.18 | + 0.19 |
| | 7 | Ursæ Majoris . . . | P. | . | . | . | . | . | 12.6 | 21.5 | 24.6 | 30.3 | 56 3.78 | + 0.57 | . | + 3.83 | 11 7 33.01 | + 0.01 |
| | 8 | Leonis . . . | P. | 16.3 | 19.0 | 20.7 | 27.3 | 29.4 | 31.7 | 38.2 | 39.9 | 42.7 | 7 29.47 | - 0.26 | + 3.73 | + 3.83 | 11 8 38.82 | - 2.29 |
| | 9 | B. A. C. 3842 . . . | P. | 21.8 | 24.7 | 26.3 | 32.9 | 35.2 | 37.5 | 44.2 | 45.8 | 48.6 | 8 35.22 | - 0.23 | . | + 3.83 | 11 13 10.39 | + 0.08 |
| | 10 | Crateris . . . | P. | 54.4 | 57.0 | 58.7 | 5.0 | 7.1 | 9.2 | 15.5 | 17.2 | 19.7 | 13 7.09 | - 0.54 | + 3.74 | + 3.84 | . | . |
| | 11 | Leonis (R) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 12 | Leonis . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 13 | Moon I, N. . . . | P. | 33.4 | 35.8 | 37.5 | 43.9 | 45.8 | 47.9 | 54.2 | 55.8 | 58.3 | 50 45.81 | - 0.43 | . | + 3.85 | 11 50 49.26 | + 64.53 |
| | 14 | Ausonia . . . | P. | 48.1 | 50.7 | 52.2 | 58.3 | 0.3 | 2.3 | 8.5 | 10.0 | 12.6 | 56 0.33 | - 0.47 | . | + 3.85 | 11 56 3.71 | . |
| | 15 | B. A. C. 4113 . . . | P. | 41.6 | 44.8 | 46.8 | 54.6 | 57.1 | 59.7 | 7.4 | 9.4 | 12.5 | 6 57.10 | - 0.76 | . | + 3.85 | 12 7 0.19 | - 1.85 |
| | 16 | B. A. C. 4124 . . . | P. | 11.7 | 14.4 | 16.0 | 22.4 | 24.6 | 26.6 | 33.0 | 34.6 | 37.2 | 9 24.50 | - 0.56 | . | + 3.85 | 12 9 27.79 | - 1.89 |
| | 17 | Virginis . . . | P. | 20.2 | 22.8 | 24.3 | 30.4 | 32.5 | 34.5 | 40.6 | 42.2 | 44.7 | 13 32.47 | - 0.43 | + 3.72 | + 3.85 | 12 13 35.89 | + 0.11 |
| | 18 | Juno . . . | P. | 17.7 | 20.2 | 21.8 | 27.9 | 30.0 | 32.1 | 38.1 | 39.5 | 42.3 | 28 29.66 | - 0.40 | . | + 3.86 | 12 28 33.42 | . |
| | 19 | Vesta . . . | P. | 23.3 | 25.8 | 27.4 | 33.6 | 35.7 | 37.7 | 44.0 | 45.5 | 48.0 | 43 35.67 | - 0.36 | . | + 3.86 | 12 43 39.17 | . |
| | 20 | B. A. C. 4321 . . . | P. | 17.5 | 20.9 | 22.8 | 30.8 | 33.4 | 36.1 | 43.7 | 45.9 | 49.2 | 46 33.37 | - 0.77 | . | + 3.86 | 12 46 36.46 | - 1.98 |
| | 21 | 12 ¹ Canum Venat. . . | P. | 55.5 | 59.0 | . | . | . | . | 23.7 | 27.1 | . | 50 11.32 | - 0.02 | . | + 3.86 | 12 50 15.16 | - 2.87 |
| | 22 | 12 ² Canum Venat. . . | P. | . | . | 7.3 | 10.0 | 12.6 | 15.2 | 17.8 | . | . | 50 12.58 | - 0.02 | + 3.81 | + 3.86 | 12 50 16.42 | + 0.05 |
| | 23 | B. A. C. 4374 . . . | P. | 35.7 | 37.6 | 43.0 | 45.8 | 48.4 | 51.2 | 53.5 | 59.1 | 1.3 | 57 48.43 | - 0.78 | . | + 3.87 | 12 57 51.52 | - 2.02 |
| | 24 | Virginis . . . | P. | 18.3 | 20.9 | 22.4 | 28.6 | 30.6 | 32.7 | 38.9 | 40.3 | 42.9 | 3 30.62 | - 0.47 | + 3.73 | + 3.87 | 13 3 34.02 | + 0.10 |
| | 25 | B. A. C. 4417 . . . | P. | 51.8 | 55.1 | 57.2 | 5.0 | 7.5 | 10.1 | 17.8 | 19.8 | 22.8 | 5 7.46 | - 0.75 | . | + 3.87 | 13 5 10.58 | - 2.01 |
| | 26 | Polaris, S. P. . . | P. | . | . | 19.9 | 54.7 | 25.0 | 58.8 | 32.4 | . | . | 12 26.24 | - 25.31 | . | + 3.87 | 1 12 4.80 | - 2.46 |
| | 27 | B. A. C. 4482 . . . | P. | 40.0 | 43.2 | 45.3 | 53.3 | 55.9 | 58.5 | 6.2 | 8.3 | 11.6 | 18 55.81 | - 0.75 | . | + 3.87 | 13 18 58.93 | - 2.05 |
| | 28 | B. A. C. 4489 . . . | P. | . | . | 37.0 | 39.9 | 42.8 | 45.3 | 48.3 | . | . | 10 42.66 | - 0.75 | . | + 3.87 | 13 19 45.75 | - 2.07 |
| | 29 | Virginis . . . | P. | 8.0 | 11.5 | 13.1 | 19.3 | 21.2 | 23.2 | 29.4 | 31.1 | 33.6 | 28 21.26 | - 0.42 | + 3.78 | + 3.87 | 13 28 24.71 | + 0.09 |
| | 30 | B. A. C. 4601 . . . | P. | 47.3 | 50.6 | 52.6 | 0.8 | 3.4 | 6.2 | 14.3 | 16.3 | 19.8 | 42 3.48 | - 0.78 | . | + 3.88 | 13 42 6.58 | - 2.11 |
| | 31 | B. A. C. 4629 ¹ . . . | P. | 48.9 | 52.0 | 53.9 | . | . | . | 12.8 | 14.7 | 17.7 | 46 3.33 | - 0.68 | . | + 3.88 | 13 46 6.53 | - 2.03 |
| | 32 | B. A. C. 4629 ² . . . | P. | . | . | 58.6 | 1.1 | 3.5 | 5.9 | 8.3 | . | . | 46 3.48 | - 0.68 | . | + 3.88 | 13 46 6.68 | - 2.03 |
| | 33 | Bootis . . . | P. | 32.6 | 35.3 | 36.9 | 43.4 | 45.5 | 47.8 | 54.2 | 55.8 | 58.5 | 48 45.56 | - 0.26 | + 3.81 | + 3.88 | 13 48 49.18 | + 0.02 |
| | 34 | Cassiopeæ, S. P. . . | P. | 26.1 | 17.7 | 13.0 | 53.1 | 46.9 | 40.3 | 20.9 | 16.0 | 7.7 | 52 46.86 | - 2.38 | . | + 3.88 | 1 52 48.36 | - 0.11 |
| | 35 | B. A. C. 4681 . . . | P. | 11.7 | 15.2 | 17.3 | 25.5 | 28.0 | 30.8 | 38.6 | 40.5 | 44.1 | 58 27.97 | - 0.77 | . | + 3.88 | 13 58 31.08 | - 2.12 |
| | 36 | B. A. C. 4686 . . . | P. | . | . | 17.3 | 20.1 | 22.5 | 25.1 | 27.6 | . | . | 59 22.52 | - 0.72 | . | + 3.88 | 13 59 25.68 | - 2.07 |
| | 37 | Eunomia . . . | P. | 25.1 | 28.1 | 29.9 | 36.8 | 39.3 | 41.6 | 48.9 | 50.7 | 53.5 | 7 39.32 | - 0.67 | . | + 3.89 | 14 7 42.54 | . |
| | 38 | B. A. C. 4759 . . . | P. | 7.3 | 10.6 | 12.5 | 20.8 | 23.4 | 25.8 | 33.6 | 35.6 | 39.1 | 15 23.19 | - 0.76 | . | + 3.89 | 14 15 26.32 | - 2.12 |
| | 39 | B. A. C. 4812 . . . | P. | 51.4 | 53.3 | 58.7 | 1.4 | 4.0 | 6.5 | 9.2 | 14.4 | 16.3 | 27 3.91 | - 0.01 | . | + 3.89 | 14 27 7.79 | - 2.60 |
| | 40 | B. A. C. 4818 . . . | P. | 40.6 | 43.9 | 45.9 | 53.7 | 56.4 | 59.1 | 7.0 | 9.0 | 12.5 | 28 56.46 | - 0.76 | . | + 3.89 | 14 28 59.59 | - 2.13 |
| | 41 | Ceres . . . | P. | 18.2 | 20.8 | 22.3 | 28.4 | 30.4 | 32.4 | 38.5 | 40.3 | 42.7 | 46 30.44 | - 0.44 | . | + 3.90 | 14 46 33.90 | . |
| | 42 | B. A. C. 4954 . . . | P. | 58.8 | 2.1 | 4.3 | 12.4 | 15.1 | 17.6 | 25.8 | 27.7 | 31.2 | 57 15.00 | - 0.77 | . | + 3.90 | 14 57 18.13 | - 2.14 |
| | 43 | XV, 2 . . . | P. | 19.3 | 22.3 | 24.1 | 31.1 | 33.4 | 35.8 | 42.9 | 44.8 | 47.7 | 1 33.49 | - 0.67 | . | + 3.90 | 15 1 36.72 | - 2.01 |
| | 44 | B. A. C. 4996 . . . | P. | 2.6 | 5.7 | 7.6 | 15.3 | 17.8 | 20.2 | 27.8 | 29.5 | 32.8 | 5 17.70 | - 0.72 | . | + 3.90 | 15 5 20.88 | - 2.07 |
| | 45 | Libre . . . | P. | 6.2 | 8.8 | 10.4 | 16.6 | 18.7 | 20.8 | 26.9 | 28.5 | 31.1 | 10 18.67 | - 0.49 | + 3.88 | + 3.90 | 15 10 22.08 | + 0.02 |
| | 46 | B. A. C. 5054 . . . | P. | 40.3 | 43.5 | 45.3 | 53.9 | 55.1 | 57.9 | 5.5 | 7.4 | 10.5 | 13 55.42 | - 0.72 | . | + 3.91 | 15 13 58.61 | - 2.06 |
| | 47 | B. A. C. 5069 . . . | P. | . | . | 14.4 | 17.1 | 19.8 | 22.3 | 27.4 | 29.4 | 32.6 | 17 17.06 | - 0.75 | . | + 3.91 | 15 17 20.22 | - 2.09 |
| | 48 | Bootis . . . | P. | 31.5 | 34.7 | 36.7 | 44.5 | 47.1 | 49.7 | 57.4 | 59.3 | 2.6 | 19 47.06 | - 0.93 | + 3.69 | + 3.91 | 15 19 50.94 | + 0.21 |
| | 49 | B. A. C. 5118 . . . | P. | 35.8 | 39.2 | 41.2 | 49.3 | 52.0 | 54.6 | 2.7 | 4.9 | 8.2 | 26 51.99 | - 0.76 | . | + 3.91 | 15 26 55.14 | - 2.12 |
| | 50 | XV, 16 . . . | P. | 25.4 | 28.2 | 29.9 | 36.7 | 39.0 | 41.3 | 48.1 | 49.6 | 52.5 | 29 38.97 | - 0.62 | . | + 3.91 | 15 29 42.26 | - 1.94 |

1, 10, 23, 29, 39, 48. Thread B used.

3, 13, 20, 23, 28, 29, 34, 35, 36, 39, 48, 50. Bisections at sets B and D.

6. Bisections at threads II and III.

14, 37. Thread A used.

25, 47. Bisections at threads V and VI.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|---------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | |
| | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " |
| 1 | 336 24 | 10 9.7 | 10.5 | 27.6 | 6.0 | 24 | .. | .. | .. | .. | 805 | 60.5 | 23 31 49.6 | .. | 25.7 | 74 38 36.5 |
| 2 | 288 40 | 11.8 | 14.0 | 2.0 | 12.1 | 36 | 235 | 195 | .. | .. | .. | 60.5 | 71 16 12.8 | .. | 2 52.8 | 122 25 26.8 |
| 3 | 350 58 | 14.1 | 15.0 | 1.7 | 16.9 | 34 | 510 | .. | .. | .. | 455 | 60.5 | 8 57 48.2 | .. | 9.3 | 60 4 18.7 |
| 4 | 341 30 | 12.4 | 14.1 | 29.0 | 10.9 | 32 | 620 | .. | .. | .. | 420 | 60.5 | 18 25 17.1 | .. | 19.7 | 69 31 58.0 |
| 5 | 341 30 | 12.4 | 14.1 | 29.0 | 10.9 | 32 | .. | 660 | .. | 565 | .. | 60.5 | 18 25 18.4 | 43.6 | 19.7 | 69 31 59.3 |
| 6 | 156 24 | 9.7 | 14.1 | 0.0 | 8.4 | 32 | 275 | 255 | .. | .. | .. | 60.5 | 203 31 10.8 | 41.8 | 25.9 | 27 34 44.5 |
| 7 | 23 28 | 12.6 | 14.1 | 2.0 | 10.0 | 38 | .. | .. | .. | 390 | 300 | 60.5 | 336 28 48.8 | .. | 25.9 | 27 34 44.1 |
| 8 | 342 14 | 10.0 | 11.8 | 28.5 | 7.4 | 32 | 565 | 590 | .. | .. | .. | 60.5 | 17 41 14.5 | .. | 19.0 | 68 47 54.7 |
| 9 | 344 48 | 11.2 | 11.8 | 29.5 | 7.6 | 32 | .. | 390 | .. | 225 | .. | 60.5 | 15 7 12.1 | .. | 16.1 | 66 13 49.4 |
| 10 | 306 58 | 9.9 | 12.2 | 29.0 | 8.9 | 29 | .. | 490 | .. | 345 | .. | 60.5 | 52 59 0.0 | .. | 1 18.8 | 104 6 40.0 |
| 11 | 215 16 | 14.0 | 17.5 | 3.9 | 9.0 | 32 | 155 | 165 | .. | .. | .. | 60.5 | 144 39 12.1 | .. | 42.2 | 86 27 51.3 |
| 12 | 324 36 | 12.3 | 12.5 | 29.9 | 11.0 | 38 | .. | .. | .. | 280 | 270 | 60.5 | 35 20 46.0 | .. | 42.2 | 86 27 49.4 |
| 13 | 321 44 | 9.4 | 11.0 | 28.5 | 8.6 | 34 | 400 | .. | 595 | .. | 710 | 60.5 | 38 11 46.0 | .. | 46.9 | 89 18 54.1 |
| 14 | 315 56 | 10.0 | 12.4 | 29.8 | 9.7 | 33 | .. | 240 | .. | 065 | .. | 60.5 | 43 56 51.9 | .. | 57.4 | 95 4 10.5 |
| 15 | 282 52 | 10.5 | 12.6 | 29.8 | 9.5 | 35 | 490 | 312 | .. | .. | .. | 60.5 | 77 3 58.3 | .. | 4 14.6 | 128 14 34.1 |
| 16 | 304 12 | 11.4 | 12.7 | 0.3 | 10.1 | 33 | 950 | 905 | .. | .. | .. | 60.5 | 55 43 36.6 | .. | 1 27.4 | 106 51 25.2 |
| 17 | 321 4 | 10.8 | 12.3 | 28.5 | 8.1 | 34 | 325 | 285 | .. | .. | .. | 60.5 | 38 51 41.3 | .. | 48.1 | 89 58 50.6 |
| 18 | 324 40 | 9.5 | 11.1 | 27.1 | 10.0 | 37 | 395 | 390 | .. | 195 | 145 | 60.5 | 35 16 27.6 | .. | 42.3 | 86 23 31.1 |
| 19 | 330 10 | 11.3 | 12.4 | 29.3 | 9.5 | 32 | 950 | 930 | .. | 760 | 745 | 60.5 | 29 45 20.9 | 38.7 | 34.2 | 80 52 16.3 |
| 20 | 281 36 | 13.4 | 13.7 | 3.0 | 11.3 | 32 | 995 | .. | .. | .. | 950 | 60.5 | 78 19 24.9 | .. | 4 42.1 | 129 30 28.2 |
| 21 | 0 0 | 11.5 | 13.2 | 27.5 | 9.1 | 30 | 610 | .. | .. | .. | 405 | 60.5 | 359 54 45.3 | .. | 0.1 | 51 1 6.4 |
| 22 | 0 0 | 11.5 | 13.2 | 27.5 | 9.1 | 29 | .. | 665 | .. | 540 | .. | 60.5 | 359 54 31.1 | .. | 0.1 | 51 0 52.2 |
| 23 | 280 36 | 13.9 | 15.1 | 4.4 | 12.8 | 27 | 325 | .. | .. | .. | 235 | 60.5 | 79 20 31.3 | .. | 5 8.6 | 130 32 1.1 |
| 24 | 310 10 | 12.6 | 14.4 | 2.5 | 12.5 | 33 | 470 | 435 | .. | .. | .. | 60.5 | 43 45 31.2 | .. | 57.3 | 94 52 49.7 |
| 25 | 283 58 | 10.8 | 12.5 | 1.9 | 10.1 | 37 | .. | .. | .. | 840 | 805 | 60.5 | 75 58 38.3 | .. | 3 55.6 | 127 8 55.1 |
| 26 | 52 22 | 9.5 | 10.7 | 27.3 | 5.1 | 35 | 310 | 350 | 335 | 360 | 340 | 60.5 | 307 33 56.2 | .. | 1 17.7 | 358 38 59.7 |
| 27 | 282 0 | 12.8 | 14.0 | 3.0 | 12.4 | 34 | 295 | 195 | .. | .. | .. | 60.5 | 77 55 43.1 | .. | 4 33.6 | 129 6 37.9 |
| 28 | 280 16 | 14.1 | 14.5 | 3.1 | 12.6 | 33 | .. | .. | .. | 995 | 045 | 60.5 | 79 39 42.1 | .. | 5 18.2 | 130 51 21.5 |
| 29 | 321 6 | 9.6 | 11.6 | 28.4 | 9.1 | 28 | 460 | .. | .. | .. | 380 | 60.5 | 38 50 44.5 | .. | 48.3 | 89 57 54.0 |
| 30 | 280 4 | 11.5 | 13.2 | 2.2 | 11.2 | 37 | .. | 560 | .. | 430 | .. | 60.5 | 79 52 33.1 | .. | 5 21.9 | 131 4 19.2 |
| 31 | 289 46 | 10.8 | 12.0 | 0.9 | 9.5 | 36 | 305 | .. | .. | .. | 205 | 60.5 | 70 9 12.8 | .. | 2 44.9 | 121 18 18.9 |
| 32 | 289 46 | 10.8 | 12.0 | 0.9 | 9.5 | 35 | .. | 340 | .. | 280 | .. | 60.5 | 70 9 58.5 | .. | 2 45.0 | 121 19 4.7 |
| 33 | 340 4 | 7.6 | 9.7 | 25.7 | 4.6 | 36 | .. | 935 | .. | 835 | .. | 60.5 | 19 52 19.1 | .. | 21.7 | 70 59 2.0 |
| 34 | 69 10 | 17.0 | 8.1 | 3.2 | 11.5 | 33 | 590 | .. | .. | .. | 665 | 60.5 | 290 45 37.0 | .. | 2 37.1 | 341 49 21.1 |
| 35 | 280 32 | 16.1 | 16.6 | 5.9 | 12.7 | 33 | 220 | .. | .. | .. | 890 | 60.5 | 79 23 44.0 | .. | 5 11.2 | 130 35 16.4 |
| 36 | 285 20 | 9.7 | 12.0 | 0.5 | 8.5 | 34 | .. | .. | .. | 650 | 625 | 60.5 | 74 35 48.2 | .. | 3 34.8 | 125 45 44.2 |
| 37 | 290 32 | 10.5 | 13.0 | 1.3 | 9.8 | 33 | 825 | 720 | .. | .. | .. | 60.5 | 69 21 0.4 | .. | 2 38.2 | 120 29 59.8 |
| 38 | 232 10 | 13.4 | 15.3 | 4.4 | 12.7 | 35 | 215 | 145 | .. | .. | .. | 60.5 | 77 45 58.3 | .. | 4 30.9 | 128 56 50.4 |
| 39 | 359 54 | 10.0 | 11.5 | 28.4 | 4.6 | 29 | 020 | .. | .. | .. | 970 | 60.5 | 0 2 52.3 | .. | 0.1 | 51 9 13.6 |
| 40 | 281 26 | 14.1 | 14.8 | 5.0 | 11.9 | 32 | .. | 045 | .. | 855 | .. | 60.5 | 78 29 10.2 | 35.5 | 4 47.7 | 129 40 19.1 |
| 41 | 318 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 42 | 280 32 | 15.1 | 16.0 | 6.5 | 13.9 | 33 | .. | 460 | .. | 270 | .. | 60.5 | 79 23 33.2 | .. | 5 11.8 | 130 35 6.2 |
| 43 | 290 52 | 12.0 | 13.8 | 1.9 | 10.2 | 33 | .. | 310 | .. | 205 | .. | 60.5 | 69 3 28.3 | .. | 2 36.2 | 120 12 25.7 |
| 44 | 285 28 | 11.5 | 13.6 | 3.6 | 11.6 | 33 | .. | 950 | .. | 765 | .. | 60.5 | 74 27 38.3 | .. | 3 33.4 | 125 37 32.9 |
| 45 | 312 8 | 12.0 | 16.0 | 3.0 | 11.9 | 36 | .. | 185 | .. | .. | .. | 60.5 | 47 48 13.6 | .. | 1 6.3 | 98 55 41.1 |
| 46 | 285 18 | 11.2 | 14.8 | 4.2 | 11.6 | 38 | .. | 550 | .. | 475 | .. | 60.5 | 74 38 49.7 | .. | 3 36.1 | 125 48 47.0 |
| 47 | 282 48 | 14.1 | 15.7 | 5.1 | 12.0 | 31 | .. | .. | .. | 360 | 405 | 60.5 | 77 7 2.6 | .. | 4 17.9 | 128 17 41.7 |
| 48 | 358 52 | 11.5 | 13.5 | 0.3 | 8.1 | 30 | 290 | .. | .. | .. | 200 | 60.5 | 1 5 13.7 | .. | 1.1 | 52 11 36.0 |
| 49 | 280 22 | 10.0 | 12.7 | 2.4 | 9.4 | 33 | 325 | 250 | .. | .. | .. | 60.5 | 79 33 26.5 | .. | 5 16.6 | 130 45 4.3 |
| 50 | 295 0 | 9.6 | 11.8 | 0.8 | 9.5 | 37 | .. | .. | .. | 485 | 465 | 60.5 | 64 56 31.9 | .. | 2 8.2 | 116 5 1.3 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " " | " " | " " | " " |
| 5 | 30.10 | 46.3 | 13 | -35 10.2 | + 15 36.5 | .. | - 19 33.7 |
| 6 | 30.09 | 45.3 | | | | | |
| 19 | 30.09 | 42.7 | | | | | |
| 40 | 30.06 | 38.5 | | | | | |

For summary of the elements of reduction see page 3.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. | | |
|-------|---------|----------------------------------|-----------|--------------------------------|------------|------------|------------|------|-----|------|-------|-----|------------|--------------|----------------|----------------|---------------------------|----|----------------------------|---------|--|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | m. | | s. | |
| | | | | | | | | | | | | | | | | | | | | | |
| 1876. | | | | | | | | | | | | m. | s. | s. | s. | s. | | | | | |
| Apr 6 | 1 | B. A. C. 5199 . . . | P. | 33.3 36.4 | 38.2 45.7 | 48.1 50.6 | 58.0 59.9 | 2.9 | | | | 38 | 48.12 | - 0.70 | . | + 3.91 | 15 | 38 | 51.33 | - 2.01 | |
| | 2 | B. A. C. 5216 . . . | P. | 13.6 16.3 | 17.9 24.3 | 26.3 28.5 | 34.8 36.4 | 39.1 | | | | 40 | 26.36 | - 0.28 | . | + 3.92 | 15 | 40 | 30.00 | - 1.90 | |
| | 3 | Serpentis . . . | P. | 24.2 26.8 | 28.3 34.6 | 36.6 38.6 | 44.7 46.2 | 48.8 | | | | 44 | 36.53 | - 0.37 | + 3.84 | + 3.92 | 15 | 44 | 40.08 | + 0.08 | |
| | 4 | XV, 25 . . . | P. | 20.7 23.6 | 25.3 32.4 | 34.8 37.1 | 44.2 46.0 | 49.0 | | | | 49 | 34.79 | - 0.65 | . | + 3.92 | 15 | 49 | 38.06 | - 1.93 | |
| | 5 | Anonymous . . . | P. | . | 11.6 13.8 | 16.2 18.8 | 21.1 . . . | | | | | 51 | 16.30 | - 0.65 | . | + 3.92 | 15 | 51 | 19.57 | - 1.93 | |
| | 6 | Anonymous . . . | P. | . | 25.4 27.0 | 30.2 32.5 | 34.8 . . . | | | | | 51 | 30.16 | - 0.65 | . | + 3.92 | 15 | 51 | 33.43 | - 1.93 | |
| | 7 | Jupiter I, N. . . | P. | 32.4 35.0 | 36.6 . . . | | 53.9 55.6 | 58.3 | | | | 57 | 45.30 | - 0.56 | . | + 3.92 | 15 | 57 | 48.66 | . | |
| | 8 | Jupiter II, S. . . | P. | . | 43.9 46.1 | 48.2 50.4 | 52.7 . . . | | | | | 57 | 48.26 | - 0.56 | . | + 3.92 | 15 | 57 | 51.62 | . | |
| | 9 | ^β Scorpii . . . | P. | . | 10.0 12.2 | 14.5 16.7 | 21.0 22.6 | 25.4 | | | | 58 | 12.30 | - 0.57 | + 3.83 | + 3.92 | 15 | 58 | 15.65 | + 0.12 | |
| | 10 | ^π Scorpii . . . | P. | 24.2 27.0 | 28.7 35.4 | 37.6 39.9 | 46.8 48.5 | 51.3 | | | | 13 | 37.71 | - 0.61 | . | + 3.92 | 16 | 13 | 41.02 | - 1.83 | |
| | 11 | ^α Scorpii . . . | P. | 33.1 36.0 | 37.6 44.6 | 46.9 49.1 | 55.9 57.7 | 0.5 | | | | 21 | 46.82 | - 0.60 | + 4.01 | + 3.93 | 16 | 21 | 50.15 | - 0.09 | |
| | 12 | ^ζ Ophiuchi . . . | P. | 5.8 8.4 | 9.9 16.1 | 18.2 20.3 | 26.4 28.1 | 30.6 | | | | 30 | 18.20 | - 0.49 | + 3.89 | + 3.93 | 16 | 30 | 21.64 | + 0.04 | |
| | 13 | B. A. C. 5583 . . . | P. | 52.3 55.7 | 57.8 3.3 | 5.8 8.5 | . | | | | | 35 | 8.56 | - 0.76 | . | + 3.93 | 16 | 35 | 11.73 | - 1.99 | |
| | 14 | B. A. C. 5584 . . . | P. | . | 11.4 14.3 | 16.9 19.5 | 22.3 . . . | | | | | 35 | 16.88 | - 0.76 | . | + 3.93 | 16 | 35 | 20.05 | - 1.99 | |
| | 15 | ^η Herculis . . . | P. | 20.8 24.2 | 26.2 34.2 | 36.6 39.3 | 47.3 49.3 | 51.6 | | | | 38 | 36.61 | 0.00 | + 3.89 | + 3.93 | 16 | 38 | 40.54 | + 0.05 | |
| | 16 | ^ε Ursæ Minoris (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 17 | ^ι Ursæ Minoris . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 18 | ^α Herculis (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 19 | ^α Herculis . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 20 | ^β Draconis (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 21 | ^β Draconis . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 22 | B. A. C. 5996 (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 23 | B. A. C. 5996 . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 24 | ^ψ Draconis (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 25 | ^ψ Draconis . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| 7 | 26 | ^α Andromedæ . . . | F. | . | 49.7 52.0 | 54.4 56.7 | 59.0 . . . | | | | | 1 | 54.36 | - 0.35 | + 3.96 | + 3.99 | 0 | 1 | 58.00 | + 0.05 | |
| | 27 | ^γ Pegasi . . . | F. | 34.4 37.0 | 38.6 44.9 | 47.0 49.0 | 55.4 57.0 | 59.7 | | | | 6 | 47.00 | - 0.50 | + 4.05 | + 3.99 | 0 | 6 | 50.49 | - 0.06 | |
| | 28 | ^β Ceti . . . | F. | 5.4 8.1 | 9.7 16.4 | 18.4 20.5 | 27.2 28.7 | 31.4 | | | | 37 | 15.42 | - 0.79 | + 3.96 | + 4.00 | 0 | 37 | 21.63 | + 0.09 | |
| 8 | 29 | Sun I, N. . . | F. | 34.7 36.3 | 40.2 42.4 | 44.4 46.4 | 48.5 52.7 | 54.2 | | | | 9 | 44.42 | - 0.56 | . | + 4.01 | 1 | 9 | 47.87 | . | |
| | 30 | Sun II, S. . . | F. | 41.6 44.0 | 45.5 51.9 | 53.9 55.9 | 2.1 3.6 | 6.1 | | | | 11 | 53.84 | - 0.56 | . | + 4.01 | 1 | 11 | 57.29 | . | |
| | 31 | Polaris . . . | F. | 59.0 50.0 | 52.0 . . . | | 24.0 28.0 | 18.0 | | | | 11 | 38.57 | + 24.03 | . | + 4.01 | 1 | 12 | 6.61 | - 0.61 | |
| | 32 | ^η Tauri . . . | F. | . | . | . | 11.9 13.6 | 16.3 | | | | 40 | 2.97 | - 0.40 | + 4.01 | + 4.06 | 3 | 40 | 6.63 | + 0.05 | |
| | 33 | ^ζ Persei . . . | F. | 1.9 4.9 | 6.6 14.0 | 16.3 18.8 | 25.9 27.5 | 30.6 | | | | 46 | 16.28 | - 0.31 | + 4.03 | + 4.06 | 3 | 46 | 20.03 | + 0.02 | |
| | 34 | ^γ Eridani . . . | F. | . | 7.0 9.0 | 11.0 13.2 | 15.3 . . . | | | | | 52 | 11.10 | - 0.75 | + 4.15 | + 4.06 | 3 | 52 | 14.41 | - 0.05 | |
| | 35 | Anonymous . . . | F. | 5.5 8.4 | 10.0 16.5 | 18.6 20.6 | 27.0 28.7 | 30.9 | | | | 20 | 18.47 | - 0.42 | . | + 4.08 | 10 | 20 | 22.13 | - 1.92 | |
| | 36 | B. A. C. 3606 . . . | F. | 20.1 22.7 | 24.3 30.7 | 32.8 34.9 | 41.3 42.9 | 45.5 | | | | 25 | 32.80 | - 0.42 | . | + 4.08 | 10 | 25 | 36.46 | - 1.95 | |
| | 37 | ^δ Leonis . . . | F. | 16.0 18.8 | 20.6 27.1 | 29.2 31.4 | 37.9 39.6 | 42.5 | | | | 7 | 29.23 | - 0.35 | + 4.05 | + 4.10 | 11 | 7 | 32.98 | - 0.01 | |
| | 38 | ^δ Crateris . . . | F. | 54.2 56.7 | 58.4 4.6 | 6.8 9.0 | 15.2 16.7 | 19.4 | | | | 13 | 6.78 | - 0.69 | + 4.19 | + 4.10 | 11 | 13 | 10.19 | - 0.11 | |
| | 39 | B. A. C. 3945 . . . | F. | 9.8 12.9 | 14.6 22.0 | 24.4 26.8 | 34.2 36.0 | 38.9 | | | | 30 | 24.40 | - 0.87 | . | + 4.11 | 11 | 30 | 27.64 | - 1.71 | |
| | 40 | ^β Leonis . . . | F. | 29.8 32.4 | 34.0 40.6 | 42.6 44.6 | 51.0 52.6 | 55.3 | | | | 42 | 42.54 | - 0.41 | + 4.07 | + 4.11 | 11 | 42 | 46.24 | + 0.02 | |
| | 41 | Ausonia . . . | F. | . | . | . | 50.6 . . . | | | | | 54 | 13.86 | - 0.60 | . | + 4.12 | 11 | 54 | 17.38 | . | |
| | 42 | Vesta . . . | F. | 35.2 37.7 | 39.3 45.5 | 47.5 49.6 | 55.8 57.3 | 59.9 | | | | 41 | 47.53 | - 0.47 | . | + 4.13 | 12 | 41 | 51.19 | . | |
| | 43 | ^θ Virginis . . . | F. | 17.8 20.5 | 21.9 28.3 | 30.3 32.4 | 39.5 40.6 | 42.6 | | | | 3 | 30.26 | - 0.60 | + 4.23 | + 4.14 | 13 | 3 | 33.81 | - 0.12 | |
| | 44 | Polaris, S.P. . . . | F. | . | 25.0 54.0 | 29.0 2.0 | 38.5 . . . | | | | | 12 | 29.78 | - 28.18 | . | + 4.15 | 1 | 12 | 5.75 | - 1.63 | |
| | 45 | Moon II, S. . . . | F. | 12.2 14.9 | 22.8 24.9 | 27.0 . . . | 35.2 37.8 | | | | | 28 | 24.97 | - 0.67 | . | + 4.15 | 13 | 28 | 28.45 | - 64.62 | |
| | 46 | ^η Bootis . . . | F. | . | 43.2 45.3 | 47.4 49.6 | 54.0 55.6 | 58.4 | | | | 48 | 45.33 | - 0.37 | + 4.17 | + 4.16 | 13 | 48 | 49.12 | - 0.06 | |
| | 47 | ^α Bootis . . . | F. | 45.8 48.4 | 50.2 56.7 | 58.8 0.9 | 7.5 9.1 | 11.8 | | | | 9 | 58.80 | - 0.36 | + 4.16 | + 4.17 | 14 | 10 | 2.61 | + 0.01 | |
| 9 | 48 | ^ε Leonis . . . | E. | 33.3 39.1 | 37.8 44.5 | 46.7 49.0 | 55.8 57.4 | 0.3 | | | | 38 | 46.77 | - 0.22 | + 3.94 | . | . | . | . | . | |
| | 49 | Lalande 10442 . . . | E. | 38.5 41.0 | 42.8 48.9 | . | 53.2 59.6 | 1.3 | 3.7 | | | 49 | 51.12 | - 0.28 | . | + 3.95 | 9 | 49 | 54.79 | - 1.79 | |
| | 50 | ^λ Draconis (R.) . . . | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |

7, 8, 41. 49. Thread A used.

8. Bisections at II and III.

9, 10. Thread B used.

16. Bisections at threads B₁, B₃, and C₁.

17, 45, 50. Bisections at sets B and D.

24. Bisections at set C.

31. Bisections at threads D₁, D₂, and D₃.

41. Transit at thread VII.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------|----|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | | | | | | |
| 1 | 286 48 | 10 12.2 | 14.4 | 4.4 | 11.1 | 35 | 750 | 660 | .. | .. | .. | 60.5 | 73 8 5.4 | 34.4 | + 3 16.3 | 124 17 42.9 | -11.1 | |
| 2 | 336 52 | 8.3 | 10.1 | 28.4 | 5.9 | 39 | .. | 080 | .. | 990 | .. | 60.5 | 23 4 53.2 | .. | + 25.7 | 74 11 40.1 | -21.4 | |
| 3 | 325 54 | 7.2 | 9.5 | 26.3 | 7.1 | 36 | .. | 245 | .. | 040 | .. | 60.5 | 34 2 8.2 | .. | + 40.7 | 85 9 10.1 | -0.3 | |
| 4 | 291 26 | 12.5 | 15.1 | 4.5 | 11.8 | 32 | .. | 170 | .. | 060 | .. | 60.5 | 68 29 12.3 | .. | + 2 31.8 | 119 38 5.3 | -11.9 | |
| 5 | 291 26 | 12.5 | 15.1 | 4.5 | 11.8 | 30 | .. | .. | .. | 870 | 785 | 60.5 | 68 28 53.7 | .. | + 2 31.8 | 119 37 46.7 | -11.9 | |
| 6 | 291 26 | 12.5 | 15.1 | 4.5 | 11.8 | 29 | .. | .. | .. | 155 | 150 | 60.5 | 68 28 28.0 | .. | + 2 31.7 | 119 37 20.9 | -11.8 | |
| 7 | 301 38 | 13.0 | 15.4 | 4.6 | 11.8 | 32 | 635 | 585 | .. | .. | .. | 60.5 | 58 14 45.3 | .. | + 1 37.1 | 109 22 43.6 | .. | |
| 8 | 301 38 | 13.0 | 15.4 | 4.6 | 11.8 | 35 | 325 | 250 | .. | .. | .. | 60.5 | 58 15 27.0 | .. | + 1 37.1 | 109 23 25.3 | .. | |
| 9 | 301 38 | 13.0 | 15.4 | 4.6 | 11.8 | 33 | .. | .. | .. | 410 | 370 | 60.5 | 58 20 5.7 | .. | + 1 37.4 | 109 28 4.3 | -0.9 | |
| 10 | 295 48 | 15.6 | 17.7 | 6.3 | 14.1 | 30 | .. | 555 | .. | 450 | .. | 60.5 | 64 9 22.5 | .. | + 2 3.9 | 115 17 47.6 | -12.3 | |
| 11 | 294 56 | 11.0 | 12.2 | 1.8 | 10.2 | 39 | 275 | 230 | .. | 085 | 060 | 60.5 | 65 0 58.0 | .. | + 2 8.7 | 116 9 27.9 | -0.9 | |
| 12 | 310 44 | 11.2 | 13.5 | 1.5 | 10.5 | 33 | .. | 815 | .. | 660 | .. | 60.5 | 49 11 35.5 | .. | + 1 9.7 | 100 19 6.4 | +0.9 | |
| 13 | 280 14 | 12.7 | 13.8 | 3.9 | 11.9 | 32 | 580 | .. | .. | .. | 385 | 60.5 | 79 41 17.1 | .. | + 5 20.8 | 130 52 59.1 | -7.3 | |
| 14 | 280 14 | 12.7 | 13.8 | 3.9 | 11.9 | 31 | .. | 280 | .. | 210 | .. | 60.5 | 79 40 58.5 | .. | + 5 20.7 | 130 52 40.4 | -7.3 | |
| 15 | 0 12 | 13.2 | 15.4 | 3.0 | 10.2 | 37 | .. | 465 | .. | 265 | .. | 60.5 | 359 44 32.6 | .. | - 0.3 | 50 50 53.5 | +1.8 | |
| 16 | 136 36 | 12.1 | 18.0 | 2.6 | 8.8 | 32 | 480 | 380 | 250 | .. | .. | 60.5 | 223 19 15.2 | .. | + 56.8 | 17 46 9.2 | -0.4 | |
| 17 | 43 16 | 12.7 | 11.6 | 0.9 | 7.7 | 38 | .. | .. | .. | 405 | 320 | 60.5 | 316 40 46.2 | .. | - 56.8 | 7 46 10.6 | +1.0 | |
| 18 | 204 18 | 14.8 | 17.5 | 5.5 | 9.5 | 36 | 970 | 935 | .. | .. | .. | 60.5 | 155 38 26.1 | .. | - 27.3 | 75 28 22.4 | +0.8 | |
| 19 | 335 34 | 8.6 | 11.0 | 27.9 | 9.0 | 33 | .. | .. | .. | 685 | 635 | 60.5 | 24 21 33.1 | .. | + 27.3 | 75 28 21.6 | 0.0 | |
| 20 | 166 26 | 12.0 | 16.5 | 2.5 | 9.9 | 32 | 700 | 625 | .. | .. | .. | 60.5 | 193 29 18.2 | .. | + 14.5 | 37 36 48.5 | -2.3 | |
| 21 | 13 26 | 9.5 | 10.4 | 28.3 | 7.3 | 38 | .. | .. | .. | 255 | 255 | 60.5 | 346 30 43.8 | .. | - 14.5 | 37 36 50.5 | -0.3 | |
| 22 | 214 12 | 13.7 | 16.5 | 5.0 | 10.0 | 35 | 130 | 080 | .. | .. | .. | 60.5 | 145 43 57.4 | .. | - 41.1 | 85 23 4.9 | -19.2 | |
| 23 | 325 40 | 8.1 | 10.5 | 28.0 | 7.8 | 35 | .. | .. | .. | 530 | 575 | 60.5 | 34 16 1.5 | .. | + 41.1 | 85 23 3.8 | -19.2 | |
| 24 | 146 38 | 11.4 | 15.5 | 2.0 | 10.1 | 34 | 330 | .. | 325 | .. | 335 | 60.5 | 213 17 45.2 | .. | + 39.6 | 17 47 56.4 | +0.7 | |
| 25 | 33 14 | 8.1 | 10.1 | 28.1 | 5.7 | 36 | .. | .. | .. | 305 | 280 | 60.5 | 326 42 13.8 | 33.5 | - 39.6 | 17 47 55.4 | -0.3 | |
| 26 | 349 26 | 7.6 | 8.1 | 26.3 | 7.1 | 32 | .. | .. | .. | 344 | 314 | 60.7 | 10 29 11.3 | .. | + 10.9 | 61 35 43.4 | +0.6 | |
| 27 | 335 32 | 9.3 | 8.7 | 27.0 | 9.1 | 34 | .. | 110 | .. | 906 | .. | 60.7 | 24 23 36.8 | 47.5 | + 26.7 | 75 30 24.7 | +1.0 | |
| 28 | 302 24 | 4.8 | 6.0 | 23.8 | 6.7 | 36 | .. | 320 | .. | 286 | .. | 60.7 | 57 32 8.6 | 48.5 | + 1 31.9 | 108 40 1.7 | -0.3 | |
| 29 | 328 34 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 50.4 | .. | .. | .. | .. |
| 30 | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 31 | 49 40 | 1.5 | 0.5 | 18.4 | 28.8 | 35 | .. | .. | 186 | 140 | 086 | 60.7 | 310 15 47.5 | .. | - 1 8.8 | 1 20 59.9 | -0.1 | |
| 32 | 344 46 | 8.3 | 9.7 | 26.8 | 10.2 | 35 | .. | .. | .. | 668 | 640 | 60.7 | 15 10 3.6 | .. | + 15.7 | 66 16 40.5 | +1.1 | |
| 33 | 352 34 | 10.2 | 10.8 | 28.3 | 10.2 | 37 | 560 | 530 | .. | .. | .. | 60.7 | 7 22 31.4 | .. | + 7.5 | 58 29 0.1 | -0.8 | |
| 34 | 307 12 | 8.6 | 8.3 | 27.2 | 10.5 | 35 | .. | .. | .. | .. | 805 | 60.7 | 52 44 5.6 | 53.4 | + 1 16.0 | 103 51 42.8 | -0.6 | |
| 35 | 335 30 | 6.3 | 8.5 | 24.0 | 6.8 | 31 | .. | 812 | .. | 800 | .. | 61.4 | 24 25 1.8 | .. | + 26.9 | 75 31 49.9 | -4.9 | |
| 36 | 335 50 | 6.6 | 7 9 | 24.9 | 6.0 | 39 | .. | 194 | .. | 046 | .. | 61.4 | 24 6 53.7 | 42.5 | + 26.5 | 75 13 11.4 | -5.1 | |
| 37 | 342 14 | 13.8 | 15.4 | 1.6 | 12.1 | 32 | .. | 238 | .. | 198 | .. | 61.4 | 17 41 14.9 | .. | + 18.9 | 68 47 55.0 | -0.6 | |
| 38 | 306 58 | 11.2 | 12.1 | 29.9 | 11.3 | 39 | .. | 282 | .. | 248 | .. | 61.4 | 52 58 59.5 | .. | + 1 18.6 | 104 6 39.3 | -1.1 | |
| 39 | 288 12 | 15.6 | 16.4 | 3.0 | 11.6 | 34 | .. | .. | .. | 710 | 688 | 61.4 | 71 43 54.6 | 41.0 | + 2 58.0 | 122 53 13.8 | -15.5 | |
| 40 | 336 18 | 12.7 | 13.7 | 0.7 | 11.0 | 33 | 168 | 158 | .. | .. | .. | 61.4 | 23 37 27.0 | 41.0 | + 26.0 | 74 44 14.2 | 0.0 | |
| 41 | 316 6 | 18.1 | 16.0 | 5.4 | 15.8 | 42 | .. | .. | .. | .. | 384 | 61.4 | 43 49 21.6 | .. | + 57.0 | 94 56 39.8 | -4.5 | |
| 42 | 330 20 | 5.5 | 6.9 | 21.8 | 6.2 | 35 | .. | 620 | .. | 500 | .. | 61.4 | 29 35 57.9 | .. | + 33.9 | 80 42 53.0 | -3.4 | |
| 43 | 316 10 | 6.7 | 7.7 | 25.7 | 7.1 | 33 | .. | .. | .. | 728 | 704 | 61.4 | 43 45 32.4 | .. | + 57.1 | 94 52 50.7 | +0.5 | |
| 44 | 52 22 | 10.8 | 9.8 | 28.3 | 6.2 | 35 | 104 | 114 | 106 | 130 | 138 | 61.4 | 307 33 54.6 | 38.4 | - 1 17.6 | 358 38 58.2 | -1.6 | |
| 45 | 308 30 | 10.2 | 10.2 | 27.0 | 5.4 | 42 | 254 | .. | 568 | .. | 710 | 61.4 | 51 27 47.4 | .. | + 1 14.9 | 102 35 23.5 | .. | |
| 46 | 34 4 | 12.2 | 13.1 | 0.0 | 10.0 | 36 | .. | .. | .. | 548 | 534 | 61.4 | 19 52 20.4 | .. | + 21.6 | 70 59 3.2 | -0.5 | |
| 47 | 340 52 | 10.4 | 9.3 | 28.8 | 10.2 | 34 | .. | .. | .. | 786 | 794 | 61.4 | 19 3 52.0 | 37.8 | + 20.7 | 70 10 33.9 | +0.5 | |
| 48 | 345 24 | 11.2 | 13.3 | 0.0 | 10.0 | 38 | .. | 115 | .. | 960 | .. | 61.6 | 14 32 42.1 | 44.5 | + 15.3 | 65 39 18.6 | -0.9 | |
| 49 | 336 20 | 13.6 | 14.3 | 2.0 | 10.7 | 38 | .. | 510 | .. | 500 | .. | 61.6 | 23 34 17.2 | .. | + 25.8 | 74 41 4.2 | -2.7 | |
| 50 | 148 50 | 3.0 | 7.2 | 23.5 | 2.0 | 38 | 590 | 670 | .. | .. | .. | 61.6 | 211 6 43.3 | .. | + 36.0 | 19 59 1.9 | -2.2 | |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|----------|
| | in. | ° | | ' " | ' " | ' " | ' " |
| 1 | 30.03 | 37.6 | | | | | |
| 25 | 30.02 | 37.4 | 7 | - 1.6 | + 20.9 | .. | + 19.2 |
| 27 | 30.10 | 47.0 | 8 | - 1.6 | - 20.9 | .. | - 22.5 |
| 28 | 30.09 | 48.5 | 45 | -43 43.2 | - 15 18.9 | .. | - 59 2.1 |
| 29 | 30.06 | 50.0 | | | | | |
| 34 | 30.04 | 54.0 | | | | | |
| 36 | 30.02 | 46.5 | | | | | |
| 39 | 30.02 | 44.4 | | | | | |
| 40 | 30.02 | 44.0 | | | | | |
| 44 | 30.03 | 43.0 | | | | | |
| 47 | 30.05 | 43.0 | | | | | |
| 48 | 30.07 | 47.5 | | | | | |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. |
|-----------------|---------|----------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|-----------------|----------------|---------------------------|---------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock apparent. | Clock adopted. | | | |
| | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. | |
| 1876. Apr. 9 | 1 | λ Draconis | S. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 12 14 15.82 | .. | .. |
| | 2 | Althea | S. | .. | .. | .. | .. | 14.1 | 16.2 | 20.2 | 21.0 | 24.5 | 14 12.11 | - 0.40 | .. | + 4.11 | 12 14 15.82 | .. | .. |
| | 3 | Hestia | S. | 5.4 | 8.0 | .. | .. | .. | .. | .. | .. | 30.0 | 20 17.70 | - 0.39 | .. | + 4.12 | 12 20 21.43 | .. | .. |
| | 4 | 12 ¹ Canum Venat. . . | S. | 55.4 | 58.6 | 0.6 | .. | .. | .. | 21.6 | 23.3 | 26.9 | 50 11.07 | - 0.08 | .. | + 4.15 | 12 50 15.14 | - 2.88 | .. |
| | 5 | 12 ² Canum Venat. . . | S. | .. | .. | 7.0 | 9.5 | 12.3 | 14.7 | 17.5 | .. | .. | 50 12.20 | - 0.08 | + 4.20 | + 4.15 | 12 50 16.27 | - 0.11 | .. |
| | 6 | Polaris (S. P.) . . . | S. | .. | .. | 15.0 | 50.5 | 23.0 | 55.5 | 29.0 | .. | .. | 12 22.68 | - 19.81 | .. | + 4.18 | 1 12 7.05 | - 0.47 | .. |
| | 7 | α Virginis | S. | 25.6 | 28.1 | 29.7 | 35.9 | 38.0 | 39.9 | 46.3 | 47.9 | 50.5 | 18 37.99 | - 0.44 | + 4.22 | + 4.19 | 13 18 41.74 | - 0.05 | .. |
| | 8 | ζ Virginis | S. | 8.6 | 11.3 | 12.5 | 15.8 | 20.9 | 23.0 | 29.0 | 30.4 | 33.1 | 28 20.84 | - 0.35 | + 4.19 | + 4.20 | 13 28 24.66 | + 0.01 | .. |
| | 9 | η Bootis | S. | 32.3 | 35.1 | 36.7 | 43.1 | 45.2 | 47.4 | 53.8 | 55.4 | 57.9 | 48 45.21 | - 0.26 | + 4.19 | + 4.22 | 13 48 49.19 | 0.00 | .. |
| | 10 | Moon II, S. . . . | S. | 6.3 | 9.0 | 10.7 | 17.3 | 19.3 | 21.6 | 28.0 | 29.7 | 32.3 | 17 19.36 | - 0.48 | .. | + 4.25 | 14 17 23.13 | - 65.68 | .. |
| | 11 | ζ Pegasi | P. | .. | .. | .. | .. | .. | .. | 20.8 | 22.5 | 25.0 | 35 12.57 | - 0.45 | + 4.33 | + 4.32 | 22 35 16.44 | + 0.05 | .. |
| | 12 | B. A. C. 7923 . . . | P. | 52.6 | 55.5 | 57.4 | 4.4 | 6.6 | 9.1 | 16.0 | 18.0 | 21.0 | 37 6.73 | - 0.25 | .. | + 4.32 | 22 37 10.80 | + 0.63 | .. |
| | 13 | α Piscis Australis . . | P. | 30.2 | 33.2 | 34.0 | 41.9 | 44.4 | 46.9 | 53.8 | 55.6 | 58.7 | 50 44.40 | - 0.81 | + 4.30 | + 4.32 | 22 50 47.91 | + 0.06 | .. |
| | 14 | B. A. C. 8032 . . . | P. | .. | .. | 36.7 | 38.9 | 41.1 | 13.6 | 45.9 | .. | .. | 57 41.24 | - 0.27 | .. | + 4.32 | 22 57 45.29 | + 0.65 | .. |
| | 15 | α Pegasi | P. | 18.2 | 22.4 | 26.6 | 28.8 | 30.9 | 33.0 | 35.1 | 39.2 | 43.4 | 58 30.84 | - 0.41 | + 4.32 | + 4.32 | 22 58 34.75 | + 0.03 | .. |
| | 16 | γ Cephei | P. | 20.2 | 26.9 | 45.2 | .. | .. | .. | 21.2 | 39.4 | 45.9 | 34 3.13 | + 1.91 | .. | + 4.32 | 23 34 9.36 | + 0.10 | .. |
| | 17 | α Andromedæ | P. | 39.9 | 44.6 | 49.2 | 50.6 | 53.9 | 56.3 | 58.6 | 3.1 | 8.0 | 1 53.91 | - 0.26 | + 4.36 | + 4.33 | 0 1 57.98 | - 0.01 | .. |
| | 18 | γ Pegasi | P. | 34.0 | 36.6 | 38.2 | 44.6 | 46.6 | 48.8 | 55.2 | 56.7 | 59.4 | 6 46.68 | - 0.41 | + 4.30 | + 4.33 | 0 6 50.60 | + 0.03 | .. |
| | 19 | Mercury II, C. . . . | P. | 17.5 | 20.2 | 21.7 | 27.7 | 29.8 | 31.8 | 38.0 | 39.6 | 42.2 | 35 29.83 | - 0.53 | .. | + 4.33 | 0 35 33.63 | - 0.18 | .. |
| | 20 | Polaris | P. | 56.0 | 46.0 | 50.0 | 44.0 | 41.0 | 38.0 | 4.0 | 33.0 | .. | 11 37.59 | + 23.75 | .. | + 4.33 | 1 12 5.67 | - 1.95 | .. |
| | 21 | Sun I, S. . . . | P. | 51.2 | 54.0 | 55.6 | 1.7 | 3.8 | 5.9 | 11.9 | 13.6 | 16.2 | 17 3.77 | - 0.50 | .. | + 4.33 | 1 17 7.60 | .. | .. |
| | 22 | Sun II | P. | 0.7 | 3.3 | 4.9 | 11.0 | 13.2 | 15.2 | 21.3 | 23.0 | 25.5 | 19 13.12 | - 0.50 | .. | + 4.33 | 1 19 16.95 | .. | .. |
| | 23 | ζ Persei | P. | 1.5 | 4.6 | 6.4 | 15.7 | 18.3 | 20.6 | 25.6 | 27.1 | 30.2 | 46 15.87 | - 0.26 | + 4.37 | + 4.35 | 3 46 19.66 | - 0.03 | .. |
| | 24 | Venus I, N. . . . | P. | 31.2 | 33.9 | 35.6 | 42.4 | 44.5 | 46.8 | 53.5 | 55.1 | 58.0 | 10 44.56 | - 0.35 | .. | + 4.36 | 4 10 48.57 | + 0.69 | .. |
| | 25 | Venus S. . . . | P. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 26 | α Tauri | P. | 31.6 | 34.3 | 35.8 | 42.3 | 44.4 | 46.5 | 53.0 | 54.4 | 57.2 | 28 44.39 | - 0.42 | + 4.34 | + 4.36 | 4 28 48.33 | 0.00 | .. |
| | 27 | B. A. C. 2937 . . . | P. | 50.8 | 53.6 | 55.3 | 1.8 | 4.0 | 6.3 | 12.8 | 14.5 | 17.2 | 36 4.93 | - 0.27 | .. | + 4.36 | 8 36 8.12 | - 1.49 | .. |
| | 28 | ϵ Hydræ | P. | .. | .. | .. | 9.9 | 11.9 | 14.0 | 18.1 | 19.7 | 22.2 | 40 9.88 | - 0.43 | + 4.37 | + 4.36 | 8 40 13.81 | - 0.05 | .. |
| | 29 | B. A. C. 2987 . . . | P. | .. | .. | .. | 5.2 | 7.2 | 9.2 | 13.4 | 14.8 | 17.4 | 43 5.15 | - 0.52 | .. | + 4.37 | 8 43 9.00 | - 1.19 | .. |
| | 30 | B. A. C. 3013 . . . | P. | 36.3 | 38.9 | 40.4 | 46.6 | 48.6 | 50.7 | 56.9 | 58.4 | 1.0 | 45 48.64 | - 0.44 | .. | + 4.37 | 8 45 52.57 | - 1.31 | .. |
| | 31 | B. A. C. 3026 . . . | P. | .. | .. | .. | .. | 13.7 | 16.0 | 20.7 | 22.4 | 25.4 | 48 11.41 | - 0.19 | .. | + 4.37 | 8 48 15.59 | - 1.69 | .. |
| | 32 | B. A. C. 3117 . . . | P. | 58.0 | 0.7 | 2.4 | 9.0 | 11.3 | 13.5 | 20.1 | 21.8 | 24.5 | 2 11.26 | - 0.26 | .. | + 4.37 | 9 2 15.37 | - 1.66 | .. |
| | 33 | B. A. C. 3123 . . . | P. | 57.5 | 0.4 | 2.0 | 8.7 | 10.9 | 13.1 | 19.7 | 21.4 | 24.2 | 3 10.88 | - 0.27 | .. | + 4.37 | 9 3 14.98 | - 1.66 | .. |
| | 34 | B. A. C. 3144 . . . | P. | 19.9 | 23.2 | 25.0 | 32.6 | 35.0 | 37.6 | 45.0 | 46.9 | 50.1 | 7 35.03 | - 0.10 | .. | + 4.37 | 9 7 39.30 | - 1.97 | .. |
| | 35 | Uranus. . . . | P. | 6.3 | 8.9 | 10.5 | 17.0 | 19.2 | 21.3 | 27.7 | 29.2 | 31.9 | 14 19.11 | - 0.33 | .. | + 4.37 | 9 14 23.15 | .. | .. |
| | 36 | B. A. C. 3204 . . . | P. | 9.7 | 12.6 | 14.4 | 21.3 | 23.5 | 25.8 | 32.7 | 34.4 | 37.3 | 17 23.52 | - 0.22 | .. | + 4.37 | 9 17 27.67 | - 1.83 | .. |
| | 37 | α Hydræ | P. | .. | 22.9 | 25.0 | 27.1 | 29.1 | 31.2 | 35.3 | 36.9 | 39.5 | 21 27.07 | - 0.56 | + 4.44 | + 4.38 | 9 21 30.89 | - 0.09 | .. |
| | 38 | ϵ Leonis | P. | 33.0 | 35.8 | 37.4 | 44.2 | 46.4 | 48.6 | 55.3 | 57.0 | 59.8 | 38 46.39 | - 0.21 | + 4.33 | + 4.38 | 9 38 50.53 | - 0.01 | .. |
| | 39 | α Leonis | P. | .. | 39.6 | 41.8 | 43.9 | 46.0 | 47.9 | 52.2 | 53.7 | 56.3 | 1 43.82 | - 0.37 | + 4.35 | + 4.38 | 10 1 47.83 | - 0.01 | .. |
| | 40 | η Draconis (R.) . . . | P. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 41 | η Draconis | P. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 42 | ζ Leonis (R.) . . . | P. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 43 | ζ Leonis | P. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 44 | Lalande 21369 . . . | P. | 56.7 | 59.8 | 1.5 | .. | .. | .. | 20.5 | 22.4 | 25.4 | 4 11.05 | - 0.16 | .. | + 4.39 | 11 4 15.28 | - 2.45 | .. |
| | 45 | Lalande 21368 . . . | P. | .. | .. | 9.8 | 12.1 | 14.4 | 16.9 | 19.3 | .. | .. | 4 14.50 | - 0.16 | .. | + 4.39 | 11 4 18.73 | - 2.45 | .. |
| | 46 | δ Crateris | P. | 53.8 | 56.4 | 58.0 | 4.4 | 6.5 | 8.6 | 15.0 | 16.4 | 19.3 | 13 6.49 | - 0.62 | + 4.40 | + 4.39 | 11 13 10.26 | - 0.03 | .. |
| | 47 | B. A. C. 3891 . . . | P. | 15.9 | 19.1 | 21.0 | 28.7 | 31.3 | 33.6 | 41.4 | 43.4 | 46.6 | 19 31.22 | - 0.86 | .. | + 4.39 | 11 19 34.75 | - 1.65 | .. |
| | 48 | Lalande (Fed.) 1882 . | P. | 31.8 | 37.4 | 40.7 | 54.2 | 58.5 | 2.8 | 10.0 | 19.2 | 24.9 | 21 58.39 | + 0.64 | .. | + 4.39 | 11 22 3.42 | - 4.46 | .. |
| | 49 | B. A. C. 3945 . . . | P. | 9.6 | 12.6 | 14.4 | 21.9 | 24.3 | 26.8 | 34.2 | 35.8 | 38.9 | 30 24.28 | - 0.81 | .. | + 4.39 | 11 30 27.86 | - 1.70 | .. |
| | 50 | β Leonis | P. | 29.5 | 32.1 | 33.8 | 40.0 | 42.1 | 44.2 | 50.6 | 52.3 | 55.0 | 42 42.18 | - 0.34 | + 4.36 | + 4.39 | 11 42 46.23 | + 0.01 | .. |

2, 3, 4, 5, 44. Thread A used.
 10, 16, 48. Bisections at sets B and D.
 15, 33, 39, 43, 46. Thread B used.
 20. Bisections at threads B₁, B₂, and B₃.
 40. Bisections at threads C₅ and D₁.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|------|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | | |
| | | r. | " | " | " | | | | | | | | | | | | | |
| 1 | 31 2 | 10 12.2 | 13.0 | 29.6 | 7.0 | 32 | .. | .. | .. | .. | 280 | 61.6 | 328 53 16.6 | 40.4 | - | 36.0 | 19 59 1.8 | - 2.3 |
| 2 | 317 14 | 11 3 | 14.3 | 0.8 | 10.0 | 42 | .. | .. | .. | 430 | .. | 61.6 | 42 41 17.2 | .. | + | 55.1 | 93 48 33.5 | - 3.3 |
| 3 | 319 24 | 10.6 | 12.6 | 29.4 | 10.4 | 56 | .. | 520 | .. | 420 | .. | 61.6 | 40 29 44.1 | .. | + | 51.0 | 91 36 56.3 | - 2.9 |
| 4 | 0 0 | 6.1 | 8.2 | 25.5 | 5.4 | 40 | .. | 818 | .. | .. | .. | 61.6 | 359 54 45.4 | .. | - | 0.1 | 51 1 6.5 | -11.3 |
| 5 | 0 0 | 6.1 | 8.2 | 25.5 | 5.4 | 39 | .. | .. | .. | 822 | 822 | 61.6 | 359 54 32.7 | .. | - | 0.1 | 51 0 53.8 | + 1.4 |
| 6 | 52 22 | 9.6 | 9.5 | 27.5 | 5.4 | 35 | 260 | .. | 280 | .. | 260 | 61.6 | 307 33 56.2 | .. | - | 1 17.9 | 358 38 59.5 | 0.0 |
| 7 | 310 32 | 10.9 | 11.6 | 28.4 | 8.2 | 33 | .. | 620 | .. | 440 | .. | 61.6 | 40 23 31.5 | .. | + | 1 10.0 | 100 31 2.7 | - 0.8 |
| 8 | 321 6 | 12.9 | 13.0 | 0.2 | 10.0 | 38 | .. | .. | .. | 120 | 090 | 61.6 | 38 50 44.6 | .. | + | 48.4 | 89 57 54.2 | - 1.3 |
| 9 | 340 4 | 9.3 | 10.3 | 27.0 | 6.2 | 36 | .. | 840 | .. | 714 | .. | 61.6 | 19 52 19.8 | .. | + | 21.8 | 70 59 2.8 | - 0.8 |
| 10 | 302 54 | 11.5 | 11.0 | 29.0 | 7.2 | 32 | 340 | .. | 410 | .. | 590 | 61.6 | 57 1 14.9 | 35.0 | + | 1 32.7 | 108 9 8.8 | .. |
| 11 | 331 14 | 7.0 | 9.2 | 26.5 | 8.0 | 36 | .. | .. | .. | 055 | 0 0 | 59.8 | 28 42 7.3 | 45.4 | + | 32.4 | 79 49 0.9 | - 1.6 |
| 12 | 330 36 | 8.5 | 9.5 | 27.2 | 7.3 | 32 | .. | 795 | .. | 065 | 530 | 59.8 | 9 19 15.6 | .. | + | 9.7 | 60 25 46.5 | -11.3 |
| 13 | 290 48 | 8.3 | 10.8 | 29.9 | 9.5 | 34 | 600 | 885 | .. | 435 | 410 | 59.8 | 69 7 44.6 | .. | + | 2 33.7 | 120 16 39.5 | - 1.8 |
| 14 | 348 26 | 7.8 | 10.0 | 26.5 | 7.5 | 31 | 640 | 510 | .. | .. | .. | 59.8 | 11 28 57.2 | .. | + | 12.0 | 62 35 30.4 | - 9.4 |
| 15 | 335 36 | 7.1 | 9.1 | 28.0 | 7.9 | 29 | .. | .. | .. | 505 | 480 | 59.8 | 24 20 59.8 | 46.7 | + | 26.7 | 75 27 47.7 | - 0.2 |
| 16 | 37 58 | 8.0 | 9.2 | 27.8 | 7.9 | 35 | 905 | .. | .. | 865 | 59.8 | 321 58 4.7 | 48.8 | - | 46.0 | 13 3 39.9 | - 1.2 | |
| 17 | 349 26 | 4.8 | 7.0 | 24.7 | 5.0 | 32 | 645 | 645 | .. | 550 | 450 | 59.8 | 10 29 11.1 | 49.4 | + | 10.9 | 61 35 43.2 | + 0.2 |
| 18 | 335 32 | 8.5 | 9.6 | 27.8 | 9.2 | 34 | .. | .. | .. | 005 | 935 | 59.8 | 24 23 36.9 | .. | + | 26.6 | 75 30 24.7 | + 1.0 |
| 19 | 322 44 | 5.9 | 9.6 | 26.4 | 7.5 | 34 | 360 | 315 | .. | 955 | 895 | 59.8 | 37 11 36.6 | 50.9 | + | 44.4 | 88 18 42.2 | .. |
| 20 | 49 40 | 9.9 | 12 0 | 29.5 | 8.5 | 34 | 565 | 575 | 570 | .. | .. | 59.8 | 310 15 47.9 | .. | - | 1 8.7 | 1 21 0.4 | - 0.3 |
| 21 | 329 2 | 11.0 | 12.8 | 29.0 | 11.0 | 32 | 805 | 795 | .. | .. | .. | 59.8 | 30 53 18.3 | 52.6 | + | 34.8 | 82 0 14.3 | .. |
| 22 | 329 18 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 23 | 352 34 | 8.1 | 11.2 | 27.1 | 9.0 | 37 | .. | .. | .. | 450 | 590 | 59.8 | 7 22 31.5 | 57.5 | + | 7.5 | 58 29 0.2 | - 0.9 |
| 24 | 344 36 | 7.3 | 9.3 | 27.0 | 8.0 | 30 | 815 | .. | .. | .. | 520 | 59.8 | 15 18 44.5 | 57.1 | + | 15.8 | 66 25 21.5 | .. |
| 25 | 344 36 | 7.3 | 9.3 | 27.0 | 8.0 | 31 | .. | 945 | .. | 745 | .. | 59.8 | 15 19 2.3 | .. | + | 15.8 | 66 25 39.3 | .. |
| 26 | 337 18 | 6.8 | 10.3 | 27.8 | 7.3 | 34 | 260 | 230 | .. | 060 | 050 | 59.8 | 22 37 37.8 | .. | + | 24.0 | 73 44 23.0 | + 0.9 |
| 27 | 342 58 | 11.1 | 12.1 | 0.0 | 8.6 | 37 | 460 | 420 | .. | 290 | 215 | 61.2 | 16 58 30.5 | 51.3 | + | 17.8 | 68 5 9.5 | + 3.7 |
| 28 | 327 56 | 9.8 | 11.5 | 25.5 | 6.3 | 38 | .. | .. | .. | 195 | 075 | 61.2 | 32 0 41.5 | .. | + | 36.5 | 83 7 39.2 | - 0.6 |
| 29 | 318 4 | 7.8 | 10.0 | 27.7 | 6.8 | 35 | .. | .. | .. | 000 | 975 | 61.2 | 41 51 53.0 | .. | + | 52.3 | 92 59 6.5 | - 4.9 |
| 30 | 326 52 | 8.5 | 11.9 | 27.5 | 5.3 | 38 | 520 | 440 | .. | .. | .. | 61.2 | 33 4 44.4 | .. | + | 38.0 | 84 11 43.6 | - 2.2 |
| 31 | 349 26 | 13.0 | 13.1 | 3.1 | 8.0 | 32 | .. | .. | .. | 825 | 815 | 61.2 | 10 29 28.9 | .. | + | 10.8 | 61 35 55.9 | + 5.3 |
| 32 | 343 36 | 12.8 | 13.9 | 1.2 | 8.8 | 37 | 570 | 625 | .. | .. | .. | 61.2 | 16 20 34.4 | .. | + | 17.2 | 67 27 12.8 | + 2.5 |
| 33 | 343 36 | 12.8 | 13.9 | 1.2 | 8.8 | 38 | .. | .. | .. | 515 | 460 | 61.2 | 16 23 22.9 | .. | + | 17.2 | 67 30 1.3 | + 2.4 |
| 34 | 356 10 | 16.7 | 18.8 | 3.9 | 11.4 | 30 | .. | .. | .. | 425 | 350 | 61.2 | 3 44 50.1 | .. | + | 3.8 | 54 51 15.1 | + 6.3 |
| 35 | 337 48 | 11.5 | 13.1 | 0.0 | 6.6 | 32 | 370 | 365 | .. | 240 | 175 | 61.2 | 22 7 12.9 | .. | + | 23.8 | 73 13 57.9 | .. |
| 36 | 347 46 | 10.0 | 10.5 | 26.6 | 6.3 | 37 | .. | 505 | .. | 325 | .. | 61.2 | 12 10 29.4 | .. | + | 12.6 | 63 17 3.2 | + 2.9 |
| 37 | 312 56 | 10.0 | 11.3 | 28.0 | 7.5 | 35 | .. | .. | .. | 550 | 490 | 61.2 | 47 0 2.2 | .. | + | 1 2.8 | 98 7 26.2 | - 0.7 |
| 38 | 345 24 | 8.1 | 10.5 | 26.6 | 5.2 | 38 | 425 | 375 | .. | 210 | 165 | 61.2 | 14 32 42.2 | .. | + | 15.2 | 65 39 18.6 | - 0.8 |
| 39 | 333 38 | 11.0 | 12.0 | 29.0 | 8.8 | 28 | .. | .. | .. | 720 | 680 | 61.2 | 26 18 51.4 | .. | + | 29.1 | 77 25 41.7 | - 0.5 |
| 40 | 142 36 | 6.5 | 10.3 | 27.7 | 4.8 | 38 | .. | .. | .. | 800 | 780 | 61.2 | 217 26 49.4 | .. | + | 45.1 | 13 38 46.7 | - 1.1 |
| 41 | 37 22 | 8.0 | 9.5 | 27.7 | 6.8 | 32 | .. | .. | .. | 265 | 155 | 61.2 | 322 33 12.6 | 46.2 | - | 45.1 | 13 38 48.7 | + 0.9 |
| 42 | 207 36 | 11.3 | 14.6 | 3.3 | 7.5 | 30 | 660 | 630 | .. | .. | .. | 61.2 | 152 18 47.6 | .. | - | 31.0 | 78 48 4.6 | + 1.6 |
| 43 | 332 16 | 8.8 | 10.5 | 27.1 | 4.5 | 36 | .. | .. | .. | 110 | 030 | 61.2 | 27 41 9.9 | .. | + | 31.0 | 78 48 2.1 | - 0.9 |
| 44 | 352 10 | 9.6 | 10.6 | 27.6 | 6.9 | 36 | 285 | .. | .. | .. | 085 | 61.2 | 7 43 37.7 | .. | + | 8.0 | 58 50 6.9 | - 3.6 |
| 45 | 352 10 | 9.6 | 10.6 | 27.6 | 6.9 | 35 | .. | 620 | .. | 530 | .. | 61.2 | 7 46 1.6 | .. | + | 8.1 | 58 52 30.9 | - 3.6 |
| 46 | 306 58 | 10.3 | 11.8 | 29.0 | 9.6 | 29 | .. | 525 | .. | 375 | .. | 61.2 | 52 59 1.5 | .. | + | 1 18.3 | 104 6 41.0 | + 0.4 |
| 47 | 284 2 | 15.1 | 16.0 | 4.5 | 13.3 | 35 | 260 | 250 | .. | .. | .. | 61.2 | 75 54 1.0 | .. | + | 3 51.6 | 127 4 13.8 | -16.1 |
| 48 | 23 28 | 10 0 | 11.9 | 0.3 | 7.5 | 30 | 965 | .. | .. | .. | 800 | 61.2 | 336 26 51.4 | .. | - | 25.8 | 27 32 46.8 | + 1.8 |
| 49 | 288 12 | 15.0 | 15.9 | 3.6 | 12.0 | 34 | 760 | 680 | .. | .. | .. | 61.2 | 71 43 52.3 | .. | + | 2 57.8 | 122 53 11.3 | -15.8 |
| 50 | 336 18 | 11.5 | 12.6 | 29.0 | 8.0 | 33 | .. | 280 | .. | 130 | .. | 61.2 | 23 37 26.8 | .. | + | 26.0 | 74 44 14.0 | 0.0 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " | " | " | " |
| 1 | 30.08 | 44.3 | 10 | -46 27.7 | - 15 10.1 | .. | -1 1 37.8 |
| 10 | 30.09 | 39.0 | 19 | - 4.1 | .. | 0.1 | 4.0 |
| 11 | 30.16 | 43.7 | 21 | - 5.6 | - 15 58.2 | .. | 16 3.8 |
| 15 | 30.17 | 45.3 | 24 | - 2.5 | + 9.0 | 0.2 | 6.3 |
| 16 | 30.17 | 46.9 | 25 | - 2.5 | - 9.0 | .. | 11.5 |
| 17 | 30.16 | 47.9 | 35 | - 0.2 | .. | .. | 0.2 |
| 19 | 30.15 | 49.3 | | | | | |
| 21 | 30.14 | 50.6 | | | | | |
| 23 | 30.10 | 55.8 | | | | | |
| 24 | 30.09 | 56.0 | | | | | |
| 27 | 30.10 | 52.0 | | | | | |
| 41 | 30.12 | 48.7 | | | | | |

For summary of the elements of reduction see page 3.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|------------------|---------|---------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|---------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't | Clock adopted. | | |
| | | | | m. | s. | | | | | | | | | s. | s. | s. | h. m. s. | s. |
| 1876. Apr. 10 | 1 | B. A. C. 4002 . | P. | 59.8 | 2.6 | 4.1 | 10.3 | 12.3 | 14.3 | 20.4 | 22.0 | 24.6 | 44 12.27 | - 0.47 | . | + 4.39 | 11 44 16.19 | - 2.00 |
| | 2 | Ausonia | P. | 19.0 | 21.5 | 23.0 | 29.2 | 31.2 | 33.2 | 39.5 | 40.8 | 43.5 | 52 31.21 | - 0.54 | . | + 4.40 | 11 52 35.07 | . |
| | 3 | D'Agelet 2805 . | P. | 53.1 | 56.7 | 58.9 | 7.3 | 10.0 | 12.0 | 21.5 | 23.7 | 27.1 | 56 10.13 | + 0.05 | . | + 4.40 | 11 56 14.58 | - 3.06 |
| | 4 | B. A. C. 4002 . | P. | 12.4 | 15.7 | 17.7 | 25.8 | 28.4 | 31.1 | 39.1 | 41.3 | 44.7 | 2 28.47 | - 0.90 | . | + 4.40 | 12 2 31.97 | - 1.84 |
| | 5 | B. A. C. 4124 . | P. | 11.3 | 13.9 | 15.4 | 21.9 | 24.1 | 26.2 | 32.6 | 34.0 | 36.9 | 9 24.03 | - 0.64 | . | + 4.40 | 12 9 27.79 | - 1.89 |
| | 6 | Althaea | P. | 16.0 | 18.5 | 20.0 | 24.2 | 28.2 | 32.2 | 36.4 | 37.8 | 40.6 | 13 28.21 | - 0.52 | . | + 4.40 | 12 13 32.09 | . |
| | 7 | Hestia | P. | 18.1 | . | . | 26.3 | 28.3 | . | . | . | . | 19 30.36 | - 0.51 | . | + 4.40 | 12 19 31.25 | . |
| | 8 | Juno | P. | 22.6 | 25.2 | 26.6 | 32.9 | 34.8 | 36.8 | 42.9 | 44.5 | 47.2 | 25 34.53 | - 0.45 | . | + 4.40 | 12 25 38.78 | . |
| | 9 | Vesta | P. | 49.0 | 51.7 | 53.3 | 59.5 | 1.5 | 3.6 | 9.9 | 11.4 | 13.9 | 40 1.53 | - 0.40 | . | + 4.40 | 12 40 5.53 | . |
| | 10 | 12 ¹ Canum Venat. | P. | 55.0 | 58.5 | 0.5 | . | . | . | 21.7 | 23.5 | 26.8 | 50 11.00 | - 0.40 | . | + 4.40 | 12 50 15.30 | - 2.88 |
| | 11 | 12 ² Canum Venat. | P. | . | . | 6.8 | 9.6 | 12.3 | 15.0 | 17.5 | . | . | 50 12.24 | - 0.40 | + 4.18 | + 4.40 | 12 50 16.60 | + 0.22 |
| | 12 | B. A. C. 4355 . | P. | 29.4 | 32.5 | 34.3 | . | . | . | 53.7 | 55.4 | 58.6 | 53 43.99 | - 0.81 | . | + 4.40 | 12 53 47.58 | - 1.95 |
| | 13 | B. A. C. 4357 . | P. | . | . | 8.7 | 11.0 | 13.5 | 15.0 | 15.4 | . | . | 54 13.50 | - 0.81 | . | + 4.41 | 12 54 17.10 | - 1.95 |
| | 14 | Lacaille 5410 . | P. | 53.2 | 56.2 | 57.9 | 5.3 | 7.7 | 10.2 | 17.4 | 19.2 | 22.3 | 2 7.71 | - 0.81 | . | + 4.41 | 13 2 11.31 | - 2.00 |
| | 15 | B. A. C. 4417 . | P. | 51.7 | 55.0 | 56.9 | 4.7 | 7.1 | 9.7 | 17.3 | 19.3 | 22.7 | 5 7.16 | - 0.86 | . | + 4.41 | 13 5 10.71 | - 2.04 |
| | 16 | Polaris, S. P. . | P. | . | . | 22.0 | 55.0 | 29.0 | 4.0 | 35.0 | . | . | 12 29.00 | - 27.07 | . | + 4.41 | 1 12 5.82 | - 1.91 |
| | 17 | Peitho | P. | . | 56.6 | 58.4 | 4.7 | 6.5 | 8.9 | 14.6 | 16.6 | . | 18 6.66 | - 0.51 | . | + 4.41 | 13 18 10.56 | . |
| | 18 | B. A. C. 4518 . | P. | 31.0 | 34.0 | 36.0 | 44.0 | 46.6 | 49.3 | 57.3 | 59.4 | 2.5 | 25 46.68 | - 0.88 | . | + 4.41 | 13 25 50.21 | - 2.10 |
| | 19 | B. A. C. 4522 . | P. | 17.2 | 20.5 | 22.5 | 30.5 | 33.1 | 35.7 | 43.6 | 45.6 | 49.3 | 26 33.11 | - 0.88 | . | + 4.41 | 13 26 36.64 | - 2.11 |
| | 20 | Virginis | P. | . | . | . | 22.8 | 24.8 | 28.0 | 30.4 | 33.0 | . | 28 20.73 | - 0.40 | + 4.42 | + 4.41 | 13 28 21.65 | - 0.01 |
| | 21 | B. A. C. 4601 . | P. | 46.7 | 50.2 | 52.2 | 0.4 | 3.0 | 5.7 | 13.9 | 15.8 | 19.2 | 42 3.01 | - 0.91 | . | + 4.41 | 13 42 6.51 | - 2.16 |
| | 22 | B. A. C. 4629 ² (N.) | P. | 48.3 | 51.6 | 53.4 | 0.7 | 2.0 | 5.3 | 12.6 | 14.4 | 17.4 | 46 2.96 | - 0.79 | . | + 4.41 | 13 46 6.58 | - 2.08 |
| | 23 | Bootis | P. | 32.0 | 34.8 | 36.4 | 42.9 | 45.1 | 47.5 | 53.7 | 55.3 | 58.0 | 48 45.06 | - 0.39 | + 4.39 | + 4.41 | 13 48 49.17 | - 0.93 |
| | 24 | B. A. C. 4681 . | P. | 11.3 | 14.8 | 16.8 | 22.0 | 24.9 | 27.6 | 30.3 | 32.0 | . | 58 27.53 | - 0.90 | . | + 4.42 | 13 58 31.05 | - 2.18 |
| | 25 | B. A. C. 4686 . | P. | . | . | 19.6 | 22.0 | 24.4 | . | 32.2 | . | 37.0 | 59 22.01 | - 0.84 | . | + 4.42 | 13 59 25.59 | - 2.13 |
| | 26 | Bootis | P. | 15.3 | 48.1 | 49.8 | 56.3 | 58.5 | 0.7 | 7.2 | 8.8 | 11.6 | 9 53.48 | - 0.39 | + 4.44 | + 4.42 | 14 10 2.66 | - 0.02 |
| | 27 | Diana | P. | 23.0 | 25.4 | 27.2 | . | . | . | 45.7 | 47.5 | 50.3 | 15 30.52 | - 0.71 | . | + 4.42 | 14 15 40.20 | . |
| | 28 | Ceres | P. | 24.2 | 26.8 | 28.5 | 34.5 | 36.5 | 38.6 | 44.7 | 46.2 | 48.9 | 43 30.54 | - 0.52 | . | + 4.42 | 14 43 40.44 | . |
| | 29 | Bootis | P. | 58.4 | 1.0 | 3.9 | 12.0 | 14.7 | 17.4 | 25.5 | 27.5 | 31.9 | 57 14.70 | 0.00 | . | + 4.42 | 14 57 19.12 | + 0.03 |
| | 30 | Moon II, S. . . | P. | 48.2 | 50.8 | 52.5 | 59.2 | 1.1 | 3.7 | 10.5 | 12.2 | 15.0 | 8 1.50 | - 0.70 | . | + 4.43 | 15 8 5.23 | - 67.09 |
| | 31 | B. A. C. 5054 . | P. | 40.0 | 43.2 | 45.2 | 52.7 | 55.5 | 57.7 | 5.2 | 7.0 | 10.2 | 13 55.16 | - 0.84 | . | + 4.43 | 15 13 58.75 | - 2.15 |
| | 32 | Bootis | P. | 30.7 | 34.0 | 36.2 | 43.9 | 46.4 | 49.0 | 56.8 | 58.5 | 2.0 | 19 46.39 | - 0.06 | + 4.47 | + 4.43 | 15 19 50.76 | - 0.05 |
| | 33 | Coronæ Borealis. | P. | 10.5 | 13.3 | 15.0 | 22.0 | 24.2 | 26.5 | 33.1 | 35.0 | 38.0 | 20 24.21 | - 0.21 | + 4.44 | + 4.43 | 15 20 28.43 | - 0.01 |
| | 34 | Serpentis (R.). | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 35 | Serpentis | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 36 | Ursæ Minoris (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 37 | Ursæ Minoris . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 38 | Jupiter I, N. . . | P. | 24.8 | 27.6 | 29.3 | . | . | . | 49.5 | 48.2 | 50.9 | 56 37.88 | - 0.67 | . | + 4.43 | 15 56 41.64 | . |
| | 39 | Jupiter II, S. . | P. | . | 36.0 | 38.8 | 40.0 | 43.2 | 45.3 | . | . | . | 50 49.96 | - 0.67 | . | + 4.43 | 15 56 44.72 | . |
| | 40 | Scorpii | P. | 58.9 | 1.5 | 3.2 | 9.8 | 11.0 | 14.1 | 20.5 | 22.2 | 24.9 | 58 11.89 | - 0.67 | + 4.43 | + 4.43 | 15 58 15.65 | + 0.03 |
| | 41 | Ophiuchi | P. | 36.6 | 39.1 | 40.7 | 46.8 | 48.8 | 50.9 | 57.0 | 58.5 | 1.2 | 7 48.84 | - 0.52 | + 4.43 | + 4.44 | 16 7 52.76 | + 0.03 |
| | 42 | Piscis Australis. | E. | . | . | . | . | . | 48.0 | 53.7 | 55.5 | 58.5 | 50 44.24 | - 0.87 | + 4.54 | + 4.48 | 22 50 47.85 | - 0.02 |
| | 43 | Pegasi | E. | 18.0 | 20.7 | 22.4 | 28.6 | 30.0 | 32.0 | 39.0 | 40.7 | 43.5 | 58 30.65 | - 0.43 | + 4.52 | + 4.48 | 22 58 34.73 | - 0.01 |
| | 44 | Andromedæ . . . | E. | 39.9 | 42.9 | 44.5 | 51.5 | 53.0 | 56.2 | 3.0 | 4.9 | 7.8 | 1 53.84 | - 0.27 | + 4.45 | + 4.47 | 0 1 58.04 | + 0.04 |
| | 45 | Pegasi | E. | 34.0 | 36.6 | 42.3 | 44.6 | 46.6 | 48.8 | 51.0 | 56.6 | 59.3 | 6 46.64 | - 0.43 | + 4.38 | + 4.47 | 0 6 50.71 | + 0.12 |
| | 46 | Mercury I, C. . . | E. | 5.9 | 8.5 | 10.0 | . | . | . | 26.5 | 28.0 | 30.6 | 42 18.25 | - 0.55 | . | + 4.46 | 0 42 22.16 | + 0.17 |
| | 47 | Mercury II . . . | E. | . | 14.5 | 16.6 | 18.6 | 20.7 | 22.7 | . | . | . | 42 18.62 | - 0.55 | . | + 4.46 | 0 42 22.53 | - 0.20 |
| | 48 | Polaris | E. | . | 46.0 | 44.0 | 39.0 | 4.0 | 32.0 | . | . | . | 11 38.92 | + 24.34 | . | + 4.46 | 1 12 7.72 | - 0.12 |
| | 49 | Sun I, N. | E. | 31.5 | 34.0 | 35.5 | 42.0 | 43.0 | 46.0 | 52.2 | 53.7 | 56.4 | 20 43.91 | - 0.53 | . | + 4.46 | 1 20 47.84 | . |
| | 50 | Sun II, S. | E. | 41.0 | 43.7 | 45.2 | 51.6 | 53.5 | 55.7 | 1.8 | 3.4 | 6.0 | 22 53.54 | - 0.53 | . | + 4.46 | 1 22 57.47 | . |

2, 6, 7, 12, 14, 17, 19, 27, 35, 39. Thread A used.

3, 39, 36, 37. Bisections at sets B and D.

13, 28, 29, 40. Thread B used.

46. Telescope micrometer reading increased one revolution in reduction.

| Number. | Circle Division | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | | |
|---------|-----------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|-------|----|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | | | | | | | |
| 1 | 323 30 | 10 10.5 | 11.5 | 27.6 | 9.5 | 32 | .. | .. | .. | 610 | 575 | 61.2 | 36 25 18.1 | .. | + | 43.8 | 87 32 23.1 | -12.0 | |
| 2 | 316 12 | 11.5 | 12.5 | 1.5 | 10.5 | 38 | .. | 095 | .. | 980 | .. | 61.2 | 43 42 8.5 | 42.9 | + | 56.7 | 94 49 26.4 | -4.5 | |
| 3 | 4 50 | 8.0 | 10.0 | 28.8 | 6.0 | 36 | 735 | .. | .. | .. | 625 | 61.2 | 355 6 18.0 | .. | - | 5.1 | 46 12 34.1 | -5.4 | |
| 4 | 280 34 | 11.9 | 13.4 | 1.4 | 11.2 | 32 | 550 | 520 | .. | .. | .. | 61.2 | 79 21 16.6 | .. | + | 5 6.6 | 130 32 44.4 | -16.1 | |
| 5 | 304 12 | 11.7 | 12.0 | 29.3 | 9.9 | 33 | 090 | 940 | .. | .. | .. | 61.2 | 55 43 38.2 | .. | + | 1 27.0 | 106 51 26.4 | -15.1 | |
| 6 | 317 20 | 11.5 | 13.1 | 29.7 | 10.0 | 38 | .. | .. | .. | 740 | .. | 61.2 | 42 34 19.8 | .. | + | 54.6 | 93 41 35.6 | -3.3 | |
| 7 | 319 30 | 5.7 | 6.7 | 24.3 | 5.1 | 37 | .. | .. | .. | 490 | 540 | 61.2 | 40 23 55.7 | .. | + | 50.6 | 91 31 7.5 | -2.9 | |
| 8 | 325 8 | 9.7 | 11.2 | 28.7 | 8.0 | 31 | 850 | 875 | .. | 735 | 690 | 61.2 | 34 47 4.2 | .. | + | 41.3 | 85 54 6.7 | -2.4 | |
| 9 | 330 28 | 8.5 | 9.6 | 27.3 | 6.9 | 33 | 580 | 535 | .. | 365 | 370 | 61.2 | 29 27 28.6 | .. | + | 33.6 | 80 34 23.4 | -2.2 | |
| 10 | 0 0 | 6.8 | 9.0 | 24.5 | 4.0 | 30 | 765 | .. | .. | .. | 600 | 61.2 | 359 54 44.5 | 41.0 | - | 0.1 | 51 1 5.6 | -11.1 | |
| 11 | 0 0 | 6.8 | 9.0 | 24.5 | 4.0 | 29 | .. | 810 | .. | 735 | .. | 61.2 | 359 54 30.2 | .. | - | 0.1 | 51 0 51.3 | -0.9 | |
| 12 | 288 12 | 13.0 | 14.0 | 1.5 | 9.6 | 33 | 325 | 270 | .. | .. | .. | 61.2 | 71 40 54.8 | .. | + | 2 58.2 | 122 50 14.2 | -15.7 | |
| 13 | 288 12 | 13.0 | 14.0 | 1.5 | 9.6 | 41 | .. | .. | .. | 425 | 455 | 61.2 | 71 48 7.9 | .. | + | 2 59.5 | 122 57 28.6 | -15.7 | |
| 14 | 288 12 | 13.0 | 14.0 | 1.5 | 9.6 | 34 | 600 | 575 | .. | .. | .. | 61.2 | 71 41 14.5 | .. | + | 2 58.4 | 122 50 34.1 | -15.6 | |
| 15 | 283 58 | 13.1 | 15.4 | 4.4 | 11.9 | 37 | 840 | 815 | .. | .. | .. | 61.2 | 75 58 39.4 | .. | + | 3 54.6 | 127 8 55.2 | -15.4 | |
| 16 | 52 22 | 8.2 | 8.7 | 25.5 | 3.4 | 35 | 400 | 345 | 315 | 325 | 320 | 61.2 | 307 33 55.4 | .. | - | 1 17.5 | 358 38 59.1 | 0.0 | |
| 17 | 319 8 | 9.5 | 12.0 | 28.5 | 8.1 | 39 | .. | 235 | .. | 080 | .. | 61.2 | 40 46 23.7 | .. | + | 51.4 | 91 53 36.3 | -2.9 | |
| 18 | 281 46 | 14.7 | 16.3 | 4.7 | 12.0 | 32 | 125 | 060 | .. | .. | .. | 61.2 | 78 9 12.2 | .. | + | 4 37.7 | 129 20 11.1 | -14.9 | |
| 19 | 281 46 | 14.7 | 16.3 | 4.7 | 12.0 | 36 | .. | .. | .. | 200 | 215 | 61.2 | 78 7 44.3 | .. | + | 4 37.2 | 129 18 42.7 | -14.9 | |
| 20 | 321 6 | 8.9 | 10.0 | 26.7 | 6.6 | 38 | .. | .. | .. | 445 | 440 | 61.2 | 38 50 45.9 | .. | + | 48.1 | 89 57 55.2 | -0.3 | |
| 21 | 280 4 | 10.5 | 12.3 | 29.5 | 9.5 | 37 | 905 | 850 | .. | .. | .. | 61.2 | 79 52 36.8 | .. | + | 5 23.8 | 131 4 21.8 | -14.3 | |
| 22 | 289 46 | 10.1 | 11.4 | 29.9 | 8.5 | 35 | .. | .. | .. | 280 | .. | 61.2 | 70 9 59.0 | .. | + | 2 44.3 | 121 19 4.5 | -15.1 | |
| 23 | 340 4 | 9.6 | 11.0 | 27.5 | 7.5 | 36 | 880 | 820 | .. | 740 | 715 | 61.2 | 10 52 20.4 | .. | + | 21.6 | 70 50 3.2 | -0.3 | |
| 24 | 280 32 | 14.5 | 14.0 | 3.9 | 11.1 | 34 | .. | 435 | .. | .. | .. | 61.2 | 79 23 47.4 | .. | + | 5 9.8 | 120 35 18.4 | -13.9 | |
| 25 | 285 20 | 8.8 | 10.3 | 29.0 | 7.4 | 34 | .. | .. | .. | 775 | 795 | 61.2 | 74 35 50.4 | .. | + | 3 33.9 | 126 5 45.5 | -14.4 | |
| 26 | 340 52 | 8.2 | 9.5 | 27.0 | 7.7 | 31 | .. | 055 | .. | 925 | .. | 61.2 | 19 3 52.0 | .. | + | 20.7 | 70 10 33.9 | +0.7 | |
| 27 | 294 42 | 12.6 | 13.0 | 0.6 | 10.6 | 38 | .. | 440 | .. | 265 | .. | 61.2 | 65 12 14.1 | 39.0 | + | 2 8.9 | 116 20 44.2 | -5.1 | |
| 28 | 318 18 | 12.2 | 14.3 | 1.4 | 11.3 | 30 | 455 | 445 | .. | 260 | 245 | 61.2 | 41 39 17.4 | .. | + | 53.2 | 92 46 31.8 | -2.7 | |
| 29 | 1 56 | 9.8 | 11.4 | 21.1 | 7.1 | 30 | .. | 085 | .. | 005 | .. | 61.2 | 358 1 10.1 | .. | - | 2.1 | 49 7 29.2 | -1.3 | |
| 30 | 298 14 | 11.0 | 11.4 | 1.0 | 8.9 | 38 | 075 | .. | 190 | .. | 270 | 61.2 | 61 42 43.2 | 38.5 | + | 1 50.9 | 112 50 55.3 | .. | |
| 31 | 285 18 | 15.7 | 16.0 | 4.2 | 12.1 | 38 | .. | 495 | .. | 395 | .. | 61.2 | 74 38 51.0 | .. | + | 3 35.0 | 125 48 47.2 | -12.2 | |
| 32 | 358 50 | 11.4 | 11.8 | 29.0 | 7.3 | 32 | .. | .. | .. | 180 | 155 | 61.2 | 1 5 12.1 | .. | + | 1.1 | 52 11 34.4 | -0.1 | |
| 33 | 348 10 | 10.0 | 10.9 | 27.3 | 7.2 | 34 | 750 | 740 | .. | .. | .. | 61.2 | 11 45 48.0 | .. | + | 12.5 | 62 52 21.7 | +0.3 | |
| 34 | 212 0 | 15.3 | 17.8 | 5.6 | 9.1 | 33 | 855 | 825 | .. | .. | .. | 61.8 | 147 55 39.4 | .. | - | 37.6 | 83 11 19.4 | +2.4 | |
| 35 | 327 52 | 7.5 | 8.5 | 24.8 | 5.6 | 36 | .. | .. | .. | 675 | 695 | 61.2 | 32 4 17.6 | .. | + | 37.6 | 83 11 16.4 | -0.6 | |
| 36 | 140 40 | 3.6 | 8.0 | 23.4 | 1.5 | 34 | 590 | 545 | .. | .. | .. | 61.2 | 219 15 40.8 | .. | + | 49.0 | 11 49 51.4 | -1.4 | |
| 37 | 39 12 | 8.7 | 9.0 | 25.5 | 3.7 | 36 | .. | .. | .. | 870 | 895 | 61.2 | 320 44 20.2 | .. | - | 49.0 | 11 49 52.4 | -0.4 | |
| 38 | 301 40 | 9.5 | 11.7 | 28.9 | 9.0 | 26 | 770 | .. | .. | .. | 515 | 61.2 | 58 11 12.0 | .. | + | 1 36.4 | 109 19 9.6 | .. | |
| 39 | 301 40 | 9.5 | 11.7 | 28.9 | 9.0 | 29 | .. | 560 | .. | 440 | .. | 61.2 | 58 11 55.9 | .. | + | 1 36.4 | 109 19 53.5 | .. | |
| 40 | 301 40 | 9.5 | 11.7 | 28.9 | 9.0 | 41 | .. | 650 | .. | 465 | 380 | 61.2 | 58 20 6.0 | .. | + | 1 37.0 | 109 28 4.2 | -1.3 | |
| 41 | 317 40 | 9.5 | 11.8 | 28.6 | 9.0 | 33 | 220 | 185 | .. | 025 | 990 | 61.2 | 42 15 24.6 | 37.7 | + | 54.5 | 93 22 40.3 | -0.7 | |
| 42 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 43 | 335 36 | 11.0 | 11.7 | 29.5 | 9.4 | 39 | .. | 500 | .. | 410 | .. | 60.2 | 24 21 1.6 | 51.7 | + | 26.4 | 75 27 49.2 | +1.3 | |
| 44 | 349 26 | 8.8 | 10.5 | 28.5 | 7.2 | 32 | .. | 515 | .. | 345 | .. | 60.2 | 10 29 12.5 | .. | + | 10.8 | 61 35 44.5 | +1.5 | |
| 45 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 46 | 323 31 | 11.9 | 13.5 | 1.6 | 12.0 | 35 | 250 | 215 | .. | 970 | 930 | 60.2 | 36 22 11.9 | .. | + | 42.8 | 87 29 15.9 | .. | |
| 47 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 48 | 49 40 | 6.5 | 7.0 | 23.9 | 2.7 | 34 | 830 | .. | 870 | .. | 865 | 60.2 | 310 15 46.0 | .. | - | 1 7.6 | 1 20 59.6 | -1.4 | |
| 49 | 329 56 | 9.7 | 11.1 | 28.2 | 10.9 | 33 | 370 | 280 | .. | .. | .. | 60.2 | 29 59 25.7 | 60.5 | + | 33.1 | 81 6 20.0 | .. | |
| 50 | 329 24 | 8.5 | 9.3 | 27.1 | 9.2 | 32 | .. | .. | .. | 915 | 890 | 60.2 | 30 31 21.0 | .. | + | 33.8 | 81 38 16.0 | .. | |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " | " | " | " |
| 2 | 30.12 | 46.6 | 30 | -48 21.3 | -15 2.0 | .. | -1 3 23.3 |
| 10 | 30.13 | 44.5 | 38 | -1.6 | + 22.0 | .. | 20.4 |
| 27 | 30.12 | 42.7 | 39 | -1.6 | - 22.0 | .. | 23.6 |
| 30 | 30.12 | 42.0 | 46 | -4.0 | .. | 0.1 | 3.9 |
| 41 | 30.11 | 40.6 | 49 | -4.4 | + 15 58.0 | .. | 15 53.6 |
| 43 | 30.14 | 48.0 | 50 | -4.5 | - 15 58.0 | .. | 16 2.5 |
| 49 | 30.11 | 55.8 | | | | | |

For summary of the elements of reduction see page 3.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. | | |
|---------|---------|--------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|---------------|----------------|---------------------------|----------------------------|-------|---------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't | Clock adopted. | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| 1876. | | | | | | | | | | | | m. | s. | s. | s. | s. | h. | m. | s. | s. |
| Apr. 11 | 1 | Tauri | E. | | | | | | 6.9 | 11.4 | 13.0 | 15.9 | 40 | 2.46 | - 0.37 | + 4.47 | + 4.44 | 3 40 | 6.53 | - 0.03 |
| | 2 | Persei | E. | | | 13.5 | 15.8 | 18.4 | 20.8 | 25.4 | 27.2 | 30.3 | 46 | 15.91 | - 0.28 | + 4.35 | + 4.44 | 3 46 | 20.06 | + 0.08 |
| | 3 | Venus I, S. . . . | E. | 10.3 | 13.3 | 15.0 | 21.7 | 23.9 | 26.0 | 32.8 | 34.1 | 37.3 | 15 | 23.87 | - 0.37 | | + 4.44 | 4 15 | 27.94 | + 0.69 |
| | 4 | Tauri | E. | 31.5 | 34.2 | 35.8 | 42.2 | 44.2 | 46.2 | 52.8 | 54.1 | 57.9 | 28 | 44.24 | - 0.45 | + 4.51 | + 4.44 | 4 28 | 48.23 | - 0.09 |
| | 5 | Polaris | F. | | | | | | | | | | 21.0 | 11 | 40.30 | | | | | |
| | 6 | Sun I, N. | F. | 12.1 | 14.6 | 16.2 | 22.1 | 24.4 | 26.5 | 32.7 | 34.2 | 36.8 | 24 | 24.43 | - 0.48 | | + 4.82 | 1 24 | 28.77 | |
| | 7 | Sun II, S. | F. | 21.5 | 24.4 | 25.8 | 32.1 | 34.2 | 36.1 | 42.2 | 43.9 | 46.4 | 26 | 34.07 | - 0.48 | | + 4.82 | 1 26 | 35.41 | |
| | 8 | Persei | F. | | | | | | | | | | | | - 0.46 | + 4.86 | + 4.79 | 3 40 | 6.55 | - 0.01 |
| | 9 | Tauri | F. | 51.6 | 53.4 | 57.8 | 0.0 | 2.2 | 4.5 | 6.6 | 11.1 | 2.8 | 40 | 2.22 | - 0.43 | + 4.77 | + 4.79 | 3 46 | 19.99 | + 0.01 |
| | 10 | Persei | F. | 1.3 | 4.2 | 6.0 | 13.2 | 15.6 | 18.1 | 25.3 | 27.6 | 30.0 | 46 | 15.63 | - 0.43 | + 4.77 | + 4.79 | | | |
| | 11 | Venus I, S. . . . | F. | 49.7 | 52.6 | 54.2 | 1.0 | 3.2 | 5.4 | 12.1 | 13.6 | 16.6 | 20 | 3 19 | - 0.46 | | + 4.79 | 4 20 | 7.52 | + 0.70 |
| | 12 | Venus, N. | F. | | | | | | | | | | | | - 0.48 | + 4.79 | - 4.75 | 4 28 | 48.25 | - 0.03 |
| | 13 | Tauri | F. | 31.2 | 33.9 | 35.5 | 41.8 | 43.9 | 46.1 | 52.5 | 54.1 | 56.8 | 28 | 43.95 | - 0.48 | | + 4.73 | 9 14 | 18.53 | |
| | 14 | Uranus | F. | 1.3 | 4.0 | 5.8 | 12.0 | 14.2 | 16.3 | 22.7 | 24.2 | 27.6 | 14 | 14.17 | - 0.37 | | + 4.73 | 9 49 | 54.88 | - 1.76 |
| | 15 | Lalande 19442. . | F. | 37.8 | 40.4 | 42.0 | 48.6 | 50.6 | 52.6 | 59.0 | 0.5 | 3.3 | 49 | 50.53 | - 0.38 | | + 4.73 | | | |
| | 16 | Leonis | F. | | | | | | 16.3 | 50.5 | 51.6 | 54.6 | 42 | 41.96 | - 0.38 | + 4.61 | + 4.70 | 11 42 | 46.28 | + 0.07 |
| | 17 | Althaea | F. | 50.9 | 53.6 | 55.4 | | | | 11.5 | 13.4 | 16.1 | 12 | 3.48 | - 0.44 | | + 4.70 | 12 12 | 7.74 | |
| | 18 | Juno | F. | 58.7 | 1.2 | 2.8 | 9.0 | 10.9 | 12.9 | 18.9 | 20.6 | 23.4 | 24 | 10.93 | - 0.42 | | + 4.09 | 12 24 | 15.20 | |
| | 19 | Vesta | F. | 5.5 | 8.1 | 9.6 | 15.9 | 17.0 | 20.1 | 26.2 | 27.9 | 30.5 | 38 | 17.97 | - 0.40 | | + 4.69 | 12 38 | 22.26 | |
| | 20 | Polaris, S. P. . . | F. | | | 8.0 | 40.0 | | 47.0 | 20.0 | | | 12 | 13.88 | - 10.12 | | + 4.67 | 1 12 | 8.43 | + 0.23 |
| | 21 | Bootis | F. | 45.4 | 48.1 | 49.8 | 56.3 | | 0.7 | 7.0 | 8.7 | 11.5 | 9 | 58 44 | - 0.36 | + 4.56 | + 4.66 | 14 10 | 2 74 | + 0.10 |
| | 22 | Ursæ Minoris (R.) | F. | | | | | | | | | | | | | | | | | |
| | 23 | Ursæ Minoris . . | F. | | | | | | | | | | | | | | | | | |
| | 24 | Boetis | F. | | 27.8 | 30.1 | | 34.6 | 36.9 | 41.5 | 43.4 | 46.2 | 39 | 32.36 | - 0.33 | + 4.65 | + 4.65 | 14 31 | 36.68 | - 0.02 |
| | 25 | Libra | F. | 46.4 | 49.1 | 50.7 | | | | 7.6 | 9.1 | 11.9 | 43 | 59 13 | - 0.48 | + 4.64 | + 4.65 | 14 44 | 3.39 | 0.00 |
| | 26 | Bootis | F. | | | | | 17.5 | 20.1 | 25.7 | 27.6 | 31.1 | 57 | 14.81 | - 0.26 | | + 4.65 | 14 57 | 19.20 | + 0.08 |
| | 27 | Coronæ Borealis . | F. | | | | | | | 33.3 | 35.0 | 37.9 | 29 | 24.12 | - 0.33 | + 4.69 | + 4.64 | 15 29 | 28.43 | - 0.05 |
| | 28 | Serpentis | F. | | 3.3 | 5.4 | | 9.6 | 11.6 | 15.7 | 17.3 | 19.7 | 35 | 7.45 | - 0.41 | + 4.61 | + 4.64 | 15 35 | 11.68 | + 0.05 |
| | 29 | Serpentis | F. | 23.6 | 26.2 | 27.7 | | | | 44.0 | 45.8 | 48.2 | 44 | 35.88 | - 0.42 | + 4.66 | + 4.64 | 15 44 | 40.10 | - 0.02 |
| | 30 | Coronæ Borealis (R) | F. | | | | | | | | | | | | | | | | | |
| | 31 | Coronæ Borealis . | F. | | | | | | | | | | | | | | | | | |
| | 32 | Scorpii | F. | 58.5 | 1.3 | 3.6 | | | | 20.3 | 21.8 | 24.7 | 58 | 11.60 | - 0.50 | + 4.60 | + 4.64 | 15 58 | 15.74 | + 0.07 |
| | 33 | Moon II, S. . . . | F. | | 22.4 | 24.8 | | 29.6 | 32.1 | 36.7 | 38.4 | 41.5 | 55 | 27.13 | - 0.53 | | + 4.62 | 16 55 | 31.02 | - 69.94 |
| | | | | | | | | | | | | | | | | | | | | |
| | 34 | B. A. C. 5432 ¹ . . | S. | 45.5 | 48.6 | 50.6 | | | | 10.2 | 12.0 | 15.2 | 10 | 0.37 | - 0.53 | | + 4.22 | 16 10 | 4 00 | + 2.08 |
| | 35 | B. A. C. 5432 ² . . | S. | | | 55.5 | 58.1 | 0.5 | 2.9 | 5.5 | | | 10 | 0.45 | - 0.53 | | + 4.22 | 16 10 | 4 17 | - 2.08 |
| | 36 | Scorpii | S. | 23.9 | 26.8 | 28.4 | 35.1 | 37.5 | 39.6 | 46.4 | 48.2 | 51.0 | 13 | 37.43 | - 0.31 | | + 4.22 | 16 13 | 41.34 | - 2.02 |
| | 37 | Scorpii | S. | 32.9 | 35.8 | 37.3 | 44.3 | 46.5 | 48.8 | 55.7 | 57.2 | 0.2 | 21 | 46.82 | - 0.31 | + 4.21 | | | | |
| | 38 | Herculis | S. | | | | | | | 47.5 | 49.5 | 52.9 | 38 | 37.04 | - 0.57 | + 4.22 | | | | |
| | 39 | B. A. C. 5718 . . . | S. | | | 44.8 | 47.5 | 49.8 | 52.3 | 54.8 | | | 53 | 49.82 | - 0.37 | | + 4.21 | 16 53 | 53.73 | - 2.01 |
| | 40 | B. A. C. 5785 ¹ . . | S. | 23.4 | 27.6 | 30.3 | | | | 58.5 | 1.2 | 5.6 | 2 | 44.41 | - 0.74 | | + 4.21 | 17 2 | 47.88 | - 2.01 |
| | 41 | B. A. C. 5785 ² . . | S. | | | 37.1 | 41.1 | 44.6 | 48.1 | 51.7 | | | 2 | 44.88 | - 0.74 | | + 4.21 | 17 2 | 48.03 | - 2.01 |
| | 42 | Groom, 966, S. P. . | S. | 50.2 | 40.1 | 34.6 | 10.7 | 2.2 | 54.8 | 31.4 | 25.5 | 16.6 | 22 | 2 77 | + 1.06 | | + 4.21 | 5 23 | 8 04 | - 0.58 |
| | 43 | Draconis | S. | 16.1 | 20.2 | 22.7 | 32.7 | 36.1 | 39.1 | 49.4 | 51.8 | 56.1 | 27 | 36.00 | - 0.71 | | + 4.21 | 17 27 | 39 56 | + 0.05 |
| | 44 | Ursæ Minoris . . . | P. | | | | 51.3 | 26.0 | 0.0 | | | | 12 | 25.13 | - 6.39 | | + 3.85 | 18 12 | 22.65 | - 0.08 |
| | 45 | Mayer 729 | P. | 47.3 | 50.1 | 51.8 | 58.2 | 0.4 | 2.6 | 9.0 | 10.6 | 13.3 | 24 | 0 37 | - 0.10 | | + 3.84 | 18 21 | 4.11 | - 1.53 |
| | 46 | Lyrae | P. | 26.3 | 29.6 | 31.5 | 39.5 | 42.2 | 44.7 | 52.5 | 54.5 | 57.7 | 32 | 42.06 | - 0.42 | + 3.84 | + 3.84 | 18 32 | 45.48 | + 0.02 |
| | 47 | Cephei, S. P. . . . | P. | | | | | | | 46.4 | 15.7 | 22.5 | 41 | 36 50 | + 7.87 | | + 3.83 | 6 41 | 47.00 | + 0.05 |
| | 48 | Moon II, N. . . . | P. | 40.9 | 44.0 | 45.7 | 52.9 | 55.3 | 57.8 | 4.8 | 6.6 | 9.7 | 40 | 55.30 | - 0.05 | | + 3.83 | 18 46 | 59.08 | - 69.76 |
| | 49 | B. A. C. 6491 . . . | P. | 1.3 | 4.3 | 6.1 | 13.3 | 15.8 | 18.2 | 25.5 | 27.3 | 30.3 | 54 | 15.79 | - 0.37 | | + 3.83 | 18 54 | 10.25 | - 0.01 |
| | 50 | Aquilæ | P. | 27.5 | 30.1 | 31.8 | 38.0 | 40.1 | 42.3 | 48.5 | 50.6 | 52.7 | 59 | 40.11 | - 0.25 | + 3.82 | + 3.82 | 18 59 | 43.68 | + 0.08 |

4. Telescope micrometer reading decreased one revolution in reduction.
15, 17, 39. Thread A used.
23, 48. Bisections at sets B and D.
32, 47. Thread B used.
42. Bisections at threads C₁ and B₁.
47. Bisections at threads D₁, D₂, and D₃.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " |
| 1 | 344 46 | 10 7.5 | 11.8 | 28.0 | 8.7 | 35 | .. | .. | .. | 815 | 745 | 58.0 | 15 10 3.1 | .. | 15.4 | 66 16 39.7 |
| 2 | 352 34 | 8.0 | 11.9 | 28.8 | 9.2 | 37 | .. | .. | .. | 715 | 700 | 58.0 | 7 22 33.2 | .. | 7.3 | 58 29 1.7 |
| 3 | 344 52 | 7.0 | 12.0 | 29.5 | 6.2 | 36 | .. | 525 | .. | 350 | .. | 58.0 | 15 4 11.6 | .. | 15.2 | 66 10 48.0 |
| 4 | 337 18 | 10.5 | 15.1 | 4.5 | 10.5 | 34 | 910 | .. | .. | .. | 700 | 58.0 | 22 37 36.0 | 67.5 | 23.5 | 73 44 20.7 |
| 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 6 | 330 18 | 12.8 | 16.9 | 2.4 | 11.2 | 33 | 766 | 784 | .. | .. | .. | 57.8 | 29 37 33.5 | .. | 32.2 | 80 44 26.9 |
| 7 | 329 46 | 11.1 | 14.4 | 29.4 | 10.4 | 33 | .. | .. | .. | 532 | 512 | 57.8 | 30 9 30.9 | 65.8 | 32.9 | 81 16 25.0 |
| 8 | 10 28 | 16.1 | 16.9 | 4.0 | 13.2 | 37 | .. | .. | .. | 346 | 222 | 57.8 | 349 28 32.4 | .. | 10.4 | 40 34 43.2 |
| 9 | 344 46 | 13.0 | 16.0 | 3.4 | 14.3 | 35 | .. | 512 | .. | 474 | .. | 57.8 | 15 10 2.4 | .. | 15.1 | 66 16 38.7 |
| 10 | 352 34 | 13.7 | 14.5 | 2.3 | 14.8 | 37 | .. | .. | .. | 478 | 438 | 57.8 | 7 22 33.5 | .. | 7.2 | 58 29 1.9 |
| 11 | 345 6 | 13.1 | 14.8 | 1.7 | 14.3 | 35 | 418 | .. | .. | .. | 052 | 57.8 | 14 49 57.9 | .. | 14.7 | 65 56 33.8 |
| 12 | 345 6 | 13.1 | 14.8 | 1.7 | 14.3 | 34 | .. | 114 | .. | 918 | .. | 57.8 | 14 49 39.1 | .. | 14.7 | 65 56 15.0 |
| 13 | 337 18 | 13.7 | 14.1 | 4.3 | 14.2 | 33 | .. | .. | .. | 924 | 850 | 57.8 | 22 37 38.9 | 75.8 | 23.1 | 73 44 23.2 |
| 14 | 337 48 | 15.6 | 11.7 | 29.8 | 11.7 | 31 | .. | 462 | .. | 354 | .. | 58.5 | 22 6 58.5 | 67.0 | 22.8 | 73 13 42.5 |
| 15 | 336 18 | 15.3 | 12.1 | 27.5 | 10.5 | 31 | .. | .. | .. | 340 | 350 | 58.5 | 23 31 24.6 | .. | 24.6 | 74 41 10.4 |
| 16 | 336 18 | 14.5 | 16.1 | 1.4 | 11.2 | 33 | .. | .. | .. | 228 | 214 | 58.5 | 23 37 28.6 | .. | 24.8 | 74 41 14.6 |
| 17 | 317 32 | 19.9 | 19.6 | 3.8 | 19.6 | 32 | .. | .. | .. | 300 | 244 | 58.5 | 42 20 45.5 | .. | 51.8 | 93 27 58.5 |
| 18 | 325 22 | 16.7 | 17.0 | 2.2 | 15.9 | 32 | .. | .. | .. | 246 | 224 | 58.5 | 34 33 15.6 | .. | 39.2 | 85 40 16.0 |
| 19 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 20 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 21 | 340 52 | 15.2 | 13.8 | 0.2 | 12.3 | 34 | .. | 978 | .. | 925 | .. | 58.5 | 19 3 53.5 | 57.0 | 19.8 | 70 10 31.5 |
| 22 | 142 36 | 13.0 | 14.2 | 0.5 | 7.7 | 36 | 670 | 594 | .. | .. | .. | 58.5 | 217 20 14.2 | .. | 43.6 | 13 45 23.4 |
| 23 | 37 16 | 14.9 | 13.8 | 0.7 | 10.7 | 34 | .. | .. | .. | .. | 546 | 58.5 | 322 39 47.6 | .. | 43.6 | 13 45 25.2 |
| 24 | 348 38 | 15.7 | 17.7 | 1.2 | 12.5 | 34 | .. | .. | .. | 858 | 852 | 58.5 | 11 17 54.7 | .. | 11.4 | 62 24 27.3 |
| 25 | 305 32 | 21.3 | 19.8 | 5.0 | 18.4 | 35 | .. | .. | .. | .. | 422 | 58.5 | 51 24 7.5 | .. | 19.8 | 105 31 48.5 |
| 26 | 1 54 | 15.7 | 14.7 | 2.4 | 13.0 | 31 | .. | .. | .. | 962 | 926 | 58.5 | 358 1 10.0 | .. | 2.0 | 49 7 29.2 |
| 27 | 348 10 | 24.7 | 22.4 | 8.0 | 18.8 | 34 | .. | .. | .. | 086 | 040 | 58.5 | 11 45 49.3 | .. | 11.9 | 62 52 22.4 |
| 28 | 327 52 | 18.2 | 16.4 | 2.5 | 13.9 | 36 | .. | .. | .. | 486 | 468 | 58.5 | 31 4 20.3 | .. | 35.9 | 83 11 17.4 |
| 29 | 325 54 | 17.8 | 18.1 | 2.3 | 15.5 | 35 | .. | 870 | .. | 800 | .. | 58.5 | 31 2 9.9 | .. | 38.7 | 85 9 9.8 |
| 30 | 191 36 | 16.2 | 17.7 | 3.5 | 12.6 | 36 | 948 | 962 | .. | .. | .. | 58.5 | 168 20 24.7 | 56.0 | 11.8 | 62 46 8.3 |
| 31 | 348 16 | 16.7 | 16.9 | 2.3 | 13.5 | 33 | .. | .. | .. | .. | 238 | 58.5 | 11 39 30.9 | .. | 11.8 | 62 46 3.9 |
| 32 | 301 38 | 16.7 | 17.0 | 2.0 | 13.7 | 33 | .. | 830 | .. | 816 | .. | 58.5 | 58 20 10.3 | .. | 32.6 | 109 28 4.1 |
| 33 | 292 16 | 18.0 | 16.8 | 4.8 | 15.2 | 32 | 016 | 006 | 996 | 050 | 100 | 58.5 | 67 39 11.8 | 55.6 | 2 18.4 | 118 47 51.4 |
| 34 | 355 12 | 21.4 | 22.5 | 5.9 | 13.5 | 33 | .. | .. | .. | 000 | .. | 59.9 | 4 43 31.1 | .. | 4.6 | 55 49 56.9 |
| 35 | 355 12 | 21.4 | 22.5 | 5.9 | 13.5 | 32 | .. | .. | .. | .. | 930 | 59.9 | 4 43 30.7 | .. | 4.6 | 55 49 50.5 |
| 36 | 295 46 | 22.0 | 23.7 | 8.8 | 18.1 | 32 | .. | 910 | .. | .. | .. | 59.9 | 64 9 30.5 | .. | 1 55.4 | 115 17 47.1 |
| 37 | 294 54 | 18.5 | 20.2 | 5.5 | 12.6 | 31 | .. | 680 | .. | 630 | .. | 58.9 | 65 1 7.9 | 62.5 | 1 59.9 | 110 9 29.0 |
| 38 | 0 12 | 17.6 | 21.3 | 6.6 | 12.0 | 36 | .. | .. | .. | 990 | 940 | 59.9 | 359 44 30.8 | .. | 0.3 | 50 50 51.7 |
| 39 | 289 4 | 20.5 | 23.9 | 9.0 | 17.3 | 31 | 320 | 350 | .. | .. | .. | 59.9 | 70 48 31.9 | .. | 2 39.8 | 121 57 32.9 |
| 40 | 15 40 | 13.8 | 16.5 | 1.6 | 8.4 | 36 | .. | .. | .. | 250 | .. | 59.9 | 344 16 15.4 | .. | 15.8 | 35 22 20.8 |
| 41 | 15 40 | 13.8 | 16.5 | 1.6 | 8.4 | 36 | .. | .. | .. | .. | 310 | 59.9 | 344 16 17.1 | .. | 15.8 | 35 22 22.5 |
| 42 | 66 2 | 8.3 | 13.1 | 26.5 | 5.5 | 33 | 885 | .. | .. | .. | 800 | 59.9 | 293 53 32.9 | .. | 2 6.1 | 344 57 48.0 |
| 43 | 13 26 | 21.5 | 22.9 | 7.1 | 14.2 | 37 | .. | .. | .. | 540 | 530 | 59.9 | 346 30 41.8 | 62.4 | 13.5 | 37 36 49.5 |
| 44 | 47 38 | 16.6 | 19.0 | 3.3 | 10.2 | 37 | .. | 745 | 775 | 765 | .. | 61.4 | 312 18 41.3 | 49.0 | 1 3.6 | 3 23 58.9 |
| 45 | 302 4 | 17.4 | 19.3 | 5.5 | 13.2 | 32 | 645 | 570 | .. | 490 | 475 | 61.4 | 57 51 22.7 | .. | 1 32.1 | 108 59 16.0 |
| 46 | 359 42 | 17.5 | 20.3 | 5.2 | 12.2 | 34 | 690 | 680 | .. | 525 | 505 | 61.4 | 0 13 54.8 | .. | 0.2 | 51 20 16.2 |
| 47 | 53 48 | 16.9 | 17.8 | 2.8 | 9.8 | 30 | .. | .. | 735 | 745 | 815 | 61.4 | 306 9 25.1 | .. | 1 19.4 | 357 14 26.9 |
| 48 | 292 18 | 17 1 | 20.3 | 5.2 | 13.5 | 30 | 830 | .. | 785 | .. | 745 | 61.4 | 67 36 56.2 | 47.3 | 2 20.4 | 118 45 37.8 |
| 49 | 353 34 | 15.7 | 18.0 | 2.2 | 11.6 | 37 | .. | 830 | .. | 740 | .. | 61.4 | 6 22 41.4 | .. | 6.5 | 57 29 9.1 |
| 50 | 334 44 | 14.1 | 16.5 | 1.8 | 11.5 | 37 | 775 | 745 | .. | 635 | 625 | 61.4 | 25 12 39.0 | .. | 27.4 | 76 19 27.6 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|---------|
| | in. | ° | | " | " | " | " |
| 4 | 30.07 | 65.0 | 3 | — | 2.6 | — | 12.1 |
| 7 | 30.03 | 61.2 | 6 | — | 4.3 | + 15 59.0 | 15 54.7 |
| 13 | 29.95 | 70.0 | 7 | — | 4.4 | + 15 59.0 | 16 3.4 |
| 14 | 29.90 | 67.5 | 11 | — | 2.5 | — | 12.0 |
| 21 | 29.87 | 60.5 | 12 | — | 2.5 | + 9.5 | 6.8 |
| 30 | 29.84 | 59.5 | 14 | — | 0.2 | — | 0.2 |
| 33 | 29.83 | 58.0 | 33 | —50 | 9.3 | — 14 50.4 | 4 59.7 |
| 37 | 29.66 | 64.2 | 48 | —50 | 0.8 | + 14 48.3 | 35 12.5 |
| 43 | 29.65 | 64.2 | | | | | |
| 44 | 29.78 | 51.7 | | | | | |
| 48 | 29.80 | 50.3 | | | | | |

For summary of the elements of reduction see page 3.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|---------|---------|---------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | |
| | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| 1876. | | | | | | | | | | | | | | | | | | |
| Apr. 14 | 1 | ♂ Draconis (R.) | P. | | | | | | | | | | | | | | | |
| | 2 | ♂ Draconis | P. | | | | | | | | | | | | | | | |
| | 3 | ♂ Aquilæ | P. | | | | 12.3 | 14.3 | 16.3 | 20.4 | 22.0 | 24.4 | 19 12.23 | - 0.20 | + 3.75 | + 3.81 | 19 19 15.84 | + 0.11 |
| | 4 | ♂ Aquilæ | P. | 6.7 | 9.3 | 10.9 | 17.0 | 19.1 | 21.2 | 27.3 | 29.0 | 34.5 | 40 19.11 | - 0.23 | + 3.82 | + 3.80 | 19 40 22.68 | - 0.01 |
| | 5 | ♂ Aquilæ | P. | 28.8 | 31.3 | 32.9 | 39.2 | 41.2 | 43.3 | 49.4 | 51.0 | 53.6 | 44 41.19 | - 0.22 | + 3.85 | + 3.80 | 19 44 44.77 | - 0.01 |
| | 6 | ♂ Polaris | E. | 42.0 | 30.0 | | 29.0 | 57.5 | 21.5 | 50.0 | 17.0 | | 12 22.50 | -18.06 | | + 3.74 | 1 12 8.18 | - 0.54 |
| 15 | 7 | Sun, N. | E. | | | | | | | | | | | | | | | |
| | 8 | Sun, S. | E. | | | | | | | | | | | | | | | |
| | 9 | ♂ Tauri | E. | | | 10.5 | 14.8 | 17.0 | | | | | 21 19.15 | - 0.40 | + 3.70 | + 3.69 | 4 21 22.44 | - 0.02 |
| | 10 | ♂ Tauri | E. | 32.1 | 34.8 | 36.4 | 42.8 | 44.9 | 47.0 | 53.3 | 55.0 | 57.7 | 28 44.89 | - 0.38 | + 3.76 | + 3.68 | 4 28 48.19 | - 0.10 |
| | 11 | ♂ Venus, S. | E. | | | | | | | | | | | | | | | |
| | 12 | ♂ Aurigæ | E. | 37.2 | 40.3 | 42.1 | 49.5 | 51.9 | 54.3 | 1.6 | 3.5 | 6.5 | 48 51.88 | - 0.41 | + 3.59 | + 3.68 | 4 48 55.15 | + 0.05 |
| | 13 | ♂ Hydræ (R.) | E. | | | | | | | | | | | | | | | |
| | 14 | ♂ Hydræ | E. | | | | | | | | | | | | | | | |
| | 15 | ♂ Ursæ Majoris (R.) | E. | | | | | | | | | | | | | | | |
| | 16 | ♂ Ursæ Majoris | E. | | | | | | | | | | | | | | | |
| | 17 | ♂ Uranus I, N. | E. | 56.7 | 59.4 | 1.0 | | | | 18.0 | 19.6 | 22.4 | 14 9.54 | - 0.30 | | + 3.60 | 9 14 12.84 | |
| | 18 | ♂ Uranus II, S. | E. | | | 5.6 | 7.7 | 9.9 | 12.0 | 14.2 | | | 14 9.88 | - 0.30 | | + 3.60 | 9 14 13.17 | |
| | 19 | ♂ Leonis | E. | 33.8 | 36.5 | 38.2 | 45.0 | 47.3 | 49.6 | 56.2 | 57.7 | 0.7 | 38 47.22 | - 0.35 | + 3.55 | + 3.59 | 9 38 50.46 | - 0.02 |
| | 20 | ♂ B. A. C. 3366 | E. | 35.6 | 38.5 | 40.2 | 46.9 | 49.3 | 51.6 | 58.2 | 0.0 | 2.7 | 44 49.22 | - 0.35 | | + 3.59 | 9 44 52.46 | - 1.88 |
| | 21 | ♂ Leonis | E. | 31.9 | 34.5 | 36.0 | 42.4 | 44.5 | 46.5 | 52.7 | 54.4 | 57.0 | 1 44.43 | - 0.28 | + 3.60 | + 3.58 | 10 1 47.73 | - 0.06 |
| | 22 | ♂ Leonis | E. | 53.6 | 56.4 | 57.9 | | | | 15.4 | 17.0 | 19.8 | 13 6.70 | - 0.33 | + 3.58 | + 3.58 | 10 13 9.95 | - 0.02 |
| | 23 | ♂ Leonis | E. | | | 2.6 | 4.8 | 7.0 | 9.3 | 11.4 | | | 13 7.01 | - 0.33 | | + 3.58 | 10 13 10.26 | - 1.93 |
| | 24 | ♂ Virginis (R.) | E. | | | | | | | | | | | | | | | |
| | 25 | ♂ Virginis | E. | | | | | | | | | | | | | | | |
| | 26 | ♂ Hestia | E. | | | 41.5 | 43.5 | 45.8 | 48.0 | 49.9 | | | 15 45.73 | - 0.22 | | + 3.55 | 12 15 49.06 | |
| | 27 | ♂ Juno | E. | 59.9 | 2.4 | 4.0 | 10.0 | 12.2 | 14.3 | 20.4 | 22.0 | 24.6 | 22 12.20 | - 0.24 | | + 3.54 | 12 22 15.50 | |
| | 28 | ♂ Vesta | E. | | | | | | | | | | | | | | | |
| | 29 | ♂ Polaris, S. P. | E. | | | | | 23.0 | 57.0 | 2.0 | 58.0 | 9.0 | 11 49.18 | +15.46 | | + 3.53 | 1 12 8.17 | - 0.62 |
| | 30 | ♂ Peitho | E. | 59.7 | 2.1 | 4.0 | 10.3 | 12.3 | 14.3 | 20.4 | 22.0 | 24.7 | 13 12.20 | - 0.22 | | + 3.53 | 13 13 15.51 | |
| | 31 | ♂ Virginis | E. | 26.0 | 28.6 | 30.1 | 36.5 | 38.5 | 40.6 | 46.6 | 48.3 | 51.0 | 18 38.47 | - 0.18 | + 3.52 | + 3.53 | 13 18 41.82 | - 0.01 |
| | 32 | ♂ Virginis | E. | 9.0 | 11.6 | 13.2 | 19.4 | 21.5 | 23.5 | 29.5 | 31.0 | 30.6 | 28 21.37 | - 0.22 | + 3.54 | + 3.52 | 13 28 24.67 | - 0.02 |
| | 33 | ♂ Bootis | E. | 33.0 | 35.8 | 37.4 | 43.9 | 46.0 | 48.2 | 54.5 | 56.2 | 59.0 | 48 46.00 | - 0.32 | + 3.51 | + 3.52 | 13 48 49.20 | - 0.04 |
| | 34 | ♂ Eunomia | E. | 23.0 | 25.8 | 27.8 | 35.0 | 37.4 | 39.7 | 46.8 | 48.7 | 51.8 | 59 37.33 | - 0.10 | | + 3.51 | 13 59 40.74 | |
| | 35 | ♂ Pallas | E. | 13.5 | 16.1 | 17.8 | 24.5 | 26.7 | 28.9 | 35.3 | 37.0 | 39.7 | 1 26.61 | - 0.32 | | + 3.51 | 14 1 29.80 | |
| 16 | 36 | ♂ Andromedæ | S. | 41.3 | 44.3 | 45.9 | 52.9 | 55.2 | 57.5 | 4.5 | 6.3 | 9.2 | 1 55.23 | - 0.31 | + 3.21 | | | |
| | 37 | ♂ Cassiopeæ | S. | 1.7 | 6.6 | 9.5 | 20.5 | 24.1 | 27.8 | 38.7 | 41.3 | 45.9 | 33 24.01 | - 0.36 | | + 3.20 | 0 33 26.85 | + 0.04 |
| | 38 | ♂ Ceti | S. | 5.8 | 8.5 | 10.2 | 16.7 | 19.0 | 21.1 | 27.4 | 29.0 | 31.7 | 37 18.82 | - 0.32 | + 3.20 | | | |
| | 39 | ♂ Polaris | S. | | | 15.0 | 45.0 | 10.0 | 36.5 | 3.0 | | | 12 9.28 | - 3.98 | | + 3.20 | 1 12 8.50 | - 0.49 |
| 17 | 40 | Sun I, S. | S. | 41.8 | 44.2 | 45.9 | 52.0 | 54.3 | 56.4 | 2.8 | 4.2 | 6.8 | 42 54.27 | - 0.32 | | + 3.19 | 1 42 57.14 | |
| | 41 | Sun II, N. | S. | 51.9 | 54.5 | 56.1 | 2.4 | 4.3 | 6.4 | 12.7 | 14.3 | 17.0 | 45 4.40 | - 0.32 | | + 3.19 | 1 45 7.27 | |
| | 42 | ♂ Tauri | S. | 50.4 | 53.0 | 54.8 | 1.5 | 3.7 | 6.0 | 12.6 | 14.3 | 17.0 | 40 3.70 | - 0.33 | + 3.16 | + 3.17 | 3 40 6.54 | + 0.01 |
| | 43 | ♂ Persei | S. | 2.7 | 5.7 | 7.5 | 14.8 | 17.1 | 19.5 | 26.7 | 28.3 | 31.5 | 46 17.09 | - 0.34 | + 3.19 | + 3.17 | 3 46 19.92 | - 0.03 |
| | 44 | ♂ Tauri | S. | 32.7 | 35.2 | 36.9 | 43.2 | 45.4 | 47.5 | 53.9 | 55.4 | 58.0 | 28 45.36 | - 0.33 | + 3.22 | + 3.16 | 4 28 48.19 | - 0.08 |
| | 45 | ♂ Venus I, N. | S. | 7.0 | 9.8 | 11.6 | 18.5 | 20.6 | 23.6 | 20.7 | 31.5 | 34.1 | 43 20.64 | - 0.33 | | + 3.16 | 4 43 23.47 | + 0.74 |
| | 46 | ♂ Venus, S. | S. | | | | | | | | | | | | | | | |
| | 47 | ♂ Aurigæ | S. | 37.7 | 40.6 | 42.6 | 49.9 | 52.3 | 54.7 | 2.0 | 3.9 | 7.0 | 48 52.30 | - 0.34 | + 3.08 | + 3.16 | 4 48 55.12 | + 0.04 |

1. Bisections at set C.
 11. Telescope micrometer reading increased one revolution in reduction.
 27, 30, 34, 35. Thread A used.
 29. Bisections at set D.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | | | External Thermom't. | Refraction. | Apparent North-Polar Distance. | | | Miscellaneous Corrections. | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|-------------|------|---------------------|-------------|--------------------------------|----|-----|----------------------------|--|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | 5. | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| | | 10 | | | | | | | | | | | | | | | | | | | |
| 1 | 151 24 | 9.0 | 13.0 | 27.0 | 5.9 | 35 | 470 | 440 | 415 | .. | .. | 61.4 | 208 31 59.6 | .. | + | 31.6 | 22 33 50.0 | .. | 1.8 | | |
| 2 | 28 28 | 14.7 | 16.3 | 2.0 | 9.4 | 35 | .. | .. | .. | 145 | .. | 61.4 | 331 28 0.9 | .. | - | 31.6 | 22 33 50.5 | .. | 1.3 | | |
| 3 | 323 56 | 16.8 | 19.7 | 4.3 | 13.1 | 38 | .. | .. | .. | 905 | 930 | 61.4 | 36 1 1.0 | .. | + | 42.3 | 87 8 4.5 | .. | 0.9 | | |
| 4 | 331 22 | 11.8 | 14.9 | 29.8 | 9.0 | 37 | 805 | 800 | .. | 735 | 685 | 61.4 | 28 34 37.8 | .. | + | 31.8 | 79 41 30.8 | .. | 0.4 | | |
| 5 | 329 36 | 12.2 | 15.5 | 1.6 | 9.5 | 38 | 350 | 370 | .. | 225 | 205 | 61.4 | 30 20 46.8 | 46.8 | + | 34.1 | 81 27 42.1 | .. | 1.2 | | |
| 6 | 49 40 | 15.2 | 17.6 | 4.4 | 9.7 | 34 | 295 | .. | 250 | .. | 170 | 60.3 | 310 15 45.8 | 60.5 | - | 6.9 | 1 21 0.1 | .. | 2.1 | | |
| 7 | 331 24 | 14.9 | 17.3 | 2.8 | 11.8 | 39 | 290 | 210 | .. | .. | .. | 60.3 | 28 33 1.2 | .. | + | 30.9 | 79 39 53.3 | .. | .. | | |
| 8 | 330 52 | 15.5 | 16.9 | 1.8 | 11.7 | 38 | .. | .. | .. | 880 | .. | 60.3 | 29 4 57.5 | 60.3 | + | 31.6 | 80 11 50.3 | .. | .. | | |
| 9 | 339 56 | 18.6 | 21.8 | 7.8 | 13.5 | 30 | 915 | 865 | .. | .. | .. | 60.3 | 19 58 57.4 | .. | + | 20.5 | 70 5 39.1 | .. | 1.0 | | |
| 10 | 337 18 | 17.0 | 20.6 | 7.3 | 13.0 | 33 | 596 | 560 | .. | 550 | 520 | 60.3 | 22 37 38.0 | .. | + | 23.4 | 73 44 22.6 | .. | 0.4 | | |
| 11 | 345 46 | 18.9 | 22.6 | 7.0 | 14.7 | 36 | .. | 530 | .. | 500 | .. | 60.3 | 14 10 40.0 | .. | + | 14.2 | 65 17 15.4 | .. | .. | | |
| 12 | 354 0 | 12.0 | 16.0 | 2.6 | 9.0 | 32 | .. | 600 | .. | 530 | .. | 60.3 | 5 55 18.3 | 65.0 | + | 5.8 | 57 1 45.3 | .. | 1.4 | | |
| 13 | 211 56 | 18.2 | 23.0 | 9.6 | 18.0 | 31 | 990 | 900 | .. | .. | .. | 61.5 | 147 59 16.3 | .. | - | 35.7 | 83 7 40.6 | .. | 1.0 | | |
| 14 | 327 56 | 14.8 | 18.4 | 2.6 | 11.5 | 37 | .. | .. | .. | 800 | 760 | 61.5 | 32 0 41.9 | .. | + | 35.7 | 83 7 38.8 | .. | 0.8 | | |
| 15 | 170 18 | 17.8 | 24.3 | 8.5 | 13.4 | 35 | 130 | 095 | .. | .. | .. | 61.5 | 189 38 3.0 | 56.0 | + | 9.7 | 41 28 8.5 | .. | 3.0 | | |
| 16 | 9 34 | 20.0 | 23.3 | 9.3 | 16.0 | 34 | .. | .. | .. | 700 | 690 | 61.5 | 350 22 0.6 | .. | - | 9.7 | 41 28 11.1 | .. | 0.4 | | |
| 17 | 337 50 | 15.0 | 17.3 | 2.0 | 11.7 | 37 | 620 | .. | .. | .. | 430 | 61.5 | 22 6 37.1 | .. | + | 23.3 | 73 13 21.6 | .. | .. | | |
| 18 | 337 50 | 15.0 | 17.3 | 2.0 | 11.7 | 37 | .. | 850 | .. | 795 | .. | 61.5 | 22 6 41.5 | .. | + | 23.3 | 73 13 26.0 | .. | .. | | |
| 19 | 345 24 | 17.5 | 19.2 | 5.3 | 13.3 | 37 | .. | 855 | .. | 760 | .. | 61.5 | 14 32 43.7 | .. | + | 14.9 | 65 30 19.8 | .. | 0.8 | | |
| 20 | 346 2 | 18.2 | 20.2 | 6.0 | 13.3 | 37 | .. | 070 | .. | 010 | .. | 61.5 | 13 54 32.5 | .. | + | 14.2 | 65 1 7.9 | .. | 1.0 | | |
| 21 | 333 38 | 15.6 | 18.0 | 3.8 | 12.5 | 38 | .. | 595 | .. | 570 | .. | 61.5 | 26 18 54.1 | .. | + | 28.5 | 77 25 43.8 | .. | 1.9 | | |
| 22 | 341 30 | 12.0 | 14.2 | 28.5 | 9.0 | 32 | 480 | .. | .. | .. | 440 | 61.5 | 18 25 16.5 | .. | + | 19.2 | 69 31 56.9 | .. | 0.7 | | |
| 23 | 341 30 | 12.0 | 14.2 | 28.5 | 9.0 | 32 | .. | 655 | .. | 590 | .. | 61.5 | 18 25 18.8 | .. | + | 19.2 | 69 31 59.2 | .. | 2.2 | | |
| 24 | 260 24 | 13.5 | 17.9 | 5.5 | 8.7 | 35 | 120 | 100 | .. | .. | .. | 61.5 | 150 31 58.9 | .. | - | 32.6 | 80 34 54.9 | .. | 2.6 | | |
| 25 | 330 28 | 12.0 | 15.2 | 1.3 | 9.0 | 35 | .. | .. | .. | 035 | 985 | 61.5 | 29 27 57.1 | .. | + | 32.6 | 80 34 50.9 | .. | 1.4 | | |
| 26 | 319 58 | 14.5 | 17.3 | 3.3 | 12.5 | 29 | .. | .. | .. | 380 | 300 | 61.5 | 39 56 32.7 | .. | + | 48.3 | 91 3 42.2 | .. | 2.2 | | |
| 27 | 325 40 | 7.3 | 10.0 | 24.7 | 6.8 | 36 | 040 | 990 | .. | 910 | 860 | 61.5 | 34 13 32.5 | .. | + | 39.3 | 85 20 33.0 | .. | 2.3 | | |
| 28 | 330 44 | 11.6 | 14.5 | 29.1 | 9.6 | 39 | .. | 600 | .. | 540 | .. | 61.5 | 29 10 32.0 | .. | + | 32.4 | 80 17 25.6 | .. | 3.3 | | |
| 29 | 52 22 | 18.2 | 19.8 | 9.9 | 12.3 | 34 | .. | .. | .. | 400 | 300 | 61.5 | 307 33 49.7 | .. | - | 14.9 | 358 38 56.0 | .. | 1.7 | | |
| 30 | 319 20 | 12.7 | 15.8 | 3.2 | 11.9 | 31 | .. | .. | .. | 140 | 030 | 61.5 | 40 32 25.1 | .. | + | 49.3 | 91 39 35.6 | .. | 3.6 | | |
| 31 | 310 32 | 17.5 | 20.6 | 7.0 | 14.5 | 33 | .. | .. | .. | 320 | 300 | 61.5 | 49 23 36.4 | .. | + | 7.2 | 100 31 4.8 | .. | 1.0 | | |
| 32 | 321 6 | 18.3 | 21.0 | 7.7 | 15.0 | 38 | 030 | 010 | .. | .. | .. | 61.5 | 38 50 47.6 | .. | + | 46.5 | 89 57 55.3 | .. | 0.1 | | |
| 33 | 340 4 | 13.0 | 15.7 | 2.5 | 9.8 | 36 | .. | 615 | .. | 535 | .. | 61.5 | 19 52 21.2 | 50.0 | + | 20.9 | 70 59 3.3 | .. | 0.6 | | |
| 34 | 290 58 | 17.0 | 19.6 | 7.5 | 14.6 | 39 | 950 | 865 | .. | .. | .. | 61.5 | 68 56 26.6 | .. | + | 28.9 | 120 5 16.7 | .. | 3.8 | | |
| 35 | 341 20 | 10.0 | 11.3 | 26.5 | 6.5 | 41 | .. | 140 | .. | 050 | .. | 61.5 | 18 34 52.8 | .. | + | 19.4 | 69 41 33.4 | .. | 1.7 | | |
| 36 | 349 26 | 9.7 | 12.2 | 27.9 | 5.0 | 32 | .. | 270 | .. | 190 | .. | 61.3 | 10 29 10.5 | 51.0 | + | 10.7 | 61 35 42.4 | .. | 0.9 | | |
| 37 | 16 54 | 10.9 | 12.4 | 1.4 | 5.5 | 37 | 598 | 572 | .. | .. | .. | 61.3 | 343 2 33.6 | .. | - | 17.6 | 34 8 37.2 | .. | 0.7 | | |
| 38 | 302 24 | 6.3 | 11.3 | 28.0 | 4.5 | 36 | .. | 080 | .. | 990 | .. | 61.3 | 57 32 7.3 | .. | + | 30.6 | 108 39 59.1 | .. | 0.8 | | |
| 39 | 49 40 | 2.3 | 7.0 | 20.6 | 27.0 | 35 | 090 | .. | 090 | .. | 060 | 61.3 | 310 15 47.2 | .. | - | 8.0 | 1 21 0.4 | .. | 2.3 | | |
| 40 | 331 34 | 9.6 | 11.8 | 28.9 | 6.4 | 38 | 210 | 172 | .. | .. | .. | 61.3 | 28 22 40.9 | 53.8 | + | 31.1 | 79 29 33.2 | .. | .. | | |
| 41 | 332 6 | 11.8 | 14.8 | 29.9 | 6.8 | 38 | .. | .. | .. | 420 | 408 | 61.3 | 27 50 48.4 | .. | + | 30.4 | 78 57 40.0 | .. | .. | | |
| 42 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | | |
| 43 | 352 34 | 8.0 | 11.5 | 26.3 | 2.9 | 37 | .. | .. | .. | 622 | 610 | 61.3 | 7 22 32.4 | 57.0 | + | 7.4 | 58 29 1.0 | .. | 0.7 | | |
| 44 | 337 18 | 8.0 | 12.4 | 27.5 | 4.0 | 34 | .. | 080 | .. | 044 | .. | 61.3 | 22 37 37.7 | .. | + | 23.9 | 73 44 22.8 | .. | 0.6 | | |
| 45 | 346 8 | 8.5 | 12.4 | 27.5 | 6.3 | 32 | 170 | .. | .. | .. | 025 | 61.3 | 13 47 8.6 | .. | + | 14.1 | 64 53 43.9 | .. | .. | | |
| 46 | 346 8 | 8.5 | 12.4 | 27.5 | 6.3 | 33 | .. | 310 | .. | 300 | .. | 61.3 | 13 47 26.9 | .. | + | 14.1 | 64 54 2.2 | .. | .. | | |
| 47 | 354 0 | 7.2 | 11.5 | 27.5 | 4.0 | 32 | .. | 840 | .. | 760 | .. | 61.3 | 5 55 18.1 | 54.8 | + | 6.0 | 57 1 45.3 | .. | 1.2 | | |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " " | " " | " " | " " |
| 5 | 29.81 | 49.9 | 7 | - 4.2 | + 15 58.5 | .. | + 15 54.3 |
| 6 | 29.84 | 59.0 | 8 | - 4.2 | - 15 58.5 | .. | - 16 2.7 |
| 8 | 29.83 | 59.2 | 11 | - 2.5 | .. 9.9 | .. | .. 12.4 |
| 12 | 29.82 | 63.0 | 17 | - 0.2 | + 2.2 | .. | + 2.0 |
| 15 | 29.80 | 59.0 | 18 | - 0.2 | - 2.2 | .. | - 2.4 |
| 33 | 29.74 | 52.5 | 40 | - 4.1 | - 15 56.6 | .. | - 16 0.7 |
| 36 | 29.87 | 51.5 | 41 | - 4.1 | + 15 56.6 | .. | + 15 52.5 |
| 40 | 29.85 | 54.1 | 45 | - 2.5 | + 9.2 | .. 0.1 | + 6.6 |
| 43 | 29.86 | 58.0 | 46 | - 2.5 | - 9.2 | .. | - 11.7 |
| 47 | 29.87 | 56.5 | | | | | |

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | m. | s. | | s. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 1876. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

4, 12, 14. Bisections at sets B and D.
10, 27, 30, 32. Thread A used.
11, 14, 16. Thread B used.
42. Bisections at threads II-VI.
50. Telescope micrometer reading decreased one revolution in reduction.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|---------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|--------|----|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | | | | | | | |
| 1 | 327 56 | 10 9.7 | 12.0 | 26.0 | 5.5 | 38 | 155 | 085 | .. | 035 | 970 | 62.5 | 32 0 40.5 | 46.0 | + | 36.8 | 83 7 38.5 | - 1.0 | |
| 2 | 170 18 | 10.0 | 15.3 | 0.8 | 7.0 | 35 | 530 | 410 | .. | .. | .. | 62.5 | 18 38 1.9 | .. | + | 10.0 | 41 28 9.3 | - 2.0 | |
| 3 | 9 34 | 8.5 | 10.5 | 26.8 | 5.4 | 35 | .. | .. | .. | 355 | 370 | 62.5 | 350 22 0.0 | .. | - | 10.0 | 41 28 11.2 | - 0.1 | |
| 4 | 151 12 | 10.2 | 14.5 | 0.8 | 8.0 | 36 | 255 | 280 | .. | .. | .. | 62.5 | 208 44 15.2 | .. | + | 32.3 | 22 21 33.7 | - 2.1 | |
| 5 | 28 40 | 8.5 | 8.7 | 25.8 | 3.6 | 34 | .. | .. | .. | 450 | 440 | 62.5 | 331 15 45.6 | .. | - | 32.3 | 22 21 34.5 | - 1.4 | |
| 6 | 358 22 | 9.5 | 12.5 | 28.3 | 6.3 | 35 | 165 | .. | .. | .. | 075 | 62.5 | 1 33 56.8 | .. | + | 1.6 | 52 40 19.6 | + 7.5 | |
| 7 | 358 22 | 9.5 | 12.5 | 28.3 | 6.3 | 35 | .. | 065 | .. | 010 | .. | 62.5 | 1 33 55.3 | .. | + | 1.6 | 52 40 18.1 | + 7.5 | |
| 8 | 337 50 | 9.1 | 11.5 | 27.5 | 6.9 | 37 | .. | .. | .. | 200 | 130 | 62.5 | 22 6 28.1 | .. | + | 24.0 | 73 13 13.3 | .. | |
| 9 | 312 56 | 9.0 | 11.9 | 27.7 | 7.0 | 35 | .. | .. | .. | 480 | 445 | 62.5 | 47 0 2.0 | 45.3 | + | 1 3.2 | 68 7 26.4 | - 0.6 | |
| 10 | 345 6 | 10.5 | 12.5 | 28.8 | 7.5 | 30 | 800 | .. | .. | .. | 650 | 62.5 | 14 46 16.5 | .. | + | 15.6 | 65 52 53.3 | - 0.6 | |
| 11 | 345 6 | 10.5 | 12.5 | 28.8 | 7.5 | 30 | .. | 555 | .. | 470 | .. | 62.5 | 14 51 18.9 | .. | + | 15.7 | 65 57 55.8 | - 0.7 | |
| 12 | 318 2 | 8.0 | 10.2 | 27.4 | 6.1 | 35 | 085 | .. | .. | .. | 955 | 62.5 | 41 53 53.5 | .. | + | 53.0 | 93 1 7.7 | - 9.2 | |
| 13 | 335 54 | 7.7 | 9.6 | 25.5 | 5.9 | 36 | .. | 930 | .. | 865 | .. | 62.5 | 24 2 21.2 | .. | + | 26.4 | 75 9 8.8 | - 5.3 | |
| 14 | 332 16 | 8.5 | 11.0 | 26.8 | 5.9 | 30 | 130 | .. | .. | .. | 995 | 62.5 | 27 41 10.1 | .. | + | 31.1 | 78 48 2.4 | - 0.1 | |
| 15 | 329 4 | 10.8 | 12.1 | 28.0 | 7.6 | 38 | .. | 690 | .. | 535 | .. | 62.5 | 30 52 50.2 | .. | + | 35.4 | 81 59 46.8 | - 8.3 | |
| 16 | 306 58 | 8.5 | 10.8 | 27.7 | 7.0 | 29 | .. | .. | .. | 330 | .. | 62.5 | 52 58 59.9 | .. | + | 18.6 | 104 6 39.7 | - 1.3 | |
| 17 | 336 6 | 10.2 | 12.6 | 28.5 | 7.5 | 34 | .. | 660 | .. | 615 | .. | 62.5 | 23 49 49.5 | .. | + | 26.2 | 74 56 36.9 | - 8.1 | |
| 18 | 336 6 | 10.2 | 12.6 | 28.5 | 7.5 | 35 | 505 | .. | .. | .. | 380 | 62.5 | 23 50 1.9 | .. | + | 26.2 | 74 56 49.3 | - 8.1 | |
| 19 | 343 6 | 12.1 | 13.0 | 29.0 | 8.1 | 39 | .. | 035 | .. | 960 | .. | 62.5 | 16 50 57.2 | .. | + | 18.0 | 67 57 36.4 | - 7.0 | |
| 20 | 336 18 | 10.0 | 11.8 | 28.2 | 7.5 | 33 | 235 | 165 | .. | .. | .. | 62.5 | 23 37 26.4 | 42.7 | + | 26.0 | 74 44 13.6 | + 0.3 | |
| 21 | 323 30 | 10.5 | 11.5 | 27.8 | 7.9 | 32 | .. | 675 | .. | 565 | .. | 62.5 | 36 25 18.3 | .. | + | 43.8 | 87 32 23.3 | - 11.8 | |
| 22 | 330 10 | 10.6 | 12.0 | 27.4 | 7.5 | 32 | .. | 380 | .. | .. | .. | 62.5 | 29 45 14.0 | .. | + | 34.6 | 80 52 9.8 | - 10.7 | |
| 23 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 42.0 | .. | .. | .. | .. | .. |
| 24 | 52 22 | 7.7 | 7.5 | 25.0 | 0.1 | 35 | 130 | 150 | 150 | 140 | 190 | 62.5 | 307 33 52.5 | .. | - | 1 17.5 | 358 38 56.2 | - 0.8 | |
| 25 | 340 4 | 9.5 | 11.2 | 27.4 | 5.9 | 36 | .. | 725 | .. | 630 | .. | 62.5 | 19 52 19.6 | .. | + | 21.6 | 70 59 2.4 | 0.0 | |
| 26 | 340 52 | 9.0 | 9.4 | 27.2 | 7.5 | 34 | 860 | 795 | .. | 750 | 705 | 62.5 | 19 3 50.4 | 39.5 | + | 20.7 | 70 10 32.3 | + 0.2 | |
| 27 | 297 4 | 9.5 | 11.8 | 28.4 | 7.8 | 35 | .. | 755 | .. | 855 | .. | 62.5 | 62 49 33.4 | .. | + | 56.2 | 113 57 50.8 | - 5.8 | |
| 28 | 318 36 | 9.6 | 11.1 | 28.5 | 7.9 | 33 | .. | 145 | .. | 060 | .. | 62.5 | 41 19 25.5 | .. | + | 52.7 | 92 26 39.4 | - 3.5 | |
| 29 | 348 38 | 11.5 | 12.2 | 29.9 | 7.3 | 34 | .. | 810 | .. | 725 | .. | 62.5 | 11 17 52.1 | .. | + | 12.0 | 62 24 25.3 | + 0.6 | |
| 30 | 305 32 | 8.3 | 10.0 | 26.1 | 6.1 | 35 | 085 | .. | .. | .. | 025 | 62.5 | 54 21 20.0 | .. | + | 1 23.5 | 105 29 4.7 | - 16.6 | |
| 31 | 305 32 | 8.3 | 10.0 | 26.1 | 6.1 | 35 | 655 | .. | .. | .. | 510 | 62.5 | 54 24 1.6 | .. | + | 1 23.6 | 105 31 46.4 | + 0.1 | |
| 32 | 307 16 | 8.0 | 10.0 | 27.5 | 7.3 | 35 | .. | 320 | .. | 180 | .. | 62.5 | 52 37 23.7 | .. | + | 1 18.4 | 103 45 3.3 | - 5.2 | |
| 33 | 1 54 | 9.0 | 11.0 | 28.7 | 5.1 | 32 | .. | 140 | .. | 020 | .. | 62.5 | 358 1 9.3 | .. | - | 2.1 | 49 7 28.4 | - 0.3 | |
| 34 | 290 52 | 11.0 | 11.9 | 29.3 | 6.5 | 33 | .. | .. | .. | 175 | 130 | 62.5 | 69 3 27.1 | .. | + | 2 35.6 | 120 12 23.9 | - 14.7 | |
| 35 | 280 6 | 12.5 | 14.0 | 2.9 | 11.3 | 35 | .. | 935 | .. | 950 | .. | 62.5 | 79 50 12.1 | .. | + | 5 24.1 | 131 1 57.4 | - 12.9 | |
| 36 | 285 18 | 9.9 | 11.8 | 0.6 | 8.7 | 38 | .. | 675 | .. | 515 | .. | 62.5 | 74 38 50.3 | .. | + | 3 35.6 | 125 48 47.1 | - 13.5 | |
| 37 | 358 50 | 9.8 | 11.3 | 29.5 | 7.0 | 32 | 150 | 135 | .. | 090 | 045 | 62.5 | 1 5 10.8 | 37.6 | + | 1.1 | 52 11 33.1 | + 0.4 | |
| 38 | 355 24 | 6.8 | 6.3 | 25.2 | 5.3 | 32 | .. | 030 | .. | 545 | .. | 62.5 | 4 31 14.5 | 39.3 | + | 4.8 | 55 37 40.5 | - 18.1 | |
| 39 | 314 56 | 8.0 | 9.6 | 27.0 | 6.1 | 34 | 135 | 145 | .. | 980 | 020 | 62.5 | 44 59 38.7 | .. | + | 49.9 | 96 6 59.8 | - 1.6 | |
| 40 | 330 22 | 6.3 | 7.5 | 27.5 | 5.4 | 38 | 665 | 615 | .. | 505 | 530 | 62.5 | 29 34 46.8 | 41.1 | + | 34.0 | 80 41 42.0 | - 1.1 | |
| 41 | 320 8 | 7.0 | 8.5 | 26.5 | 8.3 | 36 | .. | 180 | .. | 035 | .. | 62.5 | 39 48 9.8 | .. | + | 49.7 | 100 55 20.7 | - 2.3 | |
| 42 | 306 52 | 6.5 | 7.2 | 25.7 | 2.6 | 31 | 920 | 670 | 490 | 225 | 060 | 62.5 | 53 2 56.7 | 43.0 | + | 1 19.1 | 104 10 37.0 | .. | |
| 43 | 331 14 | 6.0 | 7.7 | 27.2 | 4.7 | 36 | 060 | 020 | .. | .. | .. | 62.5 | 28 42 6.9 | .. | + | 32.6 | 79 41 0.7 | - 1.2 | |
| 44 | 350 36 | 8.9 | 9.2 | 28.0 | 7.0 | 32 | 570 | 580 | .. | .. | .. | 62.5 | 9 19 15.9 | 44.3 | + | 9.8 | 60 25 46.9 | - 15.9 | |
| 45 | 299 48 | 7.8 | 9.5 | 29.0 | 5.3 | 34 | .. | 330 | .. | 140 | .. | 62.9 | 69 7 41.6 | .. | + | 2 34.5 | 120 16 37.3 | - 1.8 | |
| 46 | 335 36 | 6.7 | 5.7 | 26.5 | 6.5 | 39 | .. | 540 | .. | 430 | .. | 62.9 | 24 21 0.8 | .. | + | 26.8 | 75 27 48.8 | + 1.2 | |
| 47 | 349 26 | 6.2 | 6.5 | 26.0 | 4.0 | 32 | .. | 510 | .. | 450 | .. | 62.9 | 10 29 12.9 | .. | + | 10.9 | 61 35 44.0 | + 0.6 | |
| 48 | 335 32 | 10.2 | 10.5 | 28.8 | 8.6 | 33 | .. | .. | .. | 760 | 740 | 62.9 | 24 33 37.0 | .. | + | 26.7 | 75 39 24.9 | + 1.4 | |
| 49 | 332 16 | 4.6 | 9.7 | 24.0 | 3.5 | 40 | 010 | 110 | .. | .. | .. | 62.9 | 27 41 7.5 | .. | + | 30.7 | 78 47 59.4 | .. | |
| 50 | 332 48 | 4.8 | 7.5 | 22.4 | 2.8 | 41 | .. | .. | .. | 410 | 550 | 62.9 | 27 9 15.3 | 51.8 | + | 30.0 | 78 16 6.5 | .. | |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| 1 | 30.10 | 48.2 | 8 | 0.2 | .. | .. | 0.2 |
| 9 | 30.12 | 47.3 | 42 | 37.6 | + 15 18.0 | .. | - 29 19.6 |
| 20 | 30.14 | 45.2 | 49 | 4.1 | - 15 56.4 | .. | - 16 0.5 |
| 23 | 30.14 | 44.4 | 50 | 4.0 | + 15 56.4 | .. | + 15 52.4 |
| 26 | 30.16 | 42.6 | | | | | |
| 37 | 30.16 | 40.6 | | | | | |
| 38 | 30.24 | 38.6 | | | | | |
| 40 | 30.24 | 40.2 | | | | | |
| 42 | 30.24 | 41.9 | | | | | |
| 44 | 30.25 | 43.3 | | | | | |
| 50 | 30.22 | 50.4 | | | | | |

For summary of the elements of reduction see page 3.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|---------|---------|-----------|--------------------------------|-----|------|-----|----|-----|------|-------|-----|------------|--------------|----------------|----------------|---------------------------|----|----------------------------|----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar'nt | Clock adopted. | h. | m. | | s. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 1876. | | | | | | | | | | | | m. | s. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Number. | Circle Division | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellan'us Corrections. | | |
|---------|-----------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|---------------------------|-------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | | r. " | " | " | " | | | | | | | | | | | | | |
| 1 | 337 50 | 10 3.0 | 6.1 | 20.7 | 0.5 | 37 | 400 | .. | .. | .. | 240 | 63.7 | 22 6 21.8 | .. | + | 23.9 | 73 13 9.9 | .. |
| 2 | 337 50 | 3.0 | 6.1 | 20.7 | 0.5 | 37 | .. | 645 | .. | 550 | .. | 63.7 | 22 6 28.9 | .. | + | 23.9 | 73 13 14.0 | .. |
| 3 | 345 24 | 12.5 | 13.5 | 28.5 | 8.7 | 37 | .. | 960 | .. | 915 | .. | 63.7 | 14 32 42.4 | 47.5 | + | 15.3 | 65 39 18.9 | + 0.2 |
| 4 | 346 2 | 11.0 | 12.8 | 29.0 | 7.9 | 37 | .. | 330 | .. | 295 | .. | 63.7 | 13 54 32.2 | .. | + | 14.6 | 65 1 8.0 | + 1.3 |
| 5 | 336 4 | 10.9 | 12.0 | 28.5 | 7.7 | 27 | .. | .. | .. | .. | 560 | 63.7 | 23 52 35.9 | .. | + | 20.2 | 74 59 23.3 | .. |
| 6 | 333 38 | 8.0 | 8.8 | 25.3 | 5.4 | 38 | .. | 780 | .. | 745 | .. | 63.7 | 26 18 51.0 | .. | + | 29.3 | 77 25 41.5 | - 0.2 |
| 7 | 5 42 | 11.5 | 13.7 | 0.5 | 8.5 | 41 | 230 | 190 | .. | .. | .. | 63.7 | 354 12 58.7 | .. | - | 6.0 | 45 19 13.9 | + 5.7 |
| 8 | 341 30 | 7.2 | 8.5 | 24.0 | 5.0 | 32 | 695 | .. | .. | .. | 600 | 63.7 | 18 25 16.9 | .. | + | 19.7 | 69 31 57.8 | + 1.9 |
| 9 | 341 30 | 7.2 | 8.5 | 24.0 | 5.0 | 32 | .. | 740 | .. | 615 | .. | 63.7 | 18 25 17.2 | .. | + | 19.7 | 69 31 58.1 | - 1.9 |
| 10 | 208 52 | 13.0 | 15.8 | 3.1 | 8.8 | 32 | 840 | 820 | .. | .. | .. | 63.7 | 151 3 25.0 | .. | - | 32.8 | 80 3 29.0 | + 2.1 |
| 11 | 331 0 | 6.5 | 8.0 | 24.9 | 4.9 | 37 | .. | .. | .. | 590 | 585 | 63.7 | 28 56 33.0 | .. | + | 32.8 | 80 3 27.0 | + 0.1 |
| 12 | 207 36 | 10.2 | 13.3 | 29.5 | 5.7 | 30 | 490 | 425 | .. | .. | .. | 63.7 | 152 18 45.7 | 45.3 | - | 31.2 | 78 48 6.7 | + 4.3 |
| 13 | 332 16 | 9.8 | 11.0 | 28.0 | 6.0 | 39 | .. | .. | .. | 840 | 765 | 63.7 | 27 41 9.6 | .. | + | 31.2 | 78 48 2.0 | - 0.4 |
| 14 | 148 50 | 4.2 | 6.5 | 24.3 | 1.8 | 38 | 635 | .. | 640 | .. | .. | 63.7 | 211 6 46.1 | .. | + | 35.9 | 19 58 59.2 | - 2.5 |
| 15 | 31 2 | 12.2 | 12.8 | 29.2 | 7.3 | 32 | .. | .. | .. | 065 | 080 | 63.7 | 323 53 14.2 | .. | - | 35.9 | 19 58 59.5 | - 2.2 |
| 16 | 64 4 | 10.3 | 9.3 | 27.5 | 5.3 | 35 | 180 | .. | 290 | .. | 220 | 63.7 | 295 51 57.8 | .. | - 2 | 2.4 | 346 56 16.6 | - 0.2 |
| 17 | 336 18 | 11.8 | 14.3 | 0.7 | 8.8 | 32 | .. | 940 | .. | 895 | .. | 63.7 | 23 37 26.1 | .. | + | 26.1 | 74 44 13.4 | + 0.2 |
| 18 | 164 26 | 17.2 | 21.0 | 5.3 | 12.6 | 31 | 570 | 540 | .. | .. | .. | 63.7 | 195 29 8.7 | .. | + | 16.5 | 35 36 56.0 | - 1.4 |
| 19 | 15 26 | 12.1 | 13.3 | 1.0 | 9.0 | 38 | .. | .. | .. | 560 | 520 | 63.7 | 344 30 53.5 | .. | - | 16.5 | 35 36 58.2 | + 0.8 |
| 20 | 280 34 | 11.4 | 12.0 | 1.5 | 10.0 | 32 | .. | .. | .. | 430 | 325 | 63.7 | 79 21 17.9 | .. | + | 5 8.2 | 130 32 47.3 | - 18.0 |
| 21 | 304 12 | 14.2 | 14.3 | 1.8 | 12.5 | 33 | .. | 670 | .. | 600 | .. | 63.7 | 55 43 38.7 | .. | + | 1 28.5 | 106 51 28.4 | - 15.9 |
| 22 | 286 22 | 14.2 | 14.3 | 3.3 | 12.6 | 35 | .. | .. | .. | 520 | 495 | 63.7 | 73 34 8.2 | .. | + | 3 20.6 | 124 43 50.0 | - 17.6 |
| 23 | 280 4 | 14.2 | 14.5 | 2.2 | 11.8 | 33 | .. | 280 | .. | 110 | .. | 63.7 | 79 51 31.7 | .. | + | 5 23.1 | 131 3 16.0 | - 17.9 |
| 24 | 330 54 | 7.0 | 8.8 | 24.5 | 5.8 | 33 | .. | 620 | .. | 580 | .. | 63.7 | 29 1 31.6 | .. | + | 33.2 | 80 8 26.0 | - 3.3 |
| 25 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 26 | 288 12 | 13.5 | 13.5 | 2.4 | 10.7 | 41 | .. | .. | .. | 560 | .. | 63.7 | 71 48 12.3 | .. | + | 3 0.5 | 122 57 34.0 | - 17.3 |
| 27 | 288 12 | 13.5 | 13.5 | 2.4 | 10.7 | 41 | .. | .. | .. | .. | 310 | 63.7 | 71 48 8.5 | .. | + | 3 0.4 | 122 57 30.1 | - 17.3 |
| 28 | 288 12 | 13.5 | 13.5 | 2.4 | 10.7 | 34 | .. | .. | .. | 335 | 235 | 63.7 | 71 41 15.2 | .. | + | 2 59.4 | 122 5 35.8 | - 17.2 |
| 29 | 319 30 | 8.8 | 7.7 | 25.8 | 5.8 | 33 | .. | .. | .. | 250 | .. | 63.7 | 40 22 53.9 | .. | + | 51.0 | 91 30 6.1 | - 3.5 |
| 30 | 52 22 | 8.8 | 8.5 | 26.5 | 3.0 | 35 | 020 | 050 | .. | .. | .. | 63.7 | 307 33 55.4 | .. | - 1 | 17.9 | 358 38 58.7 | + 2.1 |
| 31 | 310 32 | 11.5 | 12.0 | 0.0 | 8.5 | 33 | .. | 530 | .. | 495 | .. | 63.7 | 49 23 34.1 | .. | + | 1 10.0 | 100 31 5.3 | + 1.3 |
| 32 | 307 12 | 14.0 | 15.5 | 1.5 | 11.0 | 37 | .. | .. | .. | 535 | 515 | 93.7 | 52 42 5.4 | .. | + | 1 18.7 | 103 49 45.3 | - 2.9 |
| 33 | 340 4 | 12.1 | 12.0 | 29.7 | 7.8 | 36 | .. | 580 | .. | 480 | .. | 63.7 | 19 52 20.4 | .. | + | 21.7 | 70 59 3.3 | + 1.0 |
| 34 | 291 14 | 13.5 | 15.5 | 3.3 | 10.8 | 39 | 120 | 930 | .. | .. | .. | 63.7 | 68 40 34.3 | .. | + | 2 33.1 | 119 49 28.6 | - 3.8 |
| 35 | 342 12 | 12.0 | 10.3 | 26.7 | 7.4 | 35 | .. | .. | .. | 840 | 790 | 63.7 | 17 41 35.6 | 39.0 | + | 19.2 | 68 48 16.0 | - 1.7 |
| 36 | 294 58 | 12.4 | 11.8 | 0.0 | 10.5 | 34 | .. | 700 | .. | 800 | .. | 63.7 | 64 55 20.2 | .. | + | 2 8.0 | 116 3 49.4 | - 4.8 |
| 37 | 340 52 | 10.7 | 9.5 | 26.8 | 7.7 | 34 | .. | 750 | .. | 720 | .. | 63.7 | 19 3 51.2 | .. | + | 20.8 | 70 10 33.2 | + 1.2 |
| 38 | 297 4 | 11.2 | 12.2 | 29.8 | 9.6 | 37 | .. | 040 | .. | 115 | .. | 63.7 | 62 49 53.3 | .. | + | 1 56.9 | 113 58 13.4 | - 5.8 |
| 39 | 299 30 | 8.1 | 9.5 | 26.8 | 6.0 | 31 | .. | .. | .. | .. | 050 | 63.7 | 60 22 20.9 | .. | + | 1 45.7 | 111 30 27.8 | - 16.4 |
| 40 | 331 14 | 13.6 | 11.9 | 1.2 | 13.2 | 35 | .. | 656 | .. | .. | .. | 63.4 | 28 42 8.1 | .. | + | 32.6 | 79 49 1.9 | + 0.1 |
| 41 | 299 48 | 12.2 | 11.3 | 29.4 | 15.3 | 34 | .. | 038 | .. | 950 | .. | 63.4 | 69 7 42.6 | 47.0 | + | 2 34.5 | 120 16 38.3 | - 0.6 |
| 42 | 335 36 | 9.5 | 9.6 | 27.1 | 9.0 | 39 | 376 | 366 | .. | .. | .. | 63.4 | 24 21 1.3 | .. | + | 26.8 | 75 27 49.3 | + 1.8 |
| 43 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 44 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 45 | 333 8 | 6.2 | 9.4 | 24.9 | 5.2 | 38 | 698 | 680 | .. | .. | .. | 63.4 | 26 48 48.0 | .. | + | 29.3 | 77 55 38.5 | .. |
| 46 | 332 36 | 6.9 | 9.4 | 25.2 | 4.5 | 37 | .. | .. | .. | 834 | 752 | 63.4 | 27 20 36.8 | 57.7 | + | 30.0 | 78 27 28.0 | .. |
| 47 | 337 50 | 10.3 | 11.1 | 27.2 | 8.3 | 37 | .. | 120 | .. | 056 | .. | 62.7 | 22 6 26.7 | .. | + | 23.4 | 73 13 11.3 | .. |
| 48 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 49 | 330 38 | 12.2 | 13.4 | 28.3 | 8.5 | 33 | .. | 864 | .. | 822 | .. | 62.7 | 29 17 23.1 | .. | + | 32.3 | 80 24 16.6 | - 2.4 |
| 50 | 358 2 | 10.0 | 12.6 | 26.2 | 7.2 | 35 | .. | 026 | .. | 008 | .. | 62.7 | 1 51 21.5 | .. | + | 1.9 | 52 57 44.6 | + 6.6 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | ' " | ' " | ' " | ' " |
| 3 | 30.26 | 50.5 | 1 | - 0.2 | + 2.0 | .. | + 1.8 |
| 12 | 30.29 | 48.7 | 2 | - 0.2 | .. | .. | - 2.2 |
| 35 | 30.30 | 43.0 | 45 | - 3.9 | + 15 54.7 | .. | + 15 50.8 |
| 41 | 30.38 | 45.5 | 46 | - 4.0 | - 15 54.7 | .. | - 15 58.7 |
| 46 | 30.29 | 54.3 | 47 | - 0.2 | .. | .. | - 0.2 |

For summary of the elements of reduction see page 3.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|---------|---------|------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|----------|------------|--------------|---------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | clock appar't | Clock adopted. | | |
| | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| 1876. | | | | | | | | | | | | | | | | | | |
| Apr. 20 | 1 | B. A. C. 3261 . | F. | . | . | . | . | . | . | . | . | . | 31 58.09 | - 0.60 | . | + 3.07 | 9 32 0.56 | - 1.42 |
| | 2 | B. A. C. 3295 . | F. | . | . | 54.0 | 56.0 | 58.1 | 0.0 | 2.0 | . | . | 31 47.82 | - 0.49 | + 3.02 | + 3.07 | 9 38 50.40 | - 0.01 |
| | 3 | Leonis . | F. | 34.3 | 37.1 | 38.0 | 45.5 | 47.9 | 50.2 | 56.8 | 58.5 | 1.2 | 31 49.77 | - 0.49 | . | + 3.07 | 9 44 52.35 | - 1.81 |
| | 4 | B. A. C. 3366 . | F. | 36.3 | 39.1 | 40.6 | 47.5 | 49.8 | 52.0 | 58.7 | 0.5 | 3.4 | 41 49.77 | - 0.56 | + 3.09 | + 3.07 | 10 1 47.67 | - 0.06 |
| | 5 | Leonis . | F. | 32.6 | 35.2 | 36.9 | 43.1 | 45.1 | 47.3 | 53.5 | 55.0 | 57.6 | 1 45.16 | - 0.51 | . | + 3.07 | 10 11 9.99 | - 1.78 |
| | 6 | Weisse 160 . | F. | 51.7 | 57.4 | 59.0 | 5.4 | 7.5 | 9.6 | 16.0 | 17.4 | 20.1 | 11 7.46 | - 0.55 | . | + 3.07 | 10 11 48.29 | - 1.76 |
| | 7 | Weisse 170 . | F. | 33.2 | 35.8 | 37.4 | 13.5 | 15.7 | 17.9 | 54.2 | 55.8 | 58.4 | 11 45.77 | - 0.51 | + 3.11 | + 3.07 | 10 13 9.85 | - 0.06 |
| | 8 | Leonis . | F. | . | . | . | . | 7.4 | 9.5 | 11.6 | . | . | 13 7.29 | - 0.51 | . | + 3.07 | 10 13 10.35 | - 1.88 |
| | 9 | Leonis . | F. | . | . | . | . | . | 16.4 | 18.1 | 21.0 | 13 7.79 | - 0.56 | . | + 3.06 | . | 10 20 39.38 | - 1.76 |
| | 10 | Weisse 331 . | F. | 24.4 | 26.8 | 28.5 | 34.8 | 36.9 | 39.0 | 45.3 | 46.7 | 49.5 | 20 36.88 | - 0.56 | . | + 3.06 | 10 21 55.58 | - 1.77 |
| | 11 | Weisse 361 . | F. | 40.6 | 43.1 | 44.7 | 51.0 | 53.1 | 55.1 | 1.4 | 3.0 | 5.7 | 21 53.08 | - 0.55 | . | + 3.06 | 10 39 53.03 | - 1.90 |
| | 12 | B. A. C. 3693 . | F. | 37 9 40.5 | 42.0 | 48.4 | 50.5 | 52.7 | 59.0 | 0.5 | 3.2 | 30 50.52 | - 0.54 | . | + 3.04 | . | 11 25 22.21 | - 2.09 |
| | 13 | B. A. C. 3919 ¹ . | F. | . | . | . | . | . | 28.3 | 29.8 | 32.3 | 25 19.74 | - 0.54 | . | + 3.04 | . | 11 25 22.77 | - 2.09 |
| | 14 | B. A. C. 3919 ² . | F. | . | . | 15.9 | 18.2 | 20.3 | 22.4 | 24.6 | . | . | 25 20.27 | - 0.50 | . | + 3.04 | 11 34 22.30 | - 2.25 |
| | 15 | B. A. C. 3964 . | F. | 6.6 | 9.2 | 11.0 | 17.5 | 19.7 | 22.0 | 28.6 | 30.2 | 33.0 | 34 19.76 | - 0.54 | . | + 3.04 | 11 42 16.18 | - 0.01 |
| | 16 | Leonis . | F. | 31.0 | 33.7 | 35.2 | 41.5 | 43.7 | 45.9 | 52.1 | 53.6 | 56.4 | 42 43.68 | - 0.58 | . | + 3.04 | 11 48 43.52 | - 2.07 |
| | 17 | B. A. C. 4027 . | F. | 28.5 | 31.2 | 32.7 | 39.0 | 41.0 | 43.2 | 49.3 | 50.8 | 53.4 | 48 41.01 | - 0.61 | . | + 3.03 | 11 53 37.76 | - 2.01 |
| | 18 | B. A. C. 4019 . | F. | 23.0 | 25.6 | 27.2 | 33.4 | 35.1 | 37.5 | 43.5 | 45.0 | 47.5 | 53 35.31 | - 0.57 | . | + 3.02 | 12 32 5.72 | . |
| | 19 | Vesta . | F. | 50.9 | 53.4 | 55.0 | 1.2 | 3.3 | 5.4 | 11.5 | 13.0 | 15.7 | 32 3 27 | - 0.66 | + 3.02 | + 3.02 | 13 3 33.95 | - 0.04 |
| | 20 | Virginis . | F. | 19.2 | 21.8 | 23.4 | 29.6 | 31.7 | 33.7 | 39.7 | 41.3 | 43.9 | 3 31.59 | - 0.64 | . | + 3.01 | 13 8 32.14 | . |
| | 21 | Peitho . | F. | . | . | . | . | . | . | 37.8 | 39.5 | 42.1 | 8 29.77 | - 9.24 | . | + 3.01 | 1 12 9.20 | - 0.36 |
| | 22 | Polaris, S. P. . | F. | . | . | 9.0 | 41.0 | 14.0 | . | . | . | . | 12 15.43 | - 0.69 | + 3.01 | + 3.00 | 13 18 41.82 | - 0.03 |
| | 23 | Virginis . | F. | 27.1 | 29.8 | 31.2 | 37.4 | 39.4 | 41.6 | 47.8 | 49.4 | 51.9 | 18 39.51 | . | . | . | . | . |
| | 24 | Pallas . | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 25 | Ursæ Minoris (R.) | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 26 | Ursæ Minoris . | F. | . | . | . | 52.6 | 1.2 | 9.7 | 27.0 | 33.5 | 41.4 | 27 52.64 | + 0.32 | . | + 2.98 | 14 27 55.94 | 0.00 |
| | 27 | Bootis . | F. | . | . | . | . | . | . | 43.5 | 45.3 | 48.2 | 39 34.36 | - 0.47 | + 2.99 | + 2.98 | 14 39 36.87 | + 0.06 |
| | 28 | Libra . | F. | . | . | 57.0 | 59.0 | 1.1 | 3.2 | 5.3 | . | . | 44 1.09 | - 0.73 | + 3.05 | + 2.98 | 14 44 3.34 | - 0.08 |
| | 29 | Hydræ . | P. | . | . | 7.0 | 9.1 | 11.3 | 13.3 | 15.3 | . | . | 40 11.19 | - 0.54 | + 3.00 | + 2.95 | 8 40 13.60 | - 0.09 |
| | 30 | Uranus . | P. | 52.5 | 55.1 | 56.8 | 3.2 | 5.3 | 7.4 | 13.8 | 15.5 | 18.2 | 14 5.31 | - 0.50 | . | + 2.95 | 9 14 7.76 | . |
| | 31 | Hydræ . | P. | 16.0 | 18.7 | 20.2 | 26.5 | 28.5 | 30.6 | 36.8 | 38.2 | 40.8 | 21 28.48 | - 0.59 | + 2.89 | + 2.95 | 9 21 30.84 | + 0.03 |
| | 32 | B. A. C. 3250 . | P. | 2.0 | 4.7 | 6.3 | 12.7 | 14.7 | 16.8 | 23.0 | 24.6 | 27.2 | 25 14.67 | - 0.52 | . | + 2.96 | 9 25 17.11 | - 1.45 |
| | 33 | B. A. C. 3295 . | P. | . | . | . | . | . | 2.2 | 6.4 | 7.9 | 10.5 | 31 58.16 | - 0.54 | . | + 2.96 | 9 32 0.58 | - 1.39 |
| | 34 | B. A. C. 3321 . | P. | 45.0 | 47.7 | 49.3 | 55.6 | 57.7 | 59.8 | 6.2 | 7.8 | 10.4 | 36 57.72 | - 0.51 | . | + 2.96 | 9 37 0.17 | - 1.56 |
| | 35 | Leonis . | P. | 34.3 | 37.2 | 38.0 | 45.6 | 47.9 | 50.0 | 56.8 | 58.5 | 1.3 | 38 47.83 | - 0.48 | + 2.97 | + 2.96 | 9 38 50.31 | - 0.07 |
| | 36 | Leonis . | P. | 28.1 | 31.0 | 32.7 | 39.5 | 41.8 | 44.2 | 51.0 | 52.7 | 55.5 | 45 41.83 | - 0.45 | + 2.93 | + 2.96 | 9 45 44.31 | + 0.02 |
| | 37 | B. A. C. 3406 . | P. | 19.6 | 22.3 | 23.9 | 30.2 | 32.3 | 34.3 | 40.6 | 42.2 | 44.7 | 51 32.23 | - 0.52 | . | + 2.96 | 9 51 34.67 | - 1.61 |
| | 38 | B. A. C. 3415 . | P. | 26.2 | 28.8 | 30.4 | 36.6 | 38.7 | 40.8 | 47.0 | 48.5 | 51.0 | 53 38.67 | - 0.53 | . | + 2.96 | 9 53 41.10 | - 1.56 |
| | 39 | Anonymous . | P. | . | . | . | 23.9 | 25.9 | 28.0 | 32.2 | 33.8 | 36.6 | 0 23.79 | - 0.51 | . | + 2.96 | 10 0 26.24 | - 1.70 |
| | 40 | B. A. C. 3575 . | P. | 52.6 | 55.3 | 56.9 | 3.2 | 5.2 | 7.3 | 13.4 | 15.0 | 17.6 | 21 5.17 | - 0.53 | . | + 2.97 | 10 21 7.61 | - 1.72 |
| | 41 | Draconis . | P. | 41.7 | 52.2 | 59.0 | 25.0 | 33.0 | 42.8 | 8.6 | 14.9 | 25.0 | 24 33.74 | - 0.20 | . | + 2.97 | 10 24 36.51 | - 0.56 |
| | 42 | B. A. C. 3693 . | P. | 37.9 | 40.5 | 42.1 | 48.5 | 50.6 | 52.8 | 59.0 | 0.6 | 3.2 | 39 50.58 | - 0.50 | . | + 2.97 | 10 39 53.05 | - 1.88 |
| | 43 | B. A. C. 3832 . | P. | 11.8 | 14.5 | 16.0 | 22.0 | 24.0 | 26.1 | 32.3 | 33.8 | 36.3 | 7 24.09 | - 0.55 | . | + 2.95 | 11 7 26.52 | - 1.79 |
| | 44 | Crateris . | P. | 55.3 | 57.8 | 59.4 | 5.8 | 7.8 | 9.9 | 16.2 | 17.7 | 20.4 | 13 7.81 | - 0.60 | + 2.99 | + 2.98 | 11 13 10.19 | - 0.05 |
| | 45 | B. A. C. 3877 ¹ . | P. | 14.6 | 17.2 | 18.8 | . | . | . | 35.4 | 36.9 | 39.7 | 17 27.12 | - 0.51 | . | + 2.98 | 11 17 29.59 | - 1.98 |
| | 46 | B. A. C. 3877 ² . | P. | . | . | 23.2 | 25.3 | 27.3 | 29.4 | 31.5 | . | . | 17 27.33 | - 0.51 | . | + 2.98 | 11 17 29.80 | - 1.98 |
| | 47 | B. A. C. 3919 ¹ . | P. | 6.9 | 9.6 | 11.3 | . | . | . | 28.1 | 29.7 | 32.3 | 25 19.67 | - 0.50 | . | + 2.98 | 11 25 22.15 | - 2.07 |
| | 48 | B. A. C. 3919 ² . | P. | . | . | 16.0 | 18.2 | 20.3 | 22.4 | 24.5 | . | . | 25 20.27 | - 0.50 | . | + 2.98 | 11 25 22.75 | - 2.07 |
| | 49 | B. A. C. 3964 . | P. | 6.5 | 9.4 | 11.0 | 17.7 | 19.8 | 22.0 | 28.6 | 30.3 | 33.0 | 34 19.81 | - 0.48 | . | + 2.98 | 11 34 22.31 | - 2.24 |
| | 50 | Leonis . | P. | 30.9 | 33.6 | 35.2 | 41.5 | 43.6 | 45.8 | 52.2 | 53.7 | 56.4 | 42 43.66 | - 0.50 | + 2.98 | + 2.99 | 11 42 46.15 | - 0.01 |

1. Thread B used.
24. Thread A used.
26, 37, 41. Bisections at sets B and D.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom ^r . | Refraction. | Apparent North-Polar Distance. | Miscellan ^{us} Corrections. | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------------------|-------------|--------------------------------|--------------------------------------|-------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | | ° ' " | " " | " " | " " | | | | | | | | | | | | | |
| 1 | 358 2 | 10 10.0 | 12.6 | 26.2 | 7.2 | 35 | .. | .. | .. | .. | 846 | 62.7 | 1 56 41.3 | .. | + | 2.0 | 53 3 4.5 | + 6.5 |
| 2 | 326 16 | 14.1 | 14.5 | 29.3 | 10.7 | 37 | .. | .. | .. | 350 | 330 | 62.7 | 33 40 34.2 | .. | + | 38.4 | 84 47 33.8 | - 4.4 |
| 3 | 345 24 | 8.7 | 10.3 | 24.9 | 5.1 | 38 | 340 | 330 | .. | .. | .. | 62.7 | 14 32 43.2 | 56.6 | + | 15.0 | 65 39 19.4 | + 0.8 |
| 4 | 346 2 | 14.5 | 15.6 | 0.4 | 11.1 | 37 | 176 | 128 | .. | .. | .. | 62.7 | 13 54 30.7 | .. | + | 14.3 | 65 1 6.2 | + 1.4 |
| 5 | 333 38 | 11.0 | 12.4 | 27.0 | 8.4 | 38 | .. | 772 | .. | 704 | .. | 62.7 | 26 18 52.4 | .. | + | 28.5 | 77 25 42.1 | + 0.5 |
| 6 | 336 32 | 13.1 | 13.3 | 28.9 | 9.3 | 36 | 522 | 516 | .. | .. | .. | 62.7 | 23 24 19.2 | .. | + | 25.0 | 74 31 5.4 | - 3.3 |
| 7 | 335 36 | 10.3 | 10.5 | 24.9 | 5.9 | 35 | .. | .. | .. | 692 | 656 | 62.7 | 24 20 4.6 | .. | + | 26.1 | 75 26 51.9 | - 3.6 |
| 8 | 341 30 | 9.0 | 10.7 | 23.6 | 6.1 | 32 | .. | .. | .. | 490 | .. | 62.7 | 18 25 15.1 | .. | + | 19.2 | 69 31 55.5 | - 0.3 |
| 9 | 341 30 | 9.0 | 10.7 | 23.6 | 6.1 | 32 | .. | .. | .. | .. | 740 | 62.7 | 18 25 19.4 | .. | + | 19.2 | 69 31 59.8 | - 1.8 |
| 10 | 333 0 | 5.8 | 6.9 | 21.3 | 5.4 | 37 | .. | .. | .. | 182 | .. | 62.7 | 26 56 24.4 | .. | + | 29.3 | 78 3 14.9 | - 4.9 |
| 11 | 333 10 | 10.9 | 12.6 | 27.6 | 8.3 | 34 | .. | .. | .. | 880 | 834 | 62.7 | 26 45 54.0 | .. | + | 29.1 | 77 52 44.3 | - 5.0 |
| 12 | 335 54 | 12.9 | 12.5 | 29.2 | 10.4 | 36 | .. | .. | .. | 620 | 596 | 62.7 | 24 2 22.2 | .. | + | 25.8 | 75 9 9.2 | - 5.2 |
| 13 | 336 6 | 11.7 | 14.4 | 29.4 | 10.2 | 34 | .. | .. | .. | 548 | 456 | 62.7 | 23 40 50.2 | .. | + | 25.5 | 74 56 36.9 | - 7.9 |
| 14 | 336 6 | 11.7 | 14.4 | 29.4 | 10.2 | 35 | .. | .. | .. | 468 | 420 | 62.2 | 23 50 4.6 | .. | + | 25.5 | 74 56 51.3 | - 7.9 |
| 15 | 343 6 | 10.7 | 11.3 | 26.3 | 6.8 | 39 | 196 | 196 | .. | .. | .. | 62.7 | 16 50 57.9 | .. | + | 17.5 | 67 57 36.6 | - 6.7 |
| 16 | 336 18 | 12.8 | 14.7 | 28.6 | 10.5 | 33 | .. | 008 | .. | 958 | .. | 62.7 | 23 37 26.3 | .. | + | 25.3 | 74 44 12.8 | - 0.3 |
| 17 | 330 10 | 9.2 | 11.2 | 25.8 | 7.4 | 32 | .. | 438 | .. | 428 | .. | 62.7 | 29 45 14.6 | .. | + | 33.0 | 80 52 8.8 | - 10.6 |
| 18 | 324 24 | 11.2 | 13.8 | 29.1 | 10.5 | 32 | .. | 910 | .. | 876 | .. | 62.7 | 35 31 24.4 | .. | + | 41.3 | 86 38 26.9 | - 12.0 |
| 19 | 330 56 | 10.7 | 12.1 | 26.1 | 7.1 | 35 | .. | 196 | .. | 110 | .. | 62.7 | 28 59 56.8 | 53.4 | + | 32.1 | 80 6 50.1 | - 3.3 |
| 20 | 316 10 | 9.1 | 11.4 | 26.7 | 8.2 | 33 | 704 | 698 | .. | .. | .. | 62.7 | 43 45 33.6 | .. | + | 55.3 | 94 52 50.1 | - 0.2 |
| 21 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 22 | 52 22 | 8.7 | 10.6 | 26.6 | 5.3 | 34 | .. | .. | 652 | 658 | 670 | 62.7 | 307 33 48.2 | .. | - | 15.1 | 358 38 54.3 | - 1.9 |
| 23 | 310 32 | 12.8 | 14.4 | 28.7 | 10.8 | 33 | .. | 628 | 590 | .. | .. | 62.7 | 49 23 35.8 | 53.4 | + | 7.4 | 100 31 4.4 | + 0.4 |
| 24 | 342 24 | 12.7 | 13.9 | 28.0 | 9.4 | 34 | .. | 546 | .. | 526 | .. | 62.7 | 17 29 16.0 | .. | + | 18.2 | 68 35 55.4 | - 1.6 |
| 25 | 142 36 | 10.0 | 13.1 | 27.8 | 5.8 | 36 | 480 | 510 | .. | .. | .. | 62.7 | 217 20 16.2 | .. | + | 44.0 | 13 45 21.0 | - 3.8 |
| 26 | 37 16 | 9.6 | 8.7 | 25.7 | 6.3 | 34 | .. | .. | .. | 538 | 546 | 62.7 | 322 39 46.5 | .. | - | 44.0 | 13 45 23.7 | - 1.1 |
| 27 | 348 38 | 18.3 | 18.3 | 0.8 | 13.8 | 34 | .. | .. | .. | 288 | 268 | 62.7 | 11 17 51.8 | .. | + | 11.5 | 62 24 24.5 | + 0.2 |
| 28 | 305 32 | 14.5 | 16.6 | 3.9 | 13.8 | 35 | .. | .. | .. | 444 | 420 | 62.7 | 54 24 7.4 | 54.8 | + | 19.9 | 105 31 48.5 | + 2.1 |
| 29 | 327 56 | 11.4 | 13.6 | 27.0 | 6.7 | 38 | .. | .. | .. | 080 | 085 | 61.6 | 32 0 42.1 | 58.7 | + | 35.8 | 83 7 39.1 | - 0.3 |
| 30 | 337 50 | 11.5 | 14.0 | 28.4 | 8.5 | 37 | 285 | 315 | .. | 245 | 190 | 61.6 | 22 6 20.7 | .. | + | 23.4 | 73 13 14.3 | .. |
| 31 | 312 56 | 13.2 | 15.6 | 0.5 | 9.0 | 35 | 530 | 535 | .. | 470 | 420 | 61.6 | 47 0 3.8 | 57.0 | + | 1.6 | 95 7 26.6 | - 0.4 |
| 32 | 332 54 | 10.7 | 13.4 | 27.9 | 7.1 | 36 | .. | .. | .. | 600 | 515 | 61.6 | 27 2 18.9 | .. | + | 29.4 | 78 9 9.5 | - 1.8 |
| 33 | 326 16 | 15.0 | 17.0 | 0.9 | 9.6 | 37 | .. | .. | .. | 340 | 335 | 61.6 | 33 40 34.1 | .. | + | 38.4 | 84 47 33.7 | - 4.4 |
| 34 | 335 38 | 12.0 | 13.7 | 28.0 | 7.3 | 35 | 265 | 205 | .. | .. | .. | 61.6 | 24 17 57.6 | .. | + | 26.0 | 75 24 44.8 | - 1.5 |
| 35 | 345 24 | 10.7 | 12.5 | 26.0 | 6.1 | 38 | 280 | 270 | .. | 170 | 130 | 61.6 | 14 32 42.6 | .. | + | 15.0 | 65 39 18.8 | + 0.3 |
| 36 | 347 38 | 11.5 | 13.4 | 28.0 | 7.0 | 35 | .. | 385 | .. | 310 | .. | 61.6 | 12 17 59.8 | .. | + | 12.6 | 63 24 33.6 | 0.0 |
| 37 | 334 4 | 11.1 | 13.5 | 27.3 | 9.0 | 31 | 850 | .. | .. | 805 | .. | 61.6 | 25 51 6.1 | .. | + | 27.9 | 76 57 55.2 | - 2.8 |
| 38 | 329 42 | 11.1 | 13.0 | 26.6 | 6.2 | 38 | 855 | 785 | .. | 735 | 690 | 61.6 | 30 14 51.3 | .. | + | 33.6 | 81 21 46.1 | - 4.4 |
| 39 | 336 24 | 13.1 | 13.7 | 27.0 | 7.1 | 34 | .. | .. | .. | .. | 645 | 61.6 | 23 31 50.3 | .. | + | 25.1 | 74 38 36.6 | - 2.6 |
| 40 | 331 26 | 12.5 | 14.4 | 26.1 | 7.5 | 33 | .. | 665 | .. | .. | .. | 61.6 | 28 29 33.5 | .. | + | 31.4 | 79 36 26.1 | - 5.3 |
| 41 | 37 22 | 10.4 | 11.7 | 26.9 | 6.1 | 32 | 065 | .. | 990 | .. | 975 | 61.6 | 322 33 7.6 | .. | - | 44.3 | 13 38 44.5 | - 1.1 |
| 42 | 335 54 | 12.0 | 13.7 | 27.5 | 8.5 | 36 | .. | 790 | .. | 700 | .. | 61.6 | 24 2 21.6 | 53.8 | + | 25.8 | 75 9 8.6 | - 5.1 |
| 43 | 321 40 | 12.4 | 13.5 | 28.5 | 8.5 | 38 | 380 | 340 | .. | 240 | 180 | 61.6 | 38 16 45.4 | .. | + | 45.7 | 89 23 52.3 | - 1.5 |
| 44 | 306 58 | 12.7 | 14.5 | 29.8 | 8.8 | 39 | 495 | 450 | .. | 335 | 295 | 61.6 | 52 59 3.0 | .. | + | 16.7 | 104 6 40.9 | - 0.3 |
| 45 | 332 16 | 14.0 | 15.3 | 29.5 | 8.9 | 37 | 490 | .. | .. | .. | 320 | 61.6 | 27 40 33.2 | .. | + | 30.4 | 78 47 24.8 | - 8.3 |
| 46 | 332 16 | 14.0 | 15.3 | 29.5 | 8.9 | 37 | .. | 375 | .. | 245 | .. | 61.6 | 27 40 31.7 | .. | + | 30.4 | 78 47 23.3 | - 8.3 |
| 47 | 336 6 | 12.2 | 14.0 | 27.9 | 7.0 | 34 | .. | 780 | .. | 705 | .. | 61.6 | 23 49 50.8 | .. | + | 25.6 | 74 56 37.6 | - 7.7 |
| 48 | 336 6 | 12.2 | 14.0 | 27.9 | 7.0 | 35 | .. | 590 | .. | 525 | .. | 61.6 | 23 50 3.3 | .. | + | 25.6 | 74 56 50.1 | - 7.7 |
| 49 | 343 6 | 14.4 | 15.0 | 29.1 | 8.9 | 39 | 170 | 090 | .. | 010 | 940 | 61.6 | 16 59 58.5 | .. | + | 17.6 | 67 57 37.3 | - 6.5 |
| 50 | 336 18 | 13.7 | 15.5 | 28.1 | 8.3 | 33 | 145 | 140 | .. | .. | .. | 61.6 | 23 37 26.6 | .. | + | 25.4 | 74 44 13.2 | + 0.3 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|------|
| | in. | ° | | " | " | " | " |
| 3 | 30.08 | 58.0 | 30 | — | 0.2 | .. | — |
| 19 | 30.00 | 56.0 | | | | | |
| 23 | 29.98 | 56.0 | | | | | |
| 28 | 29.95 | 55.5 | | | | | |
| 29 | 30.05 | 59.8 | | | | | |
| 31 | 30.04 | 58.6 | | | | | |
| 42 | 30.04 | 55.9 | | | | | |

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. |
|------------------|---------|-----------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|----------|------------|--------------|----------------|----------------|---------------------------|----|-------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | m. | s. | |
| | | | | | | | | | | | | | | | | | | | | |
| 1876. Apr. 22 | 1 | B. A. C. 4002 . . . | P. | 1.5 | 4.0 | 5.5 | 11.7 | 13.8 | 15.9 | 21.9 | 23.4 | 26.1 | 44 13.76 | - 0.54 | . | + 2.99 | 11 | 44 | 16.21 | - 1.96 |
| | 2 | B. A. C. 4049 . . . | P. | 23.0 | 25.7 | 27.2 | 33.3 | 35.4 | 37.4 | 43.5 | 45.0 | 47.7 | 53 35.36 | - 0.52 | . | + 2.99 | 11 | 53 | 37.83 | - 2.01 |
| | 3 | B. A. C. 4124 . . . | P. | 12.6 | 15.2 | 16.8 | 23.2 | 25.4 | 27.5 | 33.8 | 35.4 | 38.2 | 9 25 34 | - 0.60 | . | + 2.99 | 12 | 9 | 27.73 | - 1.88 |
| | 4 | Virginis | P. | 21.0 | 23.6 | 25.1 | 31.3 | 33.3 | 35.4 | 41.4 | 43.0 | 45.6 | 13 33.30 | - 0.54 | + 2.99 | + 2.99 | 12 | 13 | 35.75 | - 0.02 |
| | 5 | Juno | P. | 51.9 | 54.5 | 56.0 | 2.2 | 4.3 | 6.3 | 12.4 | 14.0 | 16.5 | 18 4.23 | - 0.52 | . | + 2.99 | 12 | 18 | 6.70 | . |
| | 6 | B. A. C. 4210 . . . | P. | 3.3 | 6.5 | 8.6 | 16.9 | 19.5 | 22.2 | 30.4 | 32.2 | 35.8 | 23 19.49 | - 0.75 | . | + 3.00 | 12 | 23 | 21.74 | - 1.91 |
| | 7 | B. A. C. 4227 . . . | P. | 32.7 | 35.8 | 38.0 | 46.1 | 49.0 | 51.6 | 59.6 | 1.7 | 5.0 | 26 48.83 | - 0.75 | . | + 3.00 | 12 | 26 | 51.08 | - 1.93 |
| | 21 | Cassiopeæ, S. P. . | P. | 7.5 | 57.9 | 52.2 | 29.1 | 22.1 | 14.6 | 31.6 | 46.1 | 36.6 | 37 22.00 | - 0.69 | . | + 3.00 | 0 | 37 | 24.31 | + 0.22 |
| | 9 | B. A. C. 4321 . . . | P. | 18.3 | 21.4 | 23.5 | 31.7 | 34.3 | 37.0 | 44.9 | 46.8 | 50.2 | 16 34 23 | - 0.74 | . | + 3.00 | 12 | 46 | 36.49 | - 2.02 |
| | 10 | 12 ¹ Canum Venat. . | P. | 56.8 | 0.1 | 2.0 | . | . | . | 23.1 | 25.0 | 28.1 | 50 12.59 | - 0.40 | . | + 3.00 | 12 | 50 | 15.19 | - 2.88 |
| | 11 | 12 ² Canum Venat. . | P. | . | . | 8.5 | 11.1 | 13.8 | 16.4 | 19.0 | . | . | 50 13.74 | - 0.40 | + 3.04 | + 3.00 | 12 | 50 | 16.34 | - 0.04 |
| | 12 | B. A. C. 4355 . . . | P. | 30.7 | 33.7 | 35.5 | 42.8 | 45.3 | 47.7 | 54.9 | 56.9 | 59.7 | 53 45.24 | - 0.69 | . | + 3.00 | 12 | 53 | 47.55 | - 2.02 |
| | 13 | B. A. C. 4357 ¹ . . . | P. | . | . | 9.5 | 11.9 | 14.5 | 16.8 | 19.2 | . | . | 54 14.36 | - 0.60 | . | + 3.00 | 12 | 54 | 16.67 | - 2.03 |
| | 14 | B. A. C. 4357 ² . . . | P. | . | 3.3 | 5.0 | . | . | . | 24.6 | 26.5 | . | 54 14.87 | - 0.60 | . | + 3.00 | 12 | 54 | 17.18 | - 2.03 |
| | 15 | Lacaille 5410 . . . | P. | 54.3 | 57.3 | 59.2 | 6.7 | 9.0 | 11.4 | 18.9 | 20.5 | 23.6 | 2 8.99 | - 0.69 | . | + 3.00 | 13 | 2 | 11.30 | - 2.06 |
| | 16 | Polaris (S. P.) . . | P. | . | . | 3.5 | 37.5 | 9.5 | 43.4 | 16.6 | . | . | 12 10.69 | - 3.95 | . | + 3.00 | 1 | 12 | 9.74 | - 0.44 |
| | 17 | a Virginis | P. | 26.8 | 29.5 | 31.0 | 37.3 | 39.4 | 41.5 | 47.6 | 49.2 | 51.5 | 18 39.31 | - 0.58 | + 3.11 | + 3.00 | 13 | 18 | 41.73 | - 0.13 |
| | 18 | Atalante | P. | 46.8 | . | . | . | . | . | 40.1 | 25 | 0.17 | . | - 0.64 | . | + 3.01 | 13 | 25 | 2.54 | . |
| | 19 | B. A. C. 4601 . . . | P. | 48.1 | 51.4 | 53.6 | 1.8 | 4.5 | 7.3 | 15.4 | 17.4 | 20.8 | 42 4.48 | - 0.75 | . | + 3.01 | 13 | 42 | 6.74 | - 2.28 |
| | 20 | B. A. C. 4629 ¹ , S. . | P. | 50.0 | 52.9 | 54.7 | . | . | . | 13.8 | 15.7 | 18.8 | 46 4.34 | - 0.68 | . | + 3.01 | 13 | 46 | 6.67 | - 2.20 |
| | 21 | B. A. C. 4629 ² , N. . | P. | . | . | 59.7 | 2.1 | 4.5 | 6.8 | 9.2 | . | . | 46 4.44 | - 0.68 | . | + 3.01 | 13 | 46 | 6.77 | - 2.20 |
| | 22 | Eunomia | P. | 50.7 | 53.8 | 55.5 | 2.7 | 5.0 | 7.5 | 14.5 | 16.3 | 19.2 | 53 5.02 | - 0.66 | . | + 3.02 | 13 | 53 | 7.38 | . |
| | 23 | Pallas | P. | 44.7 | 47.4 | 49.1 | 55.8 | 58.0 | 0.1 | 6.8 | 8.3 | 11.1 | 55 57.92 | - 0.46 | . | + 3.02 | 13 | 56 | 0.48 | . |
| | 24 | Diana | P. | 16.7 | 19.5 | 21.0 | 27.8 | 30.1 | 32.6 | 39.5 | 41.0 | 43.8 | 3 30.22 | - 0.64 | . | + 3.02 | 14 | 3 | 32.60 | . |
| | 25 | a Bootis (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 26 | a Bootis | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 27 | Leucothea | P. | 30.0 | 32.7 | 34.6 | 41.2 | 43.6 | 45.9 | 52.3 | 54.1 | 57.0 | 18 43.49 | - 0.63 | . | + 3.02 | 14 | 18 | 45.88 | . |
| | 28 | Ceres | P. | 24.8 | 27.4 | 29.0 | 35.3 | 37.4 | 39.3 | 45.4 | 46.9 | 49.4 | 33 37.21 | - 0.54 | . | + 3.02 | 14 | 33 | 39.69 | . |
| | 29 | 34 (H.) Bootis . . | P. | 20.6 | 23.9 | 25.8 | 33.5 | 36.1 | 38.7 | 46.5 | 48.4 | 51.6 | 15 36.12 | - 0.40 | . | + 3.03 | 14 | 45 | 38.75 | - 2.71 |
| | 30 | Asia | P. | . | . | 5.8 | 8.1 | 10.1 | 12.3 | 14.4 | . | . | 52 10.13 | - 0.58 | . | + 3.03 | 14 | 52 | 12.58 | . |
| | 31 | B. A. C. 4954 . . . | P. | 0.0 | 3.3 | 5.4 | 13.5 | 16.2 | 18.9 | 26.9 | 28.9 | 32.5 | 57 16.18 | - 0.70 | . | + 3.03 | 14 | 57 | 18.51 | - 2.47 |
| | 32 | XV, 2 | P. | 20.5 | 23.3 | 25.1 | 32.3 | 34.7 | 37.0 | 44.1 | 45.8 | 48.9 | 1 34.63 | - 0.66 | . | + 3.03 | 15 | 1 | 37.00 | - 2.32 |
| | 33 | B. A. C. 4996 . . . | P. | 3.8 | 6.9 | 9.0 | 16.3 | 18.8 | 21.4 | 28.8 | 30.6 | 33.9 | 5 18.83 | - 0.70 | . | + 3.03 | 15 | 5 | 21.16 | - 2.40 |
| | 34 | B. A. C. 5035 . . . | P. | 33.0 | 36.2 | 38.3 | 46.4 | 49.0 | 51.8 | 59.7 | 1.8 | 5.3 | 10 49.06 | - 0.73 | . | + 3.03 | 15 | 10 | 51.36 | - 2.49 |
| | 35 | B. A. C. 5046 . . . | P. | 58.5 | 1.9 | 3.8 | 11.7 | 14.5 | 17.3 | 25.2 | 27.4 | 30.4 | 13 14.52 | - 0.73 | . | + 3.03 | 15 | 13 | 16.82 | - 2.49 |
| | 36 | μ ¹ Bootis | P. | 32.8 | 36.0 | 38.0 | . | . | . | 58.8 | 0.7 | 4.0 | 19 48.41 | - 0.40 | + 2.90 | + 3.03 | 15 | 19 | 51.04 | + 0.02 |
| | 37 | μ ² Bootis | P. | . | . | 44.5 | 47.2 | 49.8 | 52.4 | 54.9 | . | . | 19 49.74 | - 0.49 | . | + 3.03 | 15 | 19 | 52.37 | - 2.58 |
| | 38 | XV, 16 | P. | 26.5 | 29.3 | 31.0 | 38.0 | 40.2 | 42.5 | 44.3 | 51.0 | 53.8 | 29 40.18 | - 0.64 | . | + 3.04 | 15 | 29 | 42.58 | - 2.28 |
| | 39 | B. A. C. 5216 (R.) . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 40 | B. A. C. 5216 . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 41 | ζ Ursæ Minoris (R) . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 42 | ζ Ursæ Minoris . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 43 | B. A. C. 5451 . . . | P. | 37.8 | 41.0 | 43.0 | 50.7 | 53.3 | 55.8 | 3.5 | 5.3 | 8.5 | 14 53.21 | - 0.70 | . | + 3.05 | 16 | 14 | 55.56 | - 2.43 |
| | 44 | a Scorpii | P. | 34.5 | 37.4 | 39.2 | 46.0 | 48.2 | 50.4 | 57.3 | 59.0 | 1.9 | 21 48.21 | - 0.63 | + 3.07 | + 3.05 | 16 | 21 | 50.63 | - 0.03 |
| | 45 | ζ Ophiuchi | P. | 7.0 | 9.6 | 11.2 | 17.4 | 19.5 | 21.5 | 27.8 | 29.2 | 32.0 | 30 19.47 | - 0.56 | + 3.09 | + 3.05 | 16 | 30 | 21.96 | - 0.04 |
| | 46 | η Herculis | P. | 22.5 | 25.8 | 27.9 | 35.6 | 38.4 | 41.0 | 48.6 | 50.7 | 54.2 | 38 38.30 | - 0.38 | + 2.99 | + 3.05 | 16 | 38 | 40.97 | + 0.07 |
| 25 | 47 | β Leonis | S. | 30.0 | 33.5 | 35.2 | 41.5 | 43.3 | 45.7 | 52.0 | 53.8 | 56.3 | 42 43 61 | - 0.45 | + 3.00 | + 2.97 | 11 | 42 | 46.10 | - 0.05 |
| | 48 | η Ursæ Majoris . . | S. | . | . | . | 22.2 | 25.7 | 32.7 | 35.3 | 39.7 | 47 18 67 | - 0.21 | . | . | + 2.97 | 11 | 47 | 21.43 | - 0.13 |
| | 49 | Lalande 22810 . . . | S. | 7.6 | 11.0 | 13.0 | 21.2 | 23.9 | 26.6 | 34.6 | 36.6 | 39.9 | 3 23.82 | - 0.33 | . | + 2.98 | 12 | 3 | 26.47 | - 2.85 |
| | 50 | η Virginis | S. | 21.0 | 23.6 | 25.2 | 31.3 | 33.3 | 35.4 | 41.3 | 43.0 | 45.7 | 13 33.31 | - 0.55 | + 2.98 | + 2.98 | 12 | 13 | 35.74 | - 0.02 |

8, 25, 42. Bisections at sets B and D.
12, 15, 18, 22, 24, 27, 35. Thread A used.
13, 14, 28, 34, 37, 44. Thread B used.
18. Transit at threads B₁ and VII.
41. Bisections at threads C₁ and C₂.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | ° ' " | ° ' " | ° ' " | ° ' " | | | |
| 1 | 323 30 | 10 14.7 | 16.0 | 29.5 | 11.4 | 32 | .. | 585 | .. | 480 | .. | 61.6 | 36 25 19.5 | .. | + | 42.8 | 87 32 23.5 | -11.7 |
| 2 | 325 24 | 10.9 | 12.2 | 27.1 | 6.9 | 37 | 130 | 060 | .. | 920 | 960 | 61.6 | 34 32 24.6 | 52.0 | + | 40.0 | 85 39 25.8 | -11.8 |
| 3 | 304 12 | 16.1 | 17.1 | 2.0 | 12.0 | 33 | 925 | 940 | .. | 820 | 780 | 61.6 | 55 43 41.1 | .. | + | 1 25.1 | 106 51 27.4 | -16.1 |
| 4 | 321 4 | 12.3 | 13.8 | 28.0 | 7.6 | 34 | .. | 330 | .. | 265 | .. | 61.6 | 38 51 44 0 | .. | + | 46.8 | 89 58 52.0 | + 0.2 |
| 5 | 326 22 | 12.1 | 13.5 | 27.1 | 7.5 | 32 | .. | 915 | .. | 835 | .. | 61.6 | 33 33 21.9 | .. | + | 38.6 | 84 40 21.7 | - 2.2 |
| 6 | 280 4 | 16.1 | 17.3 | 3.0 | 12.5 | 33 | .. | .. | .. | 935 | 975 | 61.6 | 79 51 43.4 | .. | + | 5 14.1 | 131 3 18.7 | -12.4 |
| 7 | 280 24 | 14.9 | 17.3 | 3.4 | 12.1 | 37 | 680 | 650 | .. | .. | .. | 61.6 | 79 32 38.4 | .. | + | 5 5.1 | 130 44 4.7 | -18.4 |
| 8 | 66 42 | 11.7 | 12.7 | 27.3 | 5.3 | 37 | 095 | .. | 045 | .. | 040 | 61.6 | 293 14 25.0 | .. | - | 2 14.7 | 344 18 31.5 | + 0.5 |
| 9 | 281 36 | 15.8 | 16.3 | 3.5 | 11.8 | 33 | .. | 625 | .. | 685 | .. | 61.6 | 78 19 37.8 | .. | + | 4 34.5 | 129 30 33.5 | -18.1 |
| 10 | 0 0 | 16.5 | 17.6 | 1.0 | 11.5 | 30 | .. | 930 | .. | 925 | .. | 61.6 | 359 54 41.9 | .. | - | 0.1 | 51 1 3.0 | - 8.5 |
| 11 | 0 0 | 16.5 | 17.6 | 1.0 | 11.5 | 29 | .. | 155 | .. | 050 | .. | 61.6 | 359 54 28.4 | .. | - | 0.1 | 51 0 49.5 | - 0.2 |
| 12 | 288 12 | 17.5 | 19.5 | 4.5 | 13.0 | 33 | 615 | 600 | .. | .. | .. | 61.6 | 71 41 4.4 | .. | + | 2 54.0 | 122 50 19.6 | -17.8 |
| 13 | 288 12 | 17.5 | 19.5 | 4.5 | 13 0 | 42 | .. | .. | .. | 020 | 960 | 61.6 | 71 48 20.4 | .. | + | 2 55.2 | 122 57 36.8 | -17.8 |
| 14 | 288 12 | 17.5 | 19.5 | 4.5 | 13.0 | 41 | .. | .. | .. | 865 | 760 | 61.6 | 71 48 17.7 | .. | + | 2 55.2 | 122 57 34.1 | -17.8 |
| 15 | 288 12 | 17.5 | 19.5 | 4.5 | 13.0 | 34 | .. | 780 | .. | 640 | .. | 61.6 | 71 41 22.4 | .. | + | 2 54.1 | 122 50 37.7 | -17.7 |
| 16 | 52 22 | 13.1 | 13.1 | 27.5 | 5.2 | 34 | 725 | 715 | 700 | 700 | 705 | 61.6 | 307 33 49.4 | .. | - | 1 15.6 | 358 38 55.0 | - 0.6 |
| 17 | 310 32 | 14.0 | 15.0 | 0.0 | 10.1 | 33 | 770 | 710 | .. | 600 | 560 | 61.6 | 49 23 36.0 | .. | + | 1 7.8 | 100 31 5.0 | + 0.9 |
| 18 | 297 26 | 13.6 | 15.0 | 0.8 | 9.2 | 36 | .. | .. | .. | 645 | .. | 61.6 | 62 7 48.8 | .. | + | 1 51.3 | 113 36 1.3 | - 2.4 |
| 19 | 280 4 | 15.5 | 16.5 | 2.5 | 10.5 | 38 | .. | 300 | .. | 160 | .. | 61.6 | 79 52 47.3 | .. | + | 5 15.5 | 131 4 24.0 | -16.9 |
| 20 | 289 46 | 17.7 | 18.7 | 4.4 | 12.8 | 36 | .. | 540 | .. | 385 | .. | 61.6 | 70 10 22.4 | .. | + | 2 40.3 | 121 19 23.9 | -17.1 |
| 21 | 289 46 | 17.7 | 18.7 | 4.4 | 12.8 | 35 | .. | 520 | .. | 410 | .. | 61.6 | 70 10 7.2 | .. | + | 2 40.3 | 121 19 8.7 | -17.1 |
| 22 | 291 28 | 13.3 | 14.4 | 29.8 | 8.3 | 40 | .. | .. | .. | 630 | 620 | 61.6 | 68 26 49.1 | .. | + | 2 26.6 | 119 35 36.9 | - 3.8 |
| 23 | 342 50 | 13.4 | 14.0 | 28.2 | 8.6 | 34 | .. | 675 | .. | 560 | .. | 61.6 | 17 5 49.7 | .. | + | 17.9 | 68 12 28.8 | - 1.4 |
| 24 | 295 8 | 15.7 | 16.6 | 1.5 | 10.1 | 38 | .. | 845 | .. | 730 | .. | 61.6 | 64 46 22.3 | .. | + | 2 3.2 | 115 54 46.7 | - 4.7 |
| 25 | 199 0 | 15.0 | 18.0 | 1.7 | 7.1 | 35 | 720 | 695 | .. | .. | .. | 61.6 | 160 56 7.9 | .. | - | 20.2 | 70 10 33.5 | + 1.9 |
| 26 | 340 52 | 13.0 | 13.4 | 28.5 | 9.7 | 34 | .. | .. | .. | 605 | 61.6 | 19 3 50.7 | .. | + | 20.2 | 70 10 32.1 | + 0.5 | |
| 27 | 297 4 | 12.6 | 14.3 | 0.5 | 10.2 | 38 | .. | 035 | .. | 890 | .. | 61.6 | 62 50 8.0 | 49.3 | + | 1 53.2 | 113 58 22.4 | - 5.5 |
| 28 | 318 46 | 15.5 | 16.8 | 0.5 | 11.4 | 30 | .. | 455 | .. | 295 | .. | 61.6 | 41 11 19.5 | .. | + | 51.1 | 92 18 31.8 | - 3.5 |
| 29 | 358 50 | 16.1 | 17.3 | 1.5 | 9.6 | 39 | 060 | 075 | .. | 950 | 935 | 61.6 | 1 6 59.8 | .. | + | 1.1 | 52 13 22.1 | -17.3 |
| 30 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 31 | 280 32 | 16.4 | 16.4 | 4.6 | 11.2 | 34 | .. | 170 | .. | 065 | .. | 61.6 | 79 23 45.3 | .. | + | 5 2.4 | 130 35 8.9 | -14.2 |
| 32 | 290 52 | 14.2 | 15.3 | 1.1 | 9.6 | 33 | .. | 630 | .. | 405 | .. | 61.6 | 69 3 34.0 | .. | + | 2 31.5 | 120 12 26.7 | -15.2 |
| 33 | 285 28 | 16.9 | 18.5 | 5.0 | 13.0 | 34 | .. | 215 | .. | 135 | .. | 61.6 | 74 27 47.4 | .. | + | 3 27.0 | 125 37 35.6 | -14.4 |
| 34 | 280 52 | 16.7 | 17.5 | 4.3 | 13.4 | 44 | 235 | 230 | .. | .. | .. | 61.6 | 79 8 52.3 | .. | + | 4 55.8 | 130 20 9.3 | -13.6 |
| 35 | 280 52 | 16.7 | 17.5 | 4.3 | 13.4 | 32 | .. | 575 | .. | 600 | .. | 61.6 | 79 0 49.2 | .. | + | 4 52.3 | 130 12 2.7 | -13.5 |
| 36 | 358 50 | 11.0 | 12.8 | 27.5 | 6.7 | 32 | 165 | .. | .. | .. | 040 | 61.6 | 1 5 10.0 | .. | + | 1.1 | 52 11 32.3 | + 0.5 |
| 37 | 358 50 | 11.0 | 12.8 | 27.5 | 6.7 | 29 | .. | 200 | .. | 135 | .. | 61.6 | 1 6 57.2 | .. | + | 1.1 | 52 13 19.5 | -19.4 |
| 38 | 295 0 | 16.4 | 17.5 | 3.5 | 12.5 | 37 | .. | 535 | .. | 495 | .. | 61.6 | 64 56 37.7 | .. | + | 2 4.5 | 116 5 3.4 | -14.8 |
| 39 | 223 0 | 16 7 | 19.4 | 3.4 | 7.6 | 31 | 635 | 580 | .. | .. | .. | 61.6 | 156 55 5.8 | .. | - | 24.9 | 74 11 40.3 | -19.5 |
| 40 | 336 52 | 13.2 | 14.4 | 29.8 | 7.7 | 38 | .. | .. | .. | 675 | 605 | 61.6 | 23 4 52.3 | .. | + | 24.9 | 74 11 38. | -19.5 |
| 41 | 140 40 | 13.0 | 17.4 | 0.8 | 8.5 | 34 | 105 | 150 | .. | .. | .. | 61.6 | 219 15 43.3 | .. | + | 47.8 | 11 49 50.1 | + 0.7 |
| 42 | 39 12 | 14.0 | 13.6 | 28.4 | 6.3 | 36 | .. | .. | .. | 355 | 335 | 61.6 | 320 44 16.1 | 47.5 | - | 47.8 | 11 49 49.5 | + 0.1 |
| 43 | 283 58 | 17.5 | 18.6 | 4.0 | 12.5 | 33 | .. | 915 | .. | 785 | .. | 61.6 | 75 57 42.2 | .. | + | 3 50.1 | 127 7 53.5 | -11.1 |
| 44 | 294 56 | 13.4 | 14.5 | 29.9 | 9.0 | 29 | 530 | 515 | .. | 450 | 440 | 61.6 | 65 1 3.7 | .. | + | 2 5.1 | 116 9 30.0 | + 0.1 |
| 45 | 310 44 | 14.0 | 14.7 | 29.2 | 9.5 | 33 | .. | 780 | .. | 700 | .. | 61.6 | 49 11 36.9 | .. | + | 1 7.8 | 100 19 5.9 | + 0.6 |
| 46 | 0 12 | 16.0 | 15.9 | 0.5 | 9.0 | 37 | 095 | 075 | .. | 990 | 980 | 61.6 | 359 44 28.8 | 46.5 | - | 0.3 | 50 50 49.7 | + 1.0 |
| 47 | 336 18 | 11.1 | 13.9 | 29.0 | 6.8 | 32 | .. | 932 | .. | .. | .. | 64.0 | 23 37 24.8 | .. | + | 26.1 | 74 44 12.1 | - 0.6 |
| 48 | 15 26 | 9.6 | 11.1 | 27.5 | 0.2 | 38 | .. | .. | .. | 670 | 682 | 64.0 | 344 30 53.2 | 41.2 | - | 16.5 | 35 36 57.9 | + 1.8 |
| 49 | 1 58 | 9.6 | 12.6 | 27.8 | 6.1 | 31 | .. | 770 | .. | 750 | .. | 64.0 | 357 57 6.4 | .. | - | 2.1 | 49 3 25.5 | - 3.6 |
| 50 | 321 4 | 9.6 | 11.1 | 26.9 | 6.2 | 34 | .. | 266 | .. | 160 | .. | 64.0 | 38 51 43.2 | .. | + | 48.1 | 89 58 52.5 | + 0.7 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|------|
| 2 | in. | ° | | | | | |
| 27 | 30.02 | 54.3 | | | | | |
| 42 | 30.00 | 52.0 | | | | | |
| 46 | 29.96 | 51.0 | | | | | |
| 48 | 29.96 | 50.0 | | | | | |
| 48 | 30.18 | 43.6 | | | | | |

For summary of the elements of reduction see page 3.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|---------|---------|-----------|--------------------------------|-----|------|-----|----|-----|------|-------|-----|------------|--------------|----------------|----------------|---------------------------|----|----|----------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | m. | s. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1876. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

4, 10, 13, 16, 19, 31. Thread A used.
11, 17, 21. Thread B used.
16. Telescope micrometer reading increased five revolutions in reduction.
25, 31, 35, 47. Bisections at set D.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|---------------------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. |
| | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | |
| 1 | 331 0 | 10 4.8 | 4.9 | 21.0 | 1.4 | 35 | .. | 896 | .. | .. | 890 | 64.0 | 28 56 3.7 | .. | + 33.1 | 80 2 58.0 | - 3.2 |
| 2 | 308 16 | 10.4 | 10.8 | 27.8 | 7.6 | 39 | .. | 020 | .. | 880 | .. | 64.0 | 51 40 56.3 | .. | + 1 15.6 | 102 48 33.1 | -16.3 |
| 3 | 332 40 | 4.7 | 5.4 | 21.7 | 2.5 | 34 | .. | 822 | .. | 832 | .. | 64.0 | 27 15 47.8 | .. | + 30.8 | 78 22 39.8 | -12.1 |
| 4 | 319 42 | 9.0 | 8.9 | 24.5 | 5.6 | 37 | .. | 478 | .. | 436 | .. | 64.0 | 40 11 57.9 | .. | + 50.6 | 91 19 9.7 | - 3.4 |
| 5 | 52 22 | 5.3 | 6.0 | 22.7 | 1.5 | 35 | .. | 230 | .. | 210 | .. | 64.0 | 307 33 53.9 | .. | - 1 17.7 | 358 38 57.4 | + 2.6 |
| 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 7 | 321 6 | 9.5 | 10.3 | 26.5 | 5.6 | 38 | .. | .. | .. | 390 | .. | 64.0 | 38 50 47.3 | .. | + 48.2 | 89 57 56.7 | + 1.6 |
| 8 | 280 4 | 12.2 | 13.2 | 0.6 | 9.5 | 37 | .. | 710 | .. | 616 | .. | 64.0 | 79 52 38.6 | .. | + 5 24.9 | 131 4 24.7 | -17.5 |
| 9 | 313 22 | 8.3 | 7.0 | 23.4 | 3.5 | 34 | .. | .. | .. | 490 | 500 | 64.0 | 16 33 45.6 | .. | + 17.8 | 67 40 24.6 | - 1.5 |
| 10 | 297 6 | 12.3 | 13.5 | 0.5 | 10.0 | 40 | .. | 500 | .. | 550 | .. | 64.0 | 62 48 49.3 | .. | + 1 56.4 | 113 57 6.9 | - 5.8 |
| 11 | 299 46 | 8.3 | 8.8 | 27.5 | 6.1 | 36 | .. | 860 | .. | 770 | .. | 64.0 | 60 7 48.6 | .. | + 1 44.3 | 111 15 54.1 | - 3.1 |
| 12 | 318 50 | 3.8 | 5.1 | 20.3 | 1.4 | 36 | .. | 558 | .. | 552 | .. | 64.0 | 41 6 13.2 | .. | + 52.4 | 92 13 26.8 | - 3.5 |
| 13 | 308 8 | 9.6 | 10.0 | 26.0 | 7.5 | 40 | .. | 690 | .. | 490 | .. | 64.0 | 51 46 47.1 | .. | + 1 16.3 | 102 54 24.6 | - 5.3 |
| 14 | 312 8 | 7.4 | 10.7 | 26.9 | 8.4 | 36 | .. | .. | .. | 350 | 300 | 64.0 | 47 48 16.1 | 37.0 | + 1 6.3 | 98 55 43.6 | + 1.5 |
| 15 | 353 50 | 4.5 | 5.1 | 18.7 | 29.0 | 32 | .. | .. | .. | 370 | 392 | 64.0 | 1 5 9.7 | .. | + 1.1 | 52 11 32.0 | + 0.8 |
| 16 | 303 14 | 8.2 | 7.5 | 23.9 | 6.1 | 43 | .. | 795 | .. | 550 | .. | 64.0 | 56 42 49.0 | .. | + 1 31.5 | 107 50 41.7 | - 3.8 |
| 17 | 301 16 | 7.4 | 8.0 | 25.4 | 6.6 | 35 | .. | 812 | .. | 810 | .. | 64.0 | 58 37 17.1 | .. | + 1 38.5 | 109 45 16.8 | - 3.6 |
| 18 | 325 54 | 7.4 | 8.0 | 25.0 | 4.5 | 35 | 970 | 900 | .. | .. | .. | 64.0 | 34 2 6.5 | .. | + 40.7 | 85 9 8.4 | - 0.6 |
| 19 | 316 42 | 7.4 | 8.0 | 24.4 | 4.5 | 37 | .. | 540 | .. | 430 | .. | 64.0 | 43 11 57.4 | 36.1 | + 56.6 | 94 19 15.2 | - 3.5 |
| 20 | 328 26 | 8.8 | 11.2 | 26.7 | 7.7 | 35 | 790 | 745 | .. | 630 | 595 | 62.3 | 31 30 4.3 | 60.1 | + 35.2 | 82 37 0.7 | + 1.7 |
| 21 | 337 50 | 6.4 | 9.3 | 22.5 | 5.0 | 28 | .. | 705 | .. | 640 | .. | 62.3 | 22 6 46.5 | .. | + 23.6 | 73 13 31.3 | .. |
| 22 | 347 46 | 9 8 | 12.5 | 26.7 | 7.0 | 37 | .. | .. | .. | 200 | 145 | 62.3 | 12 10 28.4 | .. | + 12.5 | 63 17 2.1 | - 4.0 |
| 23 | 330 38 | 9.4 | 12.4 | 26.0 | 6.3 | 32 | .. | .. | .. | 960 | 920 | 62.3 | 29 17 22.9 | .. | + 32.5 | 80 24 16.6 | - 2.2 |
| 24 | 332 54 | 8.8 | 12.3 | 27.3 | 6.1 | 36 | .. | 640 | .. | 560 | .. | 62.3 | 27 2 18.2 | .. | + 29.6 | 78 9 9.0 | - 1.6 |
| 25 | 352 46 | 8.9 | 10.7 | 24.8 | 4.5 | 37 | .. | .. | .. | 230 | 210 | 62.3 | 7 10 26.6 | 54.5 | + 7.3 | 58 16 55.1 | + 5.3 |
| 26 | 326 16 | 12.2 | 14.4 | 28.7 | 8.7 | 37 | 540 | 520 | .. | .. | .. | 62.3 | 33 40 34.1 | .. | + 38.7 | 84 47 34.0 | - 4.2 |
| 27 | 345 24 | 8.3 | 10.8 | 24.3 | 3.9 | 38 | 295 | 250 | .. | 190 | 170 | 62.3 | 14 32 41.5 | .. | + 15.1 | 65 39 17.8 | + 0.4 |
| 28 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 29 | 347 38 | 9.1 | 10.9 | 26.0 | 5.3 | 35 | 510 | 470 | .. | 360 | 400 | 62.3 | 12 17 59.8 | .. | + 12.7 | 63 24 33.7 | + 0.5 |
| 30 | 338 42 | 8.7 | 11.4 | 24.3 | 5.6 | 37 | .. | 740 | .. | 685 | .. | 62.3 | 21 14 34.2 | .. | + 22.6 | 72 21 18.0 | - 1.0 |
| 31 | 339 4 | 10.8 | 12.9 | 27.5 | 6.5 | 37 | .. | .. | .. | 895 | 885 | 62.3 | 20 50 5.6 | .. | + 22.1 | 71 56 48.9 | - 1.0 |
| 32 | 336 24 | 8.0 | 10.7 | 23.9 | 4.0 | 38 | .. | 945 | .. | 900 | .. | 62.3 | 23 32 51.8 | .. | + 25.4 | 74 39 38.4 | - 2.3 |
| 33 | 336 24 | 8.0 | 10.7 | 23.9 | 4.0 | 34 | .. | .. | .. | 910 | 865 | 62.3 | 23 31 50.9 | .. | + 25.3 | 74 38 37.4 | - 2.3 |
| 34 | 339 50 | 7.3 | 9.0 | 21.5 | 2.6 | 31 | .. | .. | .. | 950 | 900 | 62.3 | 20 5 4.0 | .. | + 21.3 | 71 11 46.5 | - 1.3 |
| 35 | 334 34 | 8.0 | 9.5 | 23.1 | 3.1 | 36 | .. | .. | .. | 835 | 750 | 62.3 | 25 22 18.7 | .. | + 27.6 | 76 29 7.5 | - 3.5 |
| 36 | 341 30 | 4.5 | 6.7 | 19.6 | 2.7 | 32 | .. | 945 | .. | 820 | .. | 62.3 | 18 25 16.1 | .. | + 19.4 | 69 31 56.7 | + 1.4 |
| 37 | 341 30 | 4.5 | 6.7 | 19.6 | 2.7 | 33 | .. | 020 | .. | 950 | .. | 62.3 | 18 25 17.7 | .. | + 19.4 | 69 31 58.3 | - 1.4 |
| 38 | 333 0 | 8.5 | 10.5 | 24.5 | 6.1 | 37 | .. | 020 | .. | 955 | .. | 62.3 | 26 56 23.0 | .. | + 29.6 | 78 3 13.8 | - 4.6 |
| 39 | 333 10 | 6.8 | 9.5 | 24.5 | 3.9 | 35 | .. | 215 | .. | 180 | .. | 62.3 | 26 45 54.3 | 52.0 | + 29.4 | 77 52 44.9 | - 4.6 |
| 40 | 288 12 | 12.1 | 14.8 | 29.4 | 9.3 | 35 | 235 | 260 | .. | 065 | 075 | 62.3 | 71 43 58.6 | 48.4 | + 2 56.0 | 122 53 15.8 | -18.2 |
| 41 | 336 18 | 11.0 | 14.0 | 27.4 | 7.0 | 33 | 180 | 155 | .. | .. | .. | 62.3 | 23 37 26.2 | .. | + 25.7 | 74 44 13.1 | + 0.5 |
| 42 | 164 26 | 10.2 | 14.2 | 28.2 | 6.2 | 32 | 240 | 160 | .. | .. | .. | 62.3 | 195 29 10.4 | .. | + 16.3 | 35 36 54.5 | - 1.4 |
| 43 | 15 26 | 11.7 | 12.6 | 28.2 | 8.0 | 33 | .. | .. | .. | 620 | 565 | 62.3 | 344 30 51.7 | .. | - 16.3 | 35 36 56.6 | + 0.7 |
| 44 | 209 24 | 10.0 | 14.9 | 28.3 | 4.8 | 35 | 565 | 510 | .. | .. | .. | 62.3 | 150 32 1.9 | .. | - 33.2 | 80 34 52.5 | + 1.0 |
| 45 | 330 28 | 9.5 | 12.4 | 26.8 | 6.7 | 35 | .. | .. | .. | 125 | 095 | 62.3 | 29 27 56.5 | .. | + 33.2 | 80 34 50.9 | - 0.6 |
| 46 | 331 0 | 12.5 | 14.0 | 28.5 | 8.4 | 35 | 635 | 600 | .. | 510 | 495 | 62.3 | 28 56 4.6 | 46.2 | + 32.6 | 80 2 53.4 | - 3.2 |
| 47 | 281 36 | 10.5 | 12.5 | 28.3 | 7.5 | 33 | .. | .. | .. | 760 | 720 | 62.3 | 78 19 35.7 | .. | + 4 38.3 | 129 30 35.2 | -18.9 |
| 48 | 0 0 | 10.7 | 14.4 | 27.1 | 7.9 | 30 | 235 | .. | .. | .. | 070 | 62.3 | 359 54 41.4 | .. | - 0.1 | 51 1 2.5 | - 7.7 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-------|
| | in. | ° | | ' " | ' " | ' " | ' " |
| 14 | 30.17 | 41.0 | 21 | — 0.2 | .. | .. | — 0.2 |
| 19 | 30.16 | 40.0 | | | | | |
| 20 | 30.13 | 58.5 | | | | | |
| 25 | 30.14 | 55.2 | | | | | |
| 39 | 30.13 | 53.4 | | | | | |
| 40 | 30.13 | 51.0 | | | | | |
| 46 | 30.12 | 50.3 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|------------------|---------|------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|----------|------------|--------------|----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | |
| | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| 1876. Apr. 26 | 1 | 12 ² Canum Venat. | P. | | | 8.4 | 11.1 | 13.7 | 16.3 | 19.0 | | | 50 13.68 | - 0.47 | + 3.15 | + 3.00 | 12 50 16.21 | - 0.15 |
| | 2 | B. A. C. 4367 | P. | 47.7 | 50.3 | 51.9 | 58.1 | 0.3 | 2.3 | 8.5 | 10.2 | 12.7 | 56 0.22 | - 0.73 | . | + 3.00 | 12 56 2.49 | - 2.26 |
| | 3 | B. A. C. 4374 | P. | 33.5 | 37.0 | 39.0 | 47.0 | 49.9 | 52.5 | 0.5 | 2.5 | 5.9 | 57 49.76 | - 1.26 | . | + 3.00 | 12 57 51.50 | - 2.09 |
| | 4 | B. A. C. 4416 | P. | 5 | 8 | 10.6 | 13.5 | 25.0 | 38.7 | 32.5 | 43.8 | 46.8 | 51.4 | - 0.16 | . | + 3.00 | 13 4 31.52 | - 3.93 |
| | 5 | Polaris, S.P. | P. | | | 19.8 | 49.5 | 23.4 | 56.3 | 32.5 | | | 12 24.86 | - 16.38 | . | + 3.00 | 1 12 11.48 | - 0.50 |
| | 6 | B. A. C. 4509 | P. | 48.5 | 51.3 | 53.0 | 59.5 | 1.6 | 3.7 | 10.3 | 11.9 | 14.7 | 24 1.61 | - 0.64 | . | + 3.00 | 13 24 3.97 | - 2.43 |
| | 7 | Virginis | P. | 10.3 | 12.7 | 14.3 | 20.4 | 22.5 | 24.5 | 30.6 | 32.3 | 34.7 | 28 22.48 | - 0.82 | + 3.09 | + 3.00 | 13 28 24.66 | - 0.09 |
| | 8 | B. A. C. 4553 | P. | 55.9 | 58.8 | 0.5 | 7.2 | 9.4 | 11.5 | 18.3 | 19.9 | 22.7 | 32 9.36 | - 0.62 | . | + 3.01 | 13 32 11.75 | - 2.49 |
| | 9 | B. A. C. 4563 | P. | 32.6 | 35.2 | 36.8 | 43.4 | 45.6 | 47.8 | 54.3 | 56.0 | 58.7 | 34 45.60 | - 0.64 | . | + 3.01 | 13 31 47.97 | - 2.45 |
| | 10 | B. A. C. 4595 | P. | 41.2 | 44.6 | 46.5 | 54.5 | 57.0 | 59.7 | 7.4 | 9.5 | 12.9 | 40 57.93 | - 0.46 | . | + 3.01 | 13 40 59.58 | - 2.89 |
| | 11 | B. A. C. 4600 | P. | 23.3 | 26.4 | 33.9 | 36.6 | 39.2 | 41.8 | 44.4 | 51.5 | 54.8 | 41 39.10 | - 0.46 | . | + 3.01 | 13 41 41.65 | - 2.90 |
| | 12 | B. A. C. 4627 | P. | 21.4 | 24.5 | 26.5 | 34.0 | 36.4 | 39.0 | 46.5 | 48.4 | 51.5 | 45 36.47 | - 0.50 | . | + 3.01 | 13 45 38.98 | - 2.78 |
| | 13 | Ennomia | P. | 7.9 | 10.8 | 12.5 | 19.3 | 21.9 | 24.4 | 31.3 | 32.9 | 36.0 | 49 21.89 | - 1.06 | . | + 3.01 | 13 49 23.81 | . |
| | 14 | Pallas | P. | 42.1 | 44.6 | 46.3 | 52.9 | 55.0 | 57.4 | 3.9 | 5.5 | 8.3 | 52 55.11 | - 0.63 | . | + 3.01 | 13 52 57.49 | . |
| | 15 | Diana | P. | 12.4 | 15.3 | 17.2 | 23.9 | 26.4 | 28.5 | 35.2 | 37.0 | 40.0 | 59 20.21 | - 1.05 | . | + 3.01 | 13 59 28.17 | . |
| | 16 | a Bootis | P. | 49.9 | 51.6 | 55.9 | 58.0 | 0.3 | 2.6 | 4.7 | 9.0 | 10.7 | 10 0.30 | - 0.65 | + 3.11 | + 3.01 | 14 10 2.66 | - 0.10 |
| | 17 | Leucothea | P. | 50.5 | 53.4 | 54.9 | 1.7 | 3.8 | 6.0 | 12.8 | 14.5 | 17.3 | 15 3.88 | - 1.03 | . | + 3.01 | 14 15 5.86 | . |
| | 18 | B. A. C. 4778 | P. | | | | 23.3 | 25.8 | 31.1 | 33.0 | 36.2 | 18 20.72 | - 0.48 | . | + 3.01 | + 3.01 | 14 18 23.25 | - 2.81 |
| | 19 | B. A. C. 4812 | P. | 49.5 | 52.9 | 54.8 | 2.6 | 5.1 | 7.9 | 15.6 | 17.6 | 21.0 | 27 5.22 | - 0.46 | . | + 3.01 | 14 27 7.77 | - 2.82 |
| | 20 | Ceres | P. | 50.0 | 52.6 | 54.0 | 0.3 | 2.3 | 4.3 | 10.5 | 11.9 | 14.6 | 30 2.28 | - 0.83 | . | + 3.01 | 14 30 4.46 | . |
| | 21 | B. A. C. 4853 | P. | 33.6 | 36.2 | 37.7 | 44.0 | 46.2 | 48.3 | 54.5 | 56.0 | 58.6 | 35 46.12 | - 0.72 | . | + 3.01 | 14 35 48.41 | - 2.34 |
| | 22 | ε Bootis | P. | 20.6 | 23.5 | 25.2 | 32.2 | 34.4 | 36.6 | 43.5 | 45.2 | 48.2 | 39 34.38 | - 0.58 | + 3.04 | + 3.01 | 14 39 36.81 | - 0.05 |
| | 23 | a ¹ Libræ | P. | | | 45 | 74.7 | 9.50 | 0.52 | 1.54 | 2.2 | | 43 49.96 | - 0.95 | . | + 3.01 | 14 43 52.02 | - 2.26 |
| | 24 | a ² Libræ | P. | | | 59.3 | 1.4 | 3.5 | 5.6 | 9.9 | 11.4 | 14.0 | 44 1.36 | - 0.95 | + 3.08 | + 3.01 | 14 40 3.42 | - 0.08 |
| | 25 | Asia | P. | 33.0 | 35.4 | 37.1 | 43.3 | 45.5 | 47.6 | 53.8 | 55.4 | 58.2 | 48 45.48 | - 0.92 | . | + 3.01 | 14 48 47.57 | . |
| | 26 | β Bootis | P. | 0.4 | 3.9 | 5.8 | 13.9 | 16.8 | 19.5 | 27.5 | 29.6 | 32.8 | 57 16.69 | - 0.44 | . | + 3.01 | 14 57 19.26 | - 0.05 |
| | 27 | Themis | P. | 55.8 | 58.5 | 0.3 | 6.8 | 9.0 | 11.1 | 17.5 | 19.2 | 21.8 | 37 8.89 | - 0.99 | . | + 3.02 | 15 37 10.92 | . |
| | 28 | B. A. C. 5248 | P. | 16.7 | 21.4 | 24.2 | 35.0 | 38.7 | 42.5 | 53.2 | 55.9 | 0.4 | 44 38.67 | - 0.20 | . | + 3.02 | 15 44 41.49 | - 3.17 |
| | 29 | B. A. C. 5316 | P. | 14.2 | 18.2 | 20.7 | 30.3 | 33.4 | 36.7 | 46.2 | 48.6 | 52.6 | 55 33.43 | - 0.20 | . | + 3.02 | 15 55 36.16 | - 2.83 |
| | 30 | B. A. C. 5341 | P. | 35.4 | 39.8 | 42.3 | 52.6 | 56.0 | 59.4 | 9.7 | 12.3 | 16.5 | 58 56.00 | - 0.23 | . | + 3.02 | 15 58 58.79 | - 2.93 |
| | 31 | δ Ophiuchi | P. | 38.7 | 41.0 | 42.7 | 49.0 | 50.9 | 53.0 | 59.0 | 0.6 | 3.2 | 7 50.90 | - 0.83 | + 3.01 | + 3.02 | 16 7 53.09 | + 0.03 |
| | 32 | Astræa | P. | 52.9 | 55.5 | 57.3 | 1.3 | 3.4 | 5.5 | 7.7 | | | 11 5.51 | - 0.91 | . | + 3.02 | 16 11 7.62 | . |
| | 33 | Weisse 180 | P. | | 13.0 | 15.1 | 17.3 | 19.3 | 21.4 | 25.5 | 27.3 | 29.6 | 11 17.20 | - 0.91 | . | + 3.02 | 16 11 19.31 | - 2.21 |
| | 34 | a Scorpii | P. | 35.0 | 37.9 | 39.5 | 46.6 | 48.8 | 51.0 | 57.9 | 59.4 | 2.4 | 21 48.72 | - 1.04 | + 3.06 | + 3.02 | 16 21 50.70 | - 0.05 |
| | 35 | B. A. C. 5522 | P. | 53.7 | 56.0 | 58.4 | 5.5 | 8.0 | 10.4 | 17.5 | 19.3 | 22.4 | 25 7.98 | - 1.11 | . | + 3.02 | 16 25 9.89 | - 2.41 |
| | 36 | ζ Ophiuchi | P. | 7.4 | 11.6 | 15.8 | 17.9 | 19.9 | 22.0 | 24.1 | 28.2 | 32.4 | 30 19.92 | - 0.89 | + 3.06 | + 3.02 | 16 30 22.05 | - 0.06 |
| | 37 | B. A. C. 5583 | P. | 54.5 | 57.6 | 59.6 | 5.3 | 8.0 | 10.6 | 13.3 | 15.8 | | 35 10.56 | - 1.24 | . | + 3.02 | 16 35 12.34 | - 2.62 |
| | 38 | B. A. C. 5584 | P. | | | 18.9 | 21.6 | 24.2 | 29.5 | 31.7 | 35.2 | 35 18.85 | - 1.24 | . | + 3.02 | + 3.02 | 16 35 20.63 | - 2.62 |
| | 39 | η Herculis | P. | 22.6 | 26.1 | 28.0 | 35.9 | 38.5 | 41.2 | 49.1 | 51.0 | 54.2 | 38 3.51 | - 0.45 | + 2.94 | + 3.02 | 16 38 41.08 | + 0.09 |
| | 40 | B. A. C. 5686 | P. | 31.6 | 33.6 | 35.3 | 41.7 | 43.8 | 45.9 | 52.1 | 53.7 | 56.4 | 47 43.72 | - 0.68 | . | + 3.02 | 16 47 46.06 | - 2.05 |
| | 41 | a Andromedæ | E. | 41.9 | 44.9 | 46.7 | 53.7 | 56.0 | 58.3 | 5.2 | 7.0 | 9.9 | 1 55.96 | - 0.56 | + 2.95 | + 2.93 | 0 1 58.33 | 0.00 |
| | 42 | γ Pegasi | E. | 36.0 | 38.6 | 40.1 | 46.6 | 48.6 | 50.9 | 57.1 | 58.6 | 1.2 | 6 48.63 | - 0.66 | + 2.91 | + 2.93 | 0 6 50.90 | + 0.02 |
| 27 | 43 | a Tauri | E. | 33.2 | 35.9 | 37.5 | 43.9 | 46.0 | 48.1 | 54.4 | 56.0 | 58.8 | 28 45.98 | - 0.70 | + 2.92 | + 2.91 | 4 28 48.19 | - 0.03 |
| | 44 | ι Aurigæ | E. | 37.9 | 41.0 | 42.9 | 50.1 | 52.6 | 55.1 | 2.4 | 4.1 | 7.3 | 48 52.60 | - 0.58 | + 2.95 | + 2.91 | 4 48 54.93 | - 0.08 |
| | 45 | β Orionis | E. | 20.3 | 22.7 | 24.5 | 30.6 | 32.6 | 34.6 | 40.7 | 42.5 | 45.0 | 8 32.61 | - 0.88 | + 2.90 | + 2.91 | 5 8 34.64 | - 0.01 |
| | 46 | β Tauri | E. | 11.0 | 13.8 | 15.6 | 22.6 | 25.0 | 27.3 | 34.3 | 36.0 | 39.0 | 18 24.96 | - 0.61 | + 2.87 | + 2.91 | 5 18 27.26 | + 0.02 |
| 28 | 47 | β Ceti | S. | | | | | | | 28.7 | 30.2 | 32.9 | 37 20.01 | - 0.75 | + 2.64 | . | . | . |
| | 48 | Polaris | S. | | | 13.0 | 42.0 | 7.5 | | 0.0 | | | 12 6.90 | + 0.65 | . | + 2.64 | 1 12 10.19 | - 2.87 |
| 29 | 49 | Sun I, S. | S. | 46.7 | 49.5 | 51.0 | 57.3 | 59.5 | 1.6 | 7.8 | 9.7 | 12.4 | 27 59.50 | - 0.68 | . | + 2.68 | 2 28 1.50 | . |
| | 50 | Sun II, N. | S. | 58.5 | 1.2 | 2.8 | 9.2 | 11.3 | 13.4 | 19.8 | 21.4 | 24.0 | 30 11.29 | - 0.68 | . | + 2.68 | 2 30 13.29 | . |

4, 16, 19, 28, 30, 36. Bisections at sets B and D.
9, 10, 19, 20, 33. Thread B used.
13, 15, 17, 23, 25, 27, 32. Thread A used.
37. Telescope micrometer reading increased one revolution in reduction.
38. Telescope micrometer reading decreased one revolution in reduction.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | | | | | | |
| 1 | 0 0 | 10 10.7 | 14.4 | 27.1 | 7.9 | 29 | .. | 370 | .. | 285 | .. | 62.3 | 359 54 28.5 | .. | — | 0.1 | 51 0 49.6 | + 0.8 |
| 2 | 332 40 | 7.7 | 9.6 | 23.6 | 5.8 | 34 | .. | 690 | .. | 650 | .. | 62.3 | 27 15 46.7 | .. | + | 30.4 | 78 22 38.3 | —13.1 |
| 3 | 280 36 | 15.5 | 16.0 | 2.8 | 11.5 | 37 | .. | 930 | .. | 835 | .. | 62.3 | 79 20 42.8 | .. | + | 5 4.2 | 130 32 8.2 | —18.7 |
| 4 | 18 32 | 12.6 | 14.0 | 28.6 | 7.3 | 37 | 275 | 265 | .. | 220 | 160 | 62.3 | 341 24 29.9 | .. | — | 19.9 | 32 30 31.2 | — 5.6 |
| 5 | 52 22 | 9.2 | 9.0 | 24.3 | 1.8 | 34 | 845 | 870 | 860 | 825 | 835 | 62.3 | 307 33 48.6 | .. | — | 1 16.7 | 358 38 53.1 | — 1.4 |
| 6 | 340 44 | 9.2 | 11.3 | 24.8 | 6.1 | 33 | .. | 710 | .. | 625 | .. | 62.3 | 19 11 32.6 | .. | + | 20.6 | 70 18 14.4 | —13.3 |
| 7 | 321 6 | 11.7 | 12.3 | 27.1 | 8.0 | 38 | 475 | 410 | .. | 385 | 315 | 62.3 | 38 50 46.8 | .. | + | 47.6 | 89 57 55.6 | + 0.6 |
| 8 | 344 12 | 8.5 | 9.9 | 25.0 | 6.1 | 34 | .. | 895 | .. | 810 | .. | 62.3 | 15 43 50.3 | .. | + | 16.6 | 66 50 28.1 | —13.2 |
| 9 | 341 42 | 9.0 | 10.4 | 23.4 | 4.5 | 29 | 740 | 695 | .. | 600 | 555 | 62.3 | 18 15 2.5 | .. | + | 19.5 | 69 21 43.2 | —13.7 |
| 10 | 0 12 | 11.5 | 12.2 | 26.4 | 6.3 | 34 | .. | .. | .. | 640 | 555 | 62.3 | 359 46 21.6 | .. | — | 0.3 | 50 52 42.6 | —11.7 |
| 11 | 0 12 | 11.5 | 12.2 | 26.4 | 6.3 | 35 | .. | .. | .. | 555 | 500 | 62.3 | 359 44 3.4 | .. | — | 0.3 | 50 50 24.3 | —11.7 |
| 12 | 356 26 | 10.2 | 11.3 | 26.3 | 6.5 | 37 | 600 | 615 | .. | .. | .. | 62.3 | 3 30 33.2 | .. | + | 3.6 | 54 36 58.0 | —12.5 |
| 13 | 291 48 | 12.0 | 14.4 | 28.5 | 8.9 | 38 | .. | 170 | .. | 150 | .. | 62.3 | 68 6 10.7 | .. | + | 2 26.2 | 119 14 58.1 | — 3.8 |
| 14 | 343 32 | 10.0 | 11.8 | 25.0 | 6.6 | 35 | .. | 950 | .. | 960 | .. | 62.3 | 16 23 53.6 | .. | + | 17.4 | 67 30 32.2 | — 1.4 |
| 15 | 295 22 | 10.6 | 12.0 | 27.0 | 7.0 | 38 | .. | 490 | .. | 325 | .. | 62.3 | 64 32 12.8 | .. | + | 2 3.7 | 115 40 37.7 | — 5.0 |
| 16 | 340 52 | 7.5 | 7.4 | 23.0 | 4.1 | 34 | .. | .. | .. | 995 | 960 | 62.3 | 19 3 50.5 | 44.1 | + | 20.5 | 70 10 32.2 | + 1.2 |
| 17 | 297 6 | 10.7 | 11.8 | 27.9 | 7.1 | 38 | .. | 245 | .. | 105 | .. | 62.3 | 62 48 9.4 | .. | + | 1 54.8 | 113 56 25.4 | — 5.8 |
| 18 | 358 48 | 10.6 | 12.2 | 25.8 | 6.8 | 34 | .. | .. | .. | 360 | 3 0 | 62.3 | 1 7 44.9 | .. | + | 1.2 | 52 14 7.3 | —14.5 |
| 19 | 359 54 | 6.7 | 9.0 | 23.6 | 2.8 | 28 | 790 | .. | .. | .. | 740 | 62.3 | 0 2 47.5 | .. | — | 0.0 | 51 9 8.7 | —15.1 |
| 20 | 318 52 | 10.7 | 12.3 | 26.5 | 8.0 | 28 | .. | 375 | .. | 250 | .. | 62.3 | 41 4 44.4 | .. | + | 51.6 | 92 11 57.2 | — 3.4 |
| 21 | 333 14 | 9.8 | 10.7 | 25.8 | 6.1 | 34 | .. | 130 | .. | 090 | .. | 62.3 | 26 41 39.6 | .. | + | 29.8 | 77 48 30.6 | —17.0 |
| 22 | 348 38 | 11.0 | 11.5 | 26.2 | 5.5 | 34 | 750 | 735 | .. | 650 | 615 | 62.3 | 11 17 49.1 | .. | + | 11.8 | 62 24 22.1 | — 1.1 |
| 23 | 305 32 | 10.5 | 12.8 | 27.0 | 9.0 | 35 | 155 | 110 | .. | .. | .. | 62.3 | 54 21 22.4 | .. | + | 1 22.5 | 105 20 6.1 | —17.0 |
| 24 | 305 32 | 10.5 | 12.8 | 27.0 | 9.0 | 35 | .. | .. | .. | 530 | 490 | 62.3 | 54 24 3.3 | .. | + | 1 22.6 | 105 31 47.1 | + 0.4 |
| 25 | 308 14 | 11.1 | 12.5 | 26.8 | 8.5 | 34 | .. | 935 | .. | .. | .. | 62.3 | 51 39 19.5 | .. | + | 1 14.8 | 102 46 55.5 | — 5.3 |
| 26 | 1 54 | 9.5 | 10.8 | 26.3 | 4.8 | 32 | 045 | 040 | .. | 975 | 880 | 62.3 | 358 1 7.2 | .. | — | 2.0 | 49 7 26.4 | — 0.4 |
| 27 | 301 18 | 12.2 | 12.1 | 29.1 | 8.0 | 34 | .. | 060 | .. | 175 | .. | 62.3 | 58 35 8.3 | .. | + | 1 36.9 | 109 43 6.4 | — 3.8 |
| 28 | 16 48 | 9.2 | 11.0 | 27.3 | 5.6 | 38 | 700 | 685 | .. | 640 | 610 | 62.3 | 343 8 49.4 | 42.6 | — | 18.0 | 34 14 52.6 | —19.4 |
| 29 | 11 16 | 8.6 | 9.9 | 25.6 | 4.6 | 35 | 880 | 755 | .. | .. | .. | 62.3 | 348 40 4.6 | .. | — | 11.9 | 39 46 13.9 | —20.3 |
| 30 | 14 18 | 11.9 | 12.7 | 27.5 | 7.1 | 37 | 590 | .. | .. | .. | 595 | 62.3 | 345 38 34.6 | .. | — | 15.2 | 36 44 40.6 | —20.4 |
| 31 | 317 40 | 8 6 | 10.2 | 24.7 | 7.2 | 33 | 255 | 205 | .. | 150 | 105 | 62.3 | 42 15 24.8 | .. | + | 54.0 | 93 22 40.0 | — 0.4 |
| 32 | 308 28 | 12.1 | 13.2 | 27 6 | 9.5 | 33 | .. | 905 | .. | 840 | .. | 62.3 | 51 25 4.8 | .. | + | 1 14.4 | 102 32 40.4 | — 4.2 |
| 33 | 308 28 | 12.1 | 13.2 | 27.6 | 9.5 | 33 | .. | .. | .. | 915 | 900 | 62.3 | 51 30 12.0 | .. | + | 1 14.5 | 102 37 47.7 | —15.8 |
| 34 | 294 54 | 10.5 | 10.7 | 26.0 | 6.0 | 31 | 460 | 470 | .. | .. | .. | 62.3 | 65 0 58.2 | .. | + | 2 7.0 | 116 9 26.4 | — 3.7 |
| 35 | 289 46 | 15.0 | 15.5 | 1.5 | 10.3 | 28 | .. | 265 | .. | 260 | .. | 62.3 | 70 8 14.8 | .. | + | 2 43.2 | 121 17 19.2 | —12.1 |
| 36 | 310 44 | 10.0 | 11.2 | 26.0 | 6.5 | 33 | .. | .. | .. | 750 | 795 | 62.3 | 49 11 34.9 | .. | + | 1 8.8 | 100 19 4.9 | — 0.3 |
| 37 | 280 14 | 12.0 | 12.0 | 28.5 | 9.2 | 32 | .. | 030 | .. | 770 | .. | 62.3 | 79 41 23.0 | .. | + | 5 16.3 | 130 53 0.5 | — 9.7 |
| 38 | 280 14 | 12.0 | 12.0 | 28.5 | 9.2 | 32 | .. | 700 | .. | 645 | .. | 62.3 | 79 41 4.2 | .. | + | 5 16.3 | 130 52 41.7 | — 9.7 |
| 39 | 0 12 | 11.2 | 12.5 | 27.9 | 6.5 | 37 | .. | 215 | .. | 130 | .. | 62.3 | 359 44 28.1 | .. | — | 0.3 | 50 50 49.0 | + 1.3 |
| 40 | 336 40 | 11.1 | 11.5 | 26.5 | 7.6 | 38 | 190 | 150 | .. | 980 | 025 | 62.3 | 23 16 41.6 | 41.3 | + | 25 6 | 74 23 28.4 | —19.8 |
| 41 | 349 26 | 11.3 | 11.2 | 28.6 | 8.2 | 32 | .. | 150 | .. | 095 | .. | 60.2 | 10 29 8.8 | 56.0 | + | 10.7 | 61 35 40.9 | — 2.9 |
| 42 | 335 32 | 12.5 | 13.8 | 29.8 | 10.8 | 33 | .. | .. | .. | 770 | 620 | 60.2 | 24 23 35.6 | .. | + | 26.2 | 75 30 23.0 | 0.0 |
| 43 | 337 18 | 5.3 | 9.5 | 23.0 | 3.3 | 34 | .. | 375 | .. | 250 | .. | 60.2 | 22 37 37.8 | .. | + | 23.6 | 73 44 22.6 | + 0.4 |
| 44 | 354 0 | 5.0 | 8.5 | 24.0 | 3.0 | 33 | .. | 120 | .. | 990 | .. | 60.2 | 5 55 18.5 | 66.5 | + | 5.9 | 57 1 45.6 | + 0.8 |
| 45 | 312 42 | 11.3 | 15.3 | 0.7 | 10.7 | 22 | .. | 862 | .. | 790 | .. | 60.2 | 47 13 21.6 | .. | + | 1 0.9 | 98 20 43.7 | — 0.9 |
| 46 | 349 32 | 11.0 | 12.2 | 28.8 | 7.3 | 32 | .. | 605 | .. | 545 | .. | 60.2 | 10 23 15.8 | .. | + | 10.3 | 61 29 47.3 | — 0.1 |
| 47 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 48 | 49 22 | 4.7 | 8.2 | 20.7 | 28.5 | 35 | 304 | .. | 360 | .. | 334 | 60.1 | 310 15 51.2 | .. | — | 1 7.4 | 1 21 5.0 | — 1.1 |
| 49 | 335 30 | 11.3 | 14.5 | 28.8 | 8.0 | 33 | 550 | 638 | .. | .. | .. | 60.1 | 24 25 30.9 | .. | + | 25.8 | 75 32 17.9 | .. |
| 50 | 336 2 | 13.0 | 15.7 | 0.0 | 8.8 | 34 | .. | .. | .. | 230 | 308 | 60.1 | 23 53 44.8 | 62.3 | + | 25.2 | 75 0 31.2 | .. |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| 16 | 30.13 | 48.0 | 49 | 3.6 | - 15 53.4 | .. | - 15 57.0 |
| 28 | 30.10 | 46.3 | 50 | 3.6 | + 15 53.4 | .. | + 15 49.8 |
| 40 | 30.10 | 44.5 | | | | | |
| 41 | 30.11 | 53.5 | | | | | |
| 44 | 30.06 | 64.0 | | | | | |
| 50 | 30.00 | 61.0 | | | | | |

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. | | |
|---------|---------|------------------------|-----------|--------------------------------|------|------|------|------|------|------|-----------|----------|--------------|-------|----------------|---------------------------|--------|----|----------------------------|--------|---------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| 1876. | | | | | | | | | | | | m. | s. | s. | s. | s. | h. | m. | s. | s. | |
| Apr. 29 | 1 | Mercury C. | S. | 16.9 | 19.5 | 21.3 | 27.6 | 29.9 | 32.1 | 33.4 | 40.1 | 43.0 | 1 | 29.87 | - 0.67 | . | + 2.69 | 3 | 1 | 31.89 | + 0.01 |
| | 2 | Pegasi | S. | . | . | . | . | . | . | 27.4 | 29.3 | 32.2 | 46 | 17.88 | - 0.64 | + 2.69 | + 2.71 | 3 | 46 | 19.95 | + 0.01 |
| | 3 | Tauri | S. | 33.3 | 36.0 | 37.7 | 44.1 | 46.2 | 48.2 | 54.6 | 56.3 | 58.9 | 28 | 46.14 | - 0.67 | + 2.73 | + 2.71 | 4 | 28 | 48.18 | - 0.04 |
| | 4 | Orionis. | S. | 20.1 | 22.8 | 24.5 | 30.7 | 32.6 | 34.9 | 40.9 | 42.4 | 45.0 | 8 | 32.66 | - 0.74 | + 2.70 | + 2.72 | 5 | 8 | 34.64 | + 0.02 |
| | 5 | Tauri | S. | 11.1 | 14.1 | 15.8 | 22.8 | 25.1 | 27.5 | 34.4 | 36.2 | 39.0 | 18 | 25.11 | - 0.65 | + 2.75 | + 2.73 | 5 | 18 | 27.19 | - 0.04 |
| | 6 | Orionis. | S. | 26.1 | 28.6 | 30.2 | 36.2 | 38.2 | 40.4 | 46.5 | 48.0 | 50.5 | 25 | 38.30 | - 0.72 | + 2.73 | + 2.73 | 5 | 25 | 40.31 | - 0.03 |
| | 7 | Venus I, S. | S. | 5.1 | 7.9 | 9.7 | 16.6 | 18.9 | 21.3 | 27.9 | 29.6 | 32.6 | 38 | 18.84 | - 0.65 | . | + 2.73 | 5 | 38 | 20.92 | + 0.84 |
| | 8 | Moon I, N. | S. | 2.3 | 5.2 | 7.0 | 13.8 | 16.2 | 18.5 | 25.4 | 27.1 | 30.6 | 58 | 16.17 | - 0.64 | . | + 2.70 | 7 | 58 | 18.23 | + 74.74 |
| | 9 | B. A. C. 3079 | S. | 14.9 | 17.8 | 19.4 | 26.1 | 28.5 | 30.7 | 37.5 | 39.1 | 41.9 | 55 | 28.43 | - 0.64 | . | + 2.69 | 8 | 55 | 30.48 | - 1.38 |
| | 10 | B. A. C. 3117 | S. | 59.7 | 2.4 | 4.1 | 10.8 | 13.0 | 15.2 | 21.7 | 23.5 | 26.2 | 2 | 12.96 | - 0.65 | . | + 2.69 | 9 | 2 | 15.00 | - 1.38 |
| | 11 | B. A. C. 3123 | S. | 59.4 | 2.2 | 3.8 | 10.4 | 12.6 | 14.8 | 21.5 | 23.1 | 25.9 | 3 | 12.63 | - 0.65 | . | + 2.69 | 9 | 3 | 14.67 | - 1.39 |
| | 12 | B. A. C. 3171 | S. | . | . | 58.4 | 0.6 | 2.8 | 5.0 | 7.2 | . | . | 12 | 2.79 | - 0.66 | . | + 2.69 | 9 | 12 | 4.82 | - 1.37 |
| | 13 | B. A. C. 3204 | S. | 11.5 | 14.4 | 16.2 | 23.0 | 25.3 | 27.6 | 34.4 | 36.2 | 38.9 | 17 | 25.28 | - 0.64 | . | + 2.69 | 9 | 17 | 27.33 | - 1.55 |
| | 14 | Hydra | S. | . | . | . | 28.8 | 30.8 | 32.9 | 37.0 | 38.6 | 41.1 | 21 | 28.78 | - 0.73 | + 2.64 | + 2.69 | 9 | 21 | 30.74 | + 0.02 |
| | 15 | B. A. C. 3321 | S. | 45.3 | 48.0 | 49.6 | 56.0 | 57.9 | 0.1 | 6.4 | 8.1 | 10.6 | 36 | 58.00 | - 0.66 | . | + 2.69 | 9 | 37 | 0.03 | - 1.47 |
| | 16 | Leonis | S. | . | 43.5 | 45.9 | 48.2 | 50.5 | 52.7 | 57.1 | 58.8 | 1.7 | 38 | 48.16 | - 0.63 | + 2.69 | + 2.69 | 9 | 38 | 50.22 | - 0.06 |
| | 17 | B. A. C. 3415 | S. | 26.7 | 29.3 | 30.8 | 37.0 | 39.1 | 41.2 | 47.3 | 48.9 | 51.4 | 53 | 39.08 | - 0.67 | . | + 2.68 | 9 | 53 | 41.99 | - 1.47 |
| | 18 | Leonis | S. | 33.0 | 35.7 | 37.2 | 43.4 | 45.6 | 47.5 | 53.5 | 55.6 | 58.2 | 1 | 45.57 | - 0.66 | + 2.67 | + 2.68 | 10 | 1 | 47.59 | - 0.03 |
| | 19 | Weisse 170 | S. | 33.6 | 36.1 | 37.7 | 44.2 | 46.2 | 48.4 | 54.5 | 56.2 | 58.9 | 11 | 46.20 | - 0.66 | . | + 2.68 | 10 | 11 | 48.22 | - 1.66 |
| | 20 | Leonis | S. | . | . | . | 7.8 | 9.9 | 12.1 | 16.5 | 18.0 | 20.8 | 13 | 7.73 | - 0.64 | + 2.69 | + 2.68 | 10 | 13 | 9.77 | - 0.03 |
| | 21 | B. A. C. 3582 | S. | . | . | 22.4 | 24.5 | 26.5 | 28.6 | 30.6 | . | . | 22 | 26.51 | - 0.71 | . | + 2.68 | 10 | 22 | 28.48 | - 1.47 |
| | 22 | B. A. C. 3592 | S. | 7.7 | 10.3 | 11.8 | 17.8 | 20.0 | 22.1 | 28.2 | 29.7 | 32.4 | 23 | 20.00 | - 0.69 | . | + 2.68 | 10 | 23 | 21.99 | - 1.54 |
| | 23 | Leonis (R.) | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 24 | Ursae Majoris (R.) . | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 25 | Ursae Majoris. . . . | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 26 | B. A. C. 3842 | S. | 23.1 | 26.0 | 27.6 | 34.3 | 36.5 | 38.8 | 45.4 | 47.1 | 49.9 | 8 | 36.52 | - 0.64 | . | + 2.67 | 11 | 8 | 38.55 | - 2.11 |
| | 27 | Weisse (2) 240 | S. | 49.4 | 52.6 | 54.3 | 1.6 | 4.0 | 6.4 | 13.8 | 15.6 | 18.6 | 14 | 4.03 | - 0.61 | . | + 2.67 | 11 | 14 | 6.09 | - 2.31 |
| | 28 | Weisse (2) 273 | S. | 58.0 | 1.0 | 2.9 | 10.2 | 12.6 | 15.0 | 22.2 | 24.0 | 27.1 | 16 | 12.56 | - 0.61 | . | + 2.67 | 11 | 16 | 14.62 | - 2.35 |
| | 29 | Weisse (2) 316 | S. | 3.1 | 6.0 | 7.9 | 15.2 | 17.6 | 20.1 | 27.2 | 29.0 | 32.2 | 18 | 17.59 | - 0.61 | . | + 2.67 | 11 | 18 | 19.65 | - 2.36 |
| | 30 | Bonn + 32 , 2156 . . | S. | 13.7 | 16.8 | 18.6 | 25.9 | 28.5 | 30.8 | 38.0 | 39.8 | 42.8 | 26 | 28.32 | - 0.61 | . | + 2.67 | 11 | 26 | 30.38 | - 2.39 |
| | 31 | Weisse (2) 609 | S. | . | . | 27.7 | 30.3 | 32.7 | 35.0 | 37.5 | . | . | 32 | 32.62 | - 0.61 | . | + 2.67 | 11 | 32 | 34.68 | - 2.42 |
| | 32 | Weisse (2) 661 | S. | 52.6 | 55.7 | 57.6 | 4.8 | 7.2 | 9.7 | 16.9 | 18.7 | 21.7 | 35 | 7.21 | - 0.61 | . | + 2.67 | 11 | 35 | 9.27 | - 2.43 |
| | 33 | Canum Venat. | S. | . | . | . | . | . | . | 24.8 | 26.9 | 30.2 | 50 | 14.42 | - 0.59 | + 2.52 | + 2.65 | 12 | 50 | 16.48 | + 0.13 |
| | 34 | Polaris, S. P. | S. | . | . | . | 9.5 | 15.0 | 14.5 | 24.0 | 20.0 | 29.5 | 12 | 9.98 | - 2.15 | . | + 2.65 | 1 | 12 | 10.48 | - 2.76 |
| | 35 | Bootis | S. | . | . | 43.0 | 45.1 | 47.3 | 49.4 | 51.6 | . | . | 48 | 47.27 | - 0.63 | + 2.63 | + 2.64 | 13 | 48 | 49.28 | - 0.04 |
| 30 | 36 | Argus | P. | 1.3 | 4.0 | 5.8 | 12.4 | 14.7 | 16.9 | 23.8 | 25.4 | 27.9 | 2 | 14.69 | - 0.74 | + 2.25 | + 2.24 | 8 | 2 | 16.19 | + 0.07 |
| | 37 | B. A. C. 2953 | P. | 24.8 | 27.4 | 29.1 | 35.5 | 37.7 | 39.9 | 46.3 | 47.8 | 50.7 | 37 | 37.69 | - 0.58 | . | + 2.24 | 8 | 37 | 39.35 | - 1.16 |
| | 38 | Ursae Majoris. . . . | P. | 24.0 | 27.0 | 30.3 | 39.5 | 42.5 | 45.8 | 54.9 | 57.3 | 1.1 | 50 | 42.59 | - 0.45 | . | + 2.25 | 8 | 50 | 44.39 | + 0.02 |
| | 39 | Moon I, N. | P. | 50.8 | 53.6 | 55.3 | 2.0 | 4.3 | 6.5 | 13.2 | 14.9 | 17.7 | 59 | 4.26 | - 0.57 | . | + 2.25 | 8 | 59 | 5.94 | + 71.48 |
| | 40 | Hydrae | P. | 16.7 | 19.3 | 20.9 | 27.0 | 29.2 | 31.2 | 37.4 | 38.8 | 41.5 | 21 | 29.11 | - 0.67 | + 2.24 | + 2.25 | 9 | 21 | 30.69 | - 0.02 |
| | 41 | B. A. C. 3250 | P. | 5.4 | 7.0 | 11.2 | 13.3 | 15.3 | 17.5 | 19.6 | 23 6 25.4 | 25 15.37 | - 0.60 | . | . | + 2.25 | 9 | 25 | 17.02 | - 1.35 | |
| | 42 | B. A. C. 3273 | P. | 6.6 | 9.6 | 11.5 | 18.8 | 21.1 | 23.6 | 30.7 | 32.5 | 35.6 | 29 | 21.11 | - 0.53 | . | + 2.25 | 9 | 29 | 22.83 | - 1.71 |
| | 43 | B. A. C. 3285 | P. | 30.4 | 33.2 | 34.9 | 41.6 | 43.9 | 46.2 | 52.9 | 54.6 | 57.4 | 30 | 43.90 | - 0.55 | . | + 2.25 | 9 | 30 | 15.60 | - 1.59 |
| | 44 | B. A. C. 3321 | P. | 45.7 | 48.4 | 50.0 | 56.3 | 58.4 | 0.6 | 6.8 | 8.5 | 11.0 | 36 | 58.41 | - 0.59 | . | + 2.25 | 9 | 37 | 0.07 | - 1.45 |
| | 45 | Leonis | P. | 35.0 | 38.0 | 39.6 | 44.0 | 46.3 | 48.5 | . | . | . | 38 | 48.53 | - 0.56 | + 2.24 | + 2.25 | 9 | 38 | 50.22 | - 0.05 |
| | 46 | Durch. 17°, 2160 . . | P. | 36.5 | 39.3 | 40.8 | 47.3 | 49.4 | 51.5 | 58.0 | 59.5 | 2.4 | 51 | 49.41 | - 0.58 | . | + 2.26 | 9 | 51 | 51.09 | - 1.58 |
| | 47 | Weisse 1106 | P. | 13.8 | 16.4 | 18.1 | 24.6 | 26.5 | 28.9 | 35.1 | 36.9 | 39.4 | 53 | 26.63 | - 0.58 | . | + 2.26 | 9 | 53 | 28.31 | - 1.60 |
| | 48 | Weisse 1158 | P. | 22.4 | 24.1 | 28.4 | 30.6 | 32.7 | 34.8 | 36.8 | 41.0 | 42.8 | 55 | 32.62 | - 0.58 | . | + 2.26 | 9 | 55 | 34.30 | - 1.60 |
| | 49 | Leonis | P. | 33.4 | 35.9 | 37.5 | 43.8 | 45.9 | 48.0 | 54.2 | 55.7 | 58.5 | 1 | 45.88 | - 0.60 | + 2.29 | + 2.26 | 10 | 1 | 47.54 | - 0.07 |
| | 50 | Weisse 74 | P. | . | . | 16.9 | 19.0 | 21.2 | 23.3 | 25.4 | . | . | 5 | 21.15 | - 0.59 | . | + 2.26 | 10 | 5 | 22.82 | - 1.63 |

8, 34, 38. Bisections at sets B and D.
1-7. Microscope VII being evidently read wrong was rejected with V, and a correction was applied to reduce the mean of 2 to the mean of 4 readings.
11, 27, 32, 40. Thread B used.
24. Bisections at threads II and III.
28, 29. Thread A used.
39. Bisections at threads II-VI.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | |
| | | r. " | " | " | " | | | | | | | | | | | |
| 1 | 339 6 | 10 | 14.5 | . | 7.3 | 37 | 060 | 030 | . | . | . | 60.1 | 20 50 23.5 | . | 71 57 6.3 | . |
| 2 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| 3 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| 4 | 312 42 | . | 14.0 | . | 5.7 | 33 | . | 200 | . | 044 | . | 60.1 | 47 13 23.4 | + | 98 20 45.2 | + 0.8 |
| 5 | 349 32 | . | 14.0 | . | 7.0 | 32 | . | 680 | . | 540 | . | 60.1 | 10 23 16.4 | + | 61 29 47.9 | + 0.4 |
| 6 | 320 40 | . | 11.5 | . | 4.0 | 37 | . | 340 | . | 230 | . | 60.1 | 39 16 25.1 | + | 90 23 32.1 | + 2.2 |
| 7 | 347 38 | . | 12.0 | . | 4.8 | 38 | . | . | . | 570 | 610 | 60.1 | 12 18 47.3 | + | 63 25 20.7 | . |
| 8 | 346 20 | 6.2 | 9.8 | 19 6 | 4.8 | 36 | 894 | . | 010 | . | 150 | 59.4 | 13 36 18.2 | + | 64 42 52.9 | . |
| 9 | 345 58 | 11.5 | 16.5 | 24.9 | 9.0 | 31 | . | 404 | . | 330 | . | 59.4 | 13 56 57.2 | + | 65 3 32.4 | + 4.7 |
| 10 | 343 36 | 8.3 | 11.7 | 24.1 | 5.4 | 37 | 882 | 897 | . | . | . | 59.4 | 16 20 33.2 | + | 67 27 10.9 | + 3.5 |
| 11 | 343 36 | 8.3 | 11.7 | 24.1 | 5.4 | 38 | . | . | . | 907 | 882 | 59.4 | 16 23 22.6 | + | 67 30 0.4 | + 3.5 |
| 12 | 339 16 | 12.4 | 14.1 | 27 1 | 5.7 | 33 | . | . | . | 404 | 354 | 59.4 | 20 39 27.9 | + | 71 46 10.4 | + 1.5 |
| 13 | 347 46 | 17.9 | 16.6 | 29.5 | 10.0 | 37 | . | 240 | . | 180 | . | 59.4 | 12 10 29.7 | + | 63 17 3.1 | + 4.2 |
| 14 | 312 56 | 14.8 | 16.6 | 0.0 | 10.2 | 35 | . | . | . | 660 | 616 | 59.4 | 47 0 5.6 | + | 98 7 27.4 | + 0.5 |
| 15 | 335 38 | 14.7 | 16.0 | 29.0 | 8.0 | 35 | 190 | 200 | . | . | . | 59.4 | 24 17 56.4 | + | 75 24 43.2 | - 1.1 |
| 16 | 345 24 | 12.5 | 14.0 | 26.2 | 5.7 | 38 | . | . | . | 280 | 270 | 59.4 | 14 32 43.0 | + | 65 39 18.9 | + 0.9 |
| 17 | 329 42 | 12.6 | 14.0 | 26.1 | 6.2 | 38 | . | 810 | . | 770 | . | 59.4 | 30 14 50.0 | + | 81 21 44.3 | - 4.1 |
| 18 | 333 38 | 7.3 | 8.5 | 21.3 | 2.0 | 39 | . | 310 | . | 170 | . | 59.4 | 26 18 52.0 | + | 77 25 41.3 | + 0.1 |
| 19 | 335 36 | 10.6 | 12.4 | 24.0 | 5.3 | 35 | 950 | 930 | . | . | . | 59.4 | 24 20 4.0 | + | 75 26 50.9 | - 3.0 |
| 20 | 341 30 | 9.0 | 9.9 | 22.6 | 4.6 | 32 | . | . | . | 740 | 730 | 59.4 | 18 25 14.9 | + | 69 31 55.1 | 0.0 |
| 21 | 317 56 | 6.6 | 8.3 | 22.0 | 2.5 | 33 | 745 | 728 | . | . | . | 59.4 | 41 59 26.9 | + | 93 6 39.3 | - 9.3 |
| 22 | 323 12 | 10.7 | 13.1 | 26.0 | 5.5 | 30 | . | . | . | 558 | 630 | 59.4 | 36 45 16.8 | + | 87 52 20.5 | - 7.7 |
| 23 | 207 36 | 14.0 | 18.0 | 0.3 | 6.3 | 30 | 690 | 660 | . | . | . | 59.4 | 152 18 47.2 | + | 78 48 4.0 | + 2.2 |
| 24 | 156 24 | 9.8 | 14.5 | 28.2 | 5.0 | 32 | 750 | 844 | . | . | . | 59.4 | 203 31 17.0 | + | 27 34 39.3 | - 1.3 |
| 25 | 23 28 | 12.0 | 14.5 | 28.5 | 5.6 | 38 | . | . | . | 300 | 230 | 59.4 | 336 28 44.1 | + | 27 34 40.4 | - 0.2 |
| 26 | 344 48 | 10.3 | 10.8 | 25.0 | 4.8 | 32 | . | 500 | . | 410 | . | 59.4 | 15 7 10.9 | + | 66 13 47.6 | - 3.5 |
| 27 | 353 30 | 9.8 | 10.1 | 22.0 | 3.8 | 36 | 570 | 560 | . | . | . | 59.4 | 6 28 44.5 | + | 57 35 11.9 | - 1.4 |
| 28 | 353 30 | 9.8 | 10.1 | 22.0 | 3.8 | 34 | 240 | 320 | . | . | . | 59.4 | 6 23 3.5 | + | 57 29 31.1 | - 1.5 |
| 29 | 353 30 | 9.8 | 10.1 | 22.0 | 3.8 | 31 | 740 | 760 | . | . | . | 59.4 | 6 23 10.7 | + | 57 29 38.3 | - 1.6 |
| 30 | 353 30 | 9 8 | 10.1 | 22.0 | 3.8 | 31 | 810 | 844 | . | . | . | 59.4 | 6 27 31.9 | + | 57 33 59.6 | - 2.2 |
| 31 | 353 30 | 9.8 | 10.1 | 22.0 | 3.8 | 38 | . | 670 | . | 712 | . | 39.4 | 6 26 45.3 | + | 57 33 12.9 | - 2.7 |
| 32 | 353 30 | 9.8 | 10.1 | 22.0 | 3.8 | 32 | 160 | 110 | . | . | . | 59.4 | 6 27 36.6 | + | 57 34 4.3 | - 2.9 |
| 33 | 0 0 | 9.8 | 11.6 | 25.4 | 4.3 | 29 | . | . | . | 470 | 490 | 59.4 | 359 54 26.7 | + | 51 0 47.8 | - 0.4 |
| 34 | 52 22 | 11.0 | 11.6 | 25.4 | 4.3 | 31 | . | . | . | 770 | 980 | 59.4 | 307 33 46.2 | + | 358 38 53.1 | - 0.7 |
| 35 | 340 4 | 14.3 | 15.7 | 29.2 | 9.0 | 36 | . | . | . | 510 | 500 | 59.4 | 19 52 18.2 | + | 70 59 0.1 | - 0.8 |
| 36 | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| 37 | 339 40 | 12.5 | 14.6 | 27.6 | 7.5 | 38 | 105 | 110 | . | . | . | 61.9 | 20 16 42.2 | + | 71 23 24.9 | + 3.3 |
| 38 | 9 34 | 14.7 | 16.0 | 1.3 | 9.0 | 35 | 095 | 065 | . | 085 | 090 | 61.9 | 350 21 58.6 | + | 41 28 10.7 | - 0.1 |
| 39 | 342 0 | 14.0 | 15.5 | 28.0 | 8.2 | 40 | 675 | 775 | 020 | 090 | 280 | 61.9 | 17 57 27.2 | + | 69 4 7.4 | . |
| 40 | 312 56 | 12.7 | 15.0 | 29.5 | 8.4 | 35 | . | 350 | . | 340 | . | 61.9 | 47 0 1.3 | + | 98 7 25.5 | - 1.4 |
| 41 | 332 54 | 9.2 | 11.0 | 25.0 | 4.7 | 36 | . | . | . | 500 | 485 | 61.9 | 27 2 15.9 | + | 78 9 7.1 | - 1.4 |
| 42 | 352 46 | 10.0 | 11.2 | 25.4 | 5.0 | 37 | 265 | 225 | . | . | . | 61.9 | 7 10 26.5 | + | 58 16 55.1 | + 5.3 |
| 43 | 346 16 | 11.0 | 13.6 | 27.0 | 6.9 | 34 | . | 435 | . | 445 | . | 61.9 | 13 39 45.8 | + | 64 46 21.3 | + 3.0 |
| 44 | 335 38 | 12.6 | 13.5 | 28.0 | 7.7 | 35 | 050 | 995 | . | . | . | 61.9 | 24 17 55.0 | + | 75 24 42.8 | - 1.1 |
| 45 | 345 21 | 9.1 | 10.9 | 24.3 | 5.0 | 38 | 310 | 260 | . | . | . | 61.9 | 14 32 41.7 | + | 65 39 18.2 | + 0.3 |
| 46 | 338 20 | 9.0 | 11.0 | 23.5 | 4.2 | 36 | 785 | 755 | . | . | . | 61.9 | 21 36 18.0 | + | 72 43 2.6 | - 0.9 |
| 47 | 339 4 | 11.7 | 13.5 | 27.5 | 6.1 | 27 | . | . | . | 760 | 680 | 61.9 | 20 50 3.8 | + | 71 50 47.5 | - 0.8 |
| 48 | 338 4 | 10.5 | 11.2 | 23.5 | 4.6 | 32 | . | . | . | 740 | 720 | 61.9 | 21 51 18.3 | + | 72 58 3.2 | - 1.2 |
| 49 | 333 38 | 11.5 | 12.6 | 27.0 | 7.1 | 28 | . | 710 | . | 665 | . | 61.9 | 26 18 50.0 | + | 77 25 40.5 | - 0.6 |
| 50 | 336 32 | 11.0 | 12.8 | 27.0 | 6.6 | 35 | . | . | . | 220 | 140 | 61.9 | 23 23 57.7 | + | 74 30 44.5 | - 2.3 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|----------|
| | in. | ° | | " | " | " | " |
| 7 | 29.94 | 67.0 | 1 | — 2.4 | . | — 0.1 | — 2.5 |
| 8 | 29.89 | 65.3 | 7 | — 2.5 | — 11.3 | . | — 13.8 |
| 23 | 29.84 | 59.8 | 8 | — 13 44.9 | + 16 11.6 | . | + 2 20.6 |
| 35 | 29.76 | 56.0 | 39 | — 17 54.7 | + 16 2.4 | . | — 1 52.4 |
| 37 | 29.77 | 51.0 | | | | | |
| 39 | 29.80 | 48.3 | | | | | |
| 45 | 29.87 | 45.6 | | | | | |

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|---------|---------|-----------|--------------------------------|-----|------|-----|----|-----|------|-------|-----|------------|--------------|-------|---------------|---------------------------|----|----|----------------------------|----|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | | Inst. | Clock appar't | Clock adopted. | h. | m. | | s. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | m. | s. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1876. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | </ |

6, 44, 45. Thread B used.

31, 32. Bisections at threads C₃ and D₃.

33. Bisections at threads C₃, C₅, D₁, and D₃.

45. Bisections at sets B and D.

48. Thread A used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom't. | Refraction. | Apparent North-Polar Distance. | Miscellan's Corrections. | | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|--------------------------|------------|-------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | | |
| | | | | | | | | | | | | | | | | | | | |
| | ° ' " | r. " | " " | " " | " " | | | | | | | " " | ° ' " | " " | " " | ° ' " | " " | | |
| 1 | | | | | | | | | | | | | | | | | | | |
| 2 | 341 30 | 10 | 14.1 | 14.9 | 28.9 | 9.1 | 32 | 280 | | | | 105 | 61.9 | 18 25 13.7 | | 19.8 | 69 31 54.7 | - 0.3 | |
| 3 | 341 30 | | 14.1 | 14.9 | 28.9 | 9.1 | 32 | | 425 | | 260 | | 61.9 | 18 25 15.8 | | 19.8 | 69 31 56.8 | - 1.1 | |
| 4 | 330 28 | | 11.5 | 11.7 | 25.0 | 6.3 | 36 | 505 | 535 | | | | 61.9 | 29 28 15.8 | | 33.6 | 80 35 10.6 | - 5.1 | |
| 5 | 317 56 | | 11.2 | 11.6 | 26.2 | 6.9 | 33 | | 020 | | 925 | | 61.9 | 41 59 22.5 | | 53.5 | 93 6 37.2 | - 9.3 | |
| 6 | | | | | | | | | | | | | | | | | | | |
| 7 | 323 12 | | 13.1 | 14.0 | 28.5 | 8.9 | 30 | | | | 175 | 100 | 61.9 | 36 45 14.6 | 39.3 | + | 44.4 | 87 52 20.2 | - 7.7 |
| 8 | 349 26 | | 11.6 | 10.3 | 0.0 | 9.8 | 32 | | 120 | | 095 | | 61.1 | 10 29 10.2 | 46.0 | + | 10.9 | 61 35 42.3 | - 1.3 |
| 9 | 335 32 | | 12.2 | 10.7 | 28.3 | 7.6 | 33 | | 825 | | 750 | | 61.1 | 24 23 35.1 | | + | 26.7 | 75 30 23.0 | + 0.2 |
| 10 | 302 24 | | 11.2 | 11.3 | 0.5 | 9.1 | 35 | | 500 | | 405 | | 61.1 | 57 32 1.5 | | + | 32.0 | 108 39 54.7 | - 2.2 |
| 11 | 356 0 | | 4.8 | 5.1 | 26.4 | 1.5 | 35 | | 240 | | 140 | | 61.1 | 3 55 50.0 | | + | 3.9 | 55 2 15.1 | - 1.5 |
| 12 | 49 40 | | 7.0 | 7.3 | 23.5 | 1.3 | 35 | 385 | | 300 | | 400 | 61.1 | 310 15 54.4 | | - | 1 9.0 | 1 21 6.6 | + 0.1 |
| 13 | | | | | | | | | | | | | | | | | | | |
| 14 | 336 6 | | 10.2 | 12.3 | 27.4 | 9.1 | 32 | 160 | 120 | | | | 61.1 | 23 49 8.8 | | + | 25.6 | 74 55 55.6 | |
| 15 | 336 38 | | 10.6 | 11.7 | 27.8 | 8.4 | 32 | | | | 920 | 870 | 61.1 | 23 17 22.6 | 52.3 | + | 25.0 | 74 24 8.8 | |
| 16 | 340 32 | | 11.8 | 13.7 | 28.7 | 8.0 | 33 | | 700 | | 700 | | 61.1 | 19 23 35.3 | | + | 20.4 | 70 30 16.9 | |
| 17 | 312 42 | | 10.8 | 14.8 | 29.5 | 10.0 | 32 | | | | 640 | 620 | 61.1 | 47 13 19.6 | | + | 1 1.7 | 98 20 42.5 | - 1.7 |
| 18 | 349 32 | | 9.5 | 10.7 | 26.6 | 6.7 | 32 | | 635 | | 565 | | 61.1 | 10 23 15.7 | | + | 10.5 | 61 29 47.4 | - 0.2 |
| 19 | | | | | | | | | | | | | | | | | | | |
| 20 | 320 40 | | 6.6 | 9.0 | 23.3 | 6.2 | 37 | | | | 120 | 090 | 61.1 | 39 16 23.2 | | + | 46.6 | 90 23 31.0 | + 1.3 |
| 21 | | | | | | | | | | | | | | | | | | | |
| 22 | 337 48 | | 15.5 | 17.9 | 1.8 | 10.7 | 33 | | | | 050 | 010 | 62.2 | 22 7 29.7 | | + | 23.4 | 73 14 14.3 | |
| 23 | 226 56 | | 11.3 | 13.5 | 0.5 | 9.5 | 34 | 870 | 930 | | | | 62.2 | 132 59 53.9 | | - | 1 1.7 | 98 7 29.0 | + 2.1 |
| 24 | 312 56 | | 12.2 | 15.0 | 0.0 | 8.0 | 35 | | | | 435 | 420 | 62.2 | 47 0 3.5 | 55.5 | + | 1 1.7 | 98 7 26.4 | - 0.5 |
| 25 | | | | | | | | | | | | | | | | | | | |
| 26 | 352 46 | | 10.6 | 11.9 | 27.5 | 5.5 | 37 | 140 | 150 | | | | 62.2 | 7 10 27.0 | | + | 7.3 | 58 16 55.5 | + 5.4 |
| 27 | 346 16 | | 13.7 | 16.5 | 1.0 | 11.0 | 34 | | | | 220 | 210 | 62.2 | 13 40 47.0 | | + | 14.0 | 64 47 22.2 | + 3.4 |
| 28 | 345 24 | | 12.3 | 14.8 | 29.0 | 7.8 | 38 | | 070 | | 050 | | 62.2 | 14 32 42.9 | | + | 15.0 | 65 39 19.1 | + 1.2 |
| 29 | 333 4 | | 11.9 | 13.5 | 28.5 | 7.5 | 39 | | | | 290 | 245 | 62.2 | 26 53 1.6 | | + | 29.2 | 76 59 52.0 | - 2.1 |
| 30 | 334 4 | | 12.5 | 14.5 | 27.2 | 10.3 | 31 | 800 | 750 | | 750 | 710 | 62.2 | 25 51 6.5 | | + | 28.0 | 76 57 55.7 | - 2.3 |
| 31 | | | | | | | | | | | | | | | | | | | |
| 32 | 341 30 | | 10.6 | 12.0 | 26.8 | 8.7 | 32 | | | | 475 | 440 | 62.2 | 18 25 16.6 | | + | 19.3 | 69 31 57.1 | + 2.1 |
| 33 | 341 30 | | 10.6 | 12.0 | 26.8 | 8.7 | 32 | | | | 660 | 640 | 62.2 | 18 25 19.7 | | + | 19.3 | 69 32 0.2 | + 1.0 |
| 34 | 331 0 | | 8.3 | 10.0 | 23.5 | 4.7 | 37 | | 750 | | 760 | | 62.2 | 28 56 33.8 | | + | 32.0 | 80 3 27.0 | + 0.8 |
| 35 | 332 16 | | 15.5 | 17.2 | 1.0 | 9.4 | 39 | | 760 | | 700 | | 62.2 | 27 41 10.7 | | + | 30.4 | 78 48 2.3 | + 0.6 |
| 36 | 45 6 | | 11.5 | 12.5 | 27.1 | 5.7 | 31 | | | 740 | 690 | | 62.2 | 314 49 4.2 | | - | 58.8 | 5 54 26.6 | + 1.4 |
| 37 | | | | | | | | | | | | | | | | | | | |
| 38 | 45 6 | | 11.5 | 12.5 | 27.1 | 5.7 | 33 | | | 925 | 935 | | 62.2 | 314 49 22.8 | | - | 58.8 | 5 54 45.2 | - 2.0 |
| 39 | 52 22 | | 9.9 | 11.2 | 26.6 | 4.3 | 34 | | 580 | 655 | 710 | 820 | 62.2 | 307 33 47.1 | | - | 1 15.8 | 358 38 52.5 | - 0.9 |
| 40 | 310 32 | | 16.9 | 18.0 | 2.6 | 11.7 | 33 | | 450 | | 400 | | 62.2 | 49 23 35.6 | | - | 1 8.2 | 100 31 5.0 | + 0.8 |
| 41 | 321 6 | | 14.0 | 14.6 | 29.0 | 9.0 | 38 | | 300 | | 285 | | 62.2 | 38 50 47.1 | | + | 47.1 | 89 57 55.4 | + 0.6 |
| 42 | 168 54 | | 16.8 | 18.5 | 4.5 | 11.8 | 35 | 020 | 900 | | | | 62.2 | 191 1 58.3 | 47.5 | + | 11.4 | 40 4 11.5 | + 0.3 |
| 43 | | | | | | | | | | | | | | | | | | | |
| 44 | 10 58 | | 10.2 | 10.0 | 25.5 | 5.5 | 35 | | | | 540 | 470 | 62.2 | 348 58 1.9 | | - | 11.4 | 40 4 11.7 | + 0.5 |
| 45 | 340 4 | | 8.8 | 10.0 | 24.2 | 4.2 | 36 | | 855 | | 800 | | 62.2 | 19 52 19.9 | | + | 21.2 | 70 59 2.3 | + 1.7 |
| 46 | | | | | | | | | | | | | | | | | | | |
| 47 | 345 24 | | 8.3 | 11.0 | 23.5 | 4.7 | 38 | | 352 | | 272 | | 60.9 | 14 32 41.4 | 51.4 | + | 15.1 | 65 39 17.7 | - 0.1 |
| 48 | 333 38 | | 9.4 | 11.1 | 24.5 | 5.0 | 38 | | 940 | | 870 | | 60.9 | 26 18 51.0 | | + | 28.8 | 77 25 41.0 | 0.0 |
| 49 | 341 30 | | 8.0 | 8.4 | 20.0 | 3.3 | 32 | 810 | 860 | | | | 60.9 | 18 25 14.8 | | + | 19.4 | 69 31 55.4 | + 0.6 |
| 50 | 341 30 | | 8.0 | 8.4 | 20.0 | 3.3 | 32 | | | | 940 | 854 | 60.9 | 18 25 17.4 | | + | 19.4 | 69 31 58.0 | - 0.9 |
| 51 | 317 56 | | 9.1 | 10.0 | 23.1 | 5.2 | 33 | 440 | 380 | | | | 60.9 | 41 59 25.3 | | + | 52.3 | 93 6 38.8 | - 9.2 |
| 52 | | | | | | | | | | | | | | | | | | | |
| 53 | 323 12 | | 9.3 | 9.6 | 23.5 | 5.2 | 30 | | | | 540 | 570 | 60.9 | 36 45 15.7 | | + | 43.4 | 87 52 20.3 | - 7.6 |
| 54 | 323 52 | | 8.8 | 10.8 | 25.0 | 3.9 | 32 | 230 | | | | 640 | 60.9 | 36 5 43.9 | | + | 42.6 | 87 12 47.7 | |
| 55 | 325 24 | | 8.7 | 9.7 | 22.9 | 4.9 | 37 | | 220 | | 170 | | 60.9 | 34 32 23.8 | | + | 40.3 | 85 39 25.3 | - 11.2 |
| 56 | 331 24 | | 7.1 | 9.0 | 21.5 | 3.1 | 35 | | 920 | | | | 60.9 | 28 32 2.3 | | + | 31.8 | 79 38 55.3 | - 10.0 |
| 57 | 327 6 | | 11.3 | 11.5 | 25.4 | 7.1 | 37 | | 170 | | 980 | | 60.9 | 32 47 50.8 | | + | 37.8 | 83 54 49.8 | - 2.1 |
| 58 | 286 22 | | 12.7 | 14.0 | 29.4 | 9.0 | 35 | | 010 | | 000 | | 60.9 | 73 34 10.1 | | + | 3 16.3 | 124 43 47.6 | - 19.7 |
| 59 | | | | | | | | | | | | | | | | | | | |
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| 73 | | | | | | | | | | | | | | | | | | | |
| 74 | | | | | | | | | | | | | | | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. |
|-------|---------|----------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|-------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. m. | s. | |
| 1876. | | | | | | | | | | | | m. | s. | s. | s. | s. | | | |
| May 3 | 1 | Vesta | S. | 44.2 | 45.7 | 49.8 | 52.0 | 54.1 | 56.1 | 58.1 | 2.3 | 3.8 | 24 54.01 | - 0.69 | . | + | 2.39 | 12 24 55.71 | . |
| | 2 | B. A. C. 4321 | S. | 19.6 | 22.9 | 24.9 | 32.7 | 35.5 | 38.2 | 46.0 | 47.9 | 51.2 | 46 35.43 | - 1.20 | . | + | 2.38 | 12 46 36.61 | - 2.01 |
| | 3 | 12 Canum Venat. | S. | 58.9 | 2.0 | 3.9 | 11.8 | 14.6 | 17.1 | 24.9 | 27.0 | 30.3 | 50 14.50 | - 0.41 | + | 2.24 | + 2.37 | 12 50 16.46 | + 0.13 |
| | 4 | Polaris, S. P. | S. | . | . | . | . | 27.0 | 1.5 | 35.5 | . | . | 12 28.83 | - 17.51 | . | + | 2.36 | 1 12 13.68 | - 0.99 |
| | 5 | Eunomia | S. | 53.0 | 56.2 | 58.0 | 4.7 | 7.2 | 9.6 | 16.5 | 18.3 | 21.2 | 43 7.19 | - 1.04 | . | + | 2.36 | 13 43 8.51 | . |
| | 6 | Pallas | S. | 45.1 | 48.0 | 49.6 | 56.3 | 58.5 | 0.7 | 7.4 | 9.0 | 11.9 | 47 58.50 | - 0.56 | . | + | 2.36 | 13 48 0.34 | . |
| | 7 | Diana | S. | 26.0 | 28.7 | 30.4 | 36.9 | 39.4 | 41.7 | 48.4 | 50.2 | 53.0 | 52 39.41 | - 1.00 | . | + | 2.36 | 13 52 40.77 | . |
| | 8 | B. A. C. 4686 | S. | 9.6 | 12.7 | 14.5 | 22.1 | 24.8 | 27.6 | 34.4 | 36.6 | 39.8 | 59 24.61 | - 1.13 | . | + | 2.36 | 13 59 25.84 | - 2.36 |
| | 9 | Leucothea | S. | 32.7 | 35.0 | 37.0 | 43.8 | 46.0 | 48.4 | 55.1 | 56.5 | 59.1 | 8 46.02 | - 0.99 | . | + | 2.36 | 14 8 47.39 | . |
| | 10 | Ceres | S. | 34.8 | 37.4 | 38.9 | 45.0 | 47.1 | 49.2 | 55.3 | 56.9 | 59.3 | 23 47.10 | - 0.78 | . | + | 2.35 | 14 23 48.67 | . |
| | 11 | B. A. C. 4853 | S. | 34.3 | 36.9 | 38.5 | 44.7 | 46.8 | 49.6 | 55.1 | 56.7 | 59.4 | 35 46.82 | - 0.66 | . | + | 2.35 | 14 35 48.51 | - 2.40 |
| | 12 | Asia | S. | 15.0 | 17.0 | 19.3 | 25.5 | 27.5 | 29.6 | 35.9 | 37.6 | 40.0 | 42 27.56 | - 0.87 | . | + | 2.35 | 14 42 29.04 | . |
| | 13 | β Bootis | S. | 1.1 | 4.7 | 6.7 | 14.8 | 17.5 | 20.2 | 28.2 | 30.3 | 33.6 | 57 17.46 | - 0.38 | . | + | 2.34 | 14 57 19.42 | + 0.05 |
| | 14 | 48 Cephei, S. P. | S. | 29.3 | 17.8 | 10.7 | 52.7 | 42.8 | 33.9 | 15.3 | 49.7 | 38.3 | 4 33.84 | - 2.44 | . | + | 2.34 | 3 4 33.74 | - 0.26 |
| | 15 | β Libræ | S. | 8.7 | 11.2 | 12.6 | 18.9 | 21.0 | 23.0 | 29.2 | 30.8 | 33.4 | 10 20.98 | - 0.84 | + | 2.36 | + 2.34 | 15 10 22.48 | - 0.02 |
| | 16 | μ^1 Bootis | S. | 33.7 | 37.2 | 38.8 | 46.7 | 49.1 | 51.9 | 59.5 | 1.4 | 4.7 | 19 49.22 | - 0.41 | + | 2.32 | + 2.34 | 15 19 51.15 | + 0.01 |
| | 17 | Themis | S. | 38.5 | 41.3 | 42.9 | 47.0 | 51.5 | 56.0 | 0.2 | 2.0 | 4.7 | 31 51.57 | - 0.91 | . | + | 2.34 | 15 31 52.97 | . |
| | 18 | Melpomene | S. | 22.6 | 25.0 | 26.9 | 33.0 | 35.1 | 37.2 | 43.1 | 44.8 | 47.4 | 45 35.01 | - 0.80 | . | + | 2.33 | 15 45 36.54 | . |
| | 19 | Polaris | P. | . | . | 2.0 | 32.0 | 0.0 | 27.0 | . | . | . | 11 57.70 | + 14.04 | . | + | 2.11 | 1 12 13.85 | - 1.03 |
| | 20 | α Arietis | P. | 56.0 | 0.4 | 4.6 | 7.0 | 9.3 | 11.5 | 13.7 | 17.9 | 22.5 | 0 9.21 | - 0.58 | + | 2.10 | + 2.11 | 2 0 10.74 | + 0.02 |
| 4 | 21 | Sun I, N. | P. | 55.3 | 58.0 | 59.6 | 6.0 | 8.1 | 10.2 | 16.4 | 18.0 | 20.8 | 47 8.04 | - 0.67 | . | + | 2.11 | 2 47 9.48 | . |
| | 22 | Sun II, S. | P. | 7.8 | 10.4 | 12.1 | 18.5 | 20.7 | 22.8 | 29.1 | 30.6 | 33.3 | 49 20.59 | - 0.67 | . | + | 2.11 | 2 49 22.03 | . |
| | 23 | η Tauri | P. | 51.7 | 54.3 | 56.1 | 2.9 | 5.0 | 7.2 | 13.9 | 15.7 | 18.4 | 40 5.03 | - 0.61 | + | 2.13 | + 2.12 | 3 40 6.54 | - 0.01 |
| | 24 | Mercury I, C. | P. | 21.8 | 24.6 | 26.2 | 32.8 | 35.0 | 37.3 | 43.8 | 45.5 | 48.3 | 42 35.03 | - 0.62 | . | + | 2.12 | 3 42 36.53 | + 0.21 |
| | 25 | γ Tauri | P. | . | . | 38.2 | 40.4 | 42.6 | 44.6 | 46.7 | . | . | 12 42.49 | - 0.68 | + | 2.25 | + 2.13 | 4 12 43.94 | - 0.11 |
| | 26 | ϵ Tauri | P. | 7.8 | 10.6 | 12.3 | 18.7 | 20.8 | 23.2 | 29.5 | 31.0 | 33.8 | 21 20.86 | - 0.65 | + | 2.19 | + 2.13 | 4 21 22.34 | - 0.07 |
| | 27 | α Tauri | P. | 34.0 | 36.6 | 38.2 | 44.5 | 46.6 | 48.8 | 55.3 | 56.8 | 59.4 | 28 46.69 | - 0.67 | + | 2.17 | + 2.13 | 4 28 48.15 | - 0.06 |
| | 28 | δ Orionis | P. | 26.7 | 29.3 | 30.8 | 36.9 | 38.6 | 41.0 | 47.0 | 48.5 | 51.2 | 25 38.92 | - 0.80 | + | 2.17 | + 2.14 | 5 25 40.26 | - 0.06 |
| | 29 | ϵ Orionis | P. | 41.7 | 44.2 | 45.8 | 51.9 | 54.0 | 56.0 | 2.0 | 3.6 | 6.2 | 29 53.93 | - 0.81 | + | 2.14 | + 2.14 | 5 29 55.26 | - 0.01 |
| | 30 | α Orionis | P. | 13.8 | 16.5 | 18.0 | 24.2 | 26.3 | 28.3 | 34.5 | 36.0 | 38.6 | 48 26.24 | - 0.74 | + | 2.10 | + 2.14 | 5 48 27.64 | + 0.01 |
| | 31 | Venus I, N. | P. | 9.3 | 12.0 | 13.0 | 20.8 | 23.0 | 25.3 | 32.3 | 33.8 | 36.8 | 0 23.02 | - 0.58 | . | + | 2.14 | 6 0 24.58 | + 0.80 |
| | 32 | Venus S. | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 33 | B. A. C. 3406 | P. | 20.5 | 23.3 | 24.8 | 31.0 | 33.3 | 35.3 | 41.6 | 43.2 | 45.7 | 51 33.19 | - 0.67 | . | + | 2.05 | 9 51 34.57 | - 1.46 |
| | 34 | B. A. C. 3415 | P. | 27.3 | 29.8 | 31.4 | 37.7 | 39.8 | 41.8 | 47.9 | 49.5 | 52.0 | 53 39.69 | - 0.71 | . | + | 2.05 | 9 53 41.03 | - 1.41 |
| | 35 | α Leonis | P. | 33.6 | 36.2 | 37.8 | 44.0 | 46.2 | 48.2 | 54.5 | 56.0 | 58.7 | 1 46.14 | - 0.68 | + | 2.06 | + 2.05 | 10 1 47.51 | - 0.05 |
| | 36 | Weisse (2) 15 | P. | . | . | . | . | . | . | 29.2 | 30.9 | 33.7 | 3 20.68 | - 0.63 | . | + | 2.05 | 10 3 22.10 | - 1.62 |
| | 37 | Weisse 170 | P. | 34.0 | 36.7 | 38.3 | 44.7 | 46.8 | 48.9 | 55.3 | 56.7 | 59.6 | 11 46.78 | - 0.66 | . | + | 2.05 | 10 11 48.17 | - 1.60 |
| | 38 | γ^1 Leonis | P. | . | . | 6.2 | 8.4 | 10.5 | 12.6 | 17.0 | 18.7 | 21.4 | 13 8.32 | - 0.61 | + | 2.01 | + 2.05 | 10 13 9.76 | + 0.02 |
| | 39 | B. A. C. 3553 | P. | 3.6 | 6.1 | 7.7 | 13.9 | 15.9 | 18.0 | 24.2 | 25.6 | 28.2 | 17 15.91 | - 0.81 | . | + | 2.04 | 10 17 17.14 | - 1.39 |
| | 40 | B. A. C. 3582 | P. | 14.7 | 17.3 | 18.9 | 25.2 | 27.1 | 29.1 | 35.3 | 36.8 | 39.4 | 22 27.09 | - 0.81 | . | + | 2.04 | 10 22 28.32 | - 1.41 |
| | 41 | B. A. C. 3592 | P. | 8.3 | 10.8 | 12.4 | 18.5 | 20.6 | 22.6 | 28.7 | 30.3 | 32.9 | 23 20.57 | - 0.76 | . | + | 2.04 | 10 23 21.85 | - 1.49 |
| | 42 | Weisse 520 | P. | 9.6 | 12.3 | 13.8 | 20.0 | 22.2 | 24.3 | 30.6 | 32.1 | 34.7 | 30 22.18 | - 0.88 | . | + | 2.04 | 10 30 23.34 | - 1.36 |
| | 43 | ζ Leonis (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 44 | ζ Leonis | P. | . | . | . | . | . | . | 53.0 | 54.5 | 57.2 | 42 44.68 | - 0.69 | + | 2.02 | + 2.04 | 10 42 46.03 | + 0.02 |
| | 45 | Lalande 21008 | P. | 20.7 | 23.7 | 25.4 | 32.5 | 34.7 | 37.0 | 44.0 | 45.7 | 48.6 | 49 34.70 | - 0.54 | . | + | 2.04 | 10 49 36.20 | - 2.06 |
| | 46 | α Ursæ Majoris (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 47 | α Ursæ Majoris | P. | . | . | . | . | . | 14.2 | 23.0 | 26.3 | 31.8 | 56 5.38 | - 0.03 | . | + | 2.04 | 10 56 7.39 | + 0.14 |
| | 48 | δ Leonis | P. | 18.0 | 20.8 | 22.5 | 29.1 | 31.3 | 33.5 | 40.0 | 41.6 | 44.4 | 7 31.24 | - 0.61 | + | 2.08 | + 2.04 | 11 7 32.67 | - 0.10 |
| | 49 | B. A. C. 3850 | P. | 42.7 | 45.3 | 46.8 | 53.0 | 55.0 | 57.0 | 3.1 | 4.7 | 7.3 | 10 54.99 | - 0.76 | . | + | 2.04 | 11 10 56.27 | - 1.74 |

4. Bisections at threads C₃, C₄, C₅, and D₁.
5, 6, 7, 9, 10, 12, 17, 18. Thread A used.
14. Bisection at thread D₃.
41. Thread B used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | | ° " | " " | " " | " " | | | | | | | | | | | | | |
| 1 | 330 52 | 10 8.0 | 9.0 | 22.2 | 1.8 | 33 | .. | 872 | .. | 858 | .. | 60.9 | 29 3 31.6 | 47.0 | + | 32.6 | 80 10 25.4 | - 3.2 |
| 2 | 281 36 | 12.2 | 13.6 | 29.0 | 8.1 | 33 | .. | 850 | .. | 778 | .. | 60.9 | 78 19 35.9 | .. | + | 4 37.0 | 129 30 34.1 | -20.1 |
| 3 | 0 0 | 4.8 | 7.1 | 18.9 | 0.5 | 29 | .. | 772 | .. | 750 | .. | 60.9 | 359 54 26.5 | .. | - | 0.1 | 51 0 47.6 | + 0.1 |
| 4 | 52 22 | 9.5 | 9.5 | 23.2 | 2.1 | 34 | .. | 860 | 880 | 800 | 970 | 60.9 | 307 33 53.5 | .. | - | 1 16.3 | 358 38 58.4 | + 5.6 |
| 5 | 292 30 | 5.7 | 7.2 | 20.0 | 2.0 | 42 | .. | 290 | .. | 070 | .. | 60.9 | 67 25 3.7 | .. | + | 2 20.7 | 118 33 45.6 | - 3.8 |
| 6 | 344 28 | 19.8 | 9.7 | 23.6 | 3.8 | 39 | .. | .. | .. | 710 | 710 | 60.9 | 15 26 30.4 | .. | + | 16.3 | 66 33 7 9 | - 1.3 |
| 7 | 295 52 | 7.7 | 8.1 | 22.1 | 4.0 | 39 | .. | 790 | .. | 750 | .. | 60.9 | 64 2 28.5 | .. | + | 2 0.5 | 115 10 50.2 | - 5.0 |
| 8 | 285 20 | 3.8 | 4.9 | 20.1 | 0.7 | 35 | .. | .. | .. | 760 | 730 | 60.9 | 74 35 57.8 | .. | + | 3 30.9 | 125 45 49.9 | -18.5 |
| 9 | 297 14 | 13.5 | 14 5 | 29.1 | 8.5 | 36 | .. | 530 | .. | 010 | .. | 60.9 | 62 39 40.9 | .. | + | 1 53.6 | 113 47 55.7 | - 5.8 |
| 10 | 318 56 | 10.7 | 11.7 | 26.2 | 6.8 | 36 | .. | 930 | .. | 890 | .. | 60.9 | 49 57 48.3 | .. | + | 51.2 | 92 5 0.7 | - 3.4 |
| 11 | 333 14 | 8.1 | 9.5 | 22.6 | 3.5 | 34 | .. | 368 | .. | 332 | .. | 60.9 | 26 41 39.7 | .. | + | 29.7 | 77 48 30.6 | -16.2 |
| 12 | 309 8 | 10.3 | 12.8 | 27.0 | 8.4 | 39 | .. | 685 | .. | 610 | .. | 60.9 | 59 46 30.9 | .. | + | 1 12.4 | 101 54 4.5 | - 5.3 |
| 13 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 14 | 63 44 | 10.5 | 10.3 | 24 8 | 2.6 | 37 | .. | .. | .. | .. | 970 | 60.9 | 296 12 20.8 | .. | - | 1 59.6 | 347 16 12.4 | + 0.5 |
| 15 | 312 8 | 10.0 | 12.2 | 26 2 | 7.9 | 36 | .. | 482 | .. | 450 | .. | 60.9 | 47 48 15.1 | .. | + | 1 5.2 | 98 55 41.5 | - 0.6 |
| 16 | 358 52 | 9.2 | 9.0 | 22.5 | 4.0 | 40 | .. | 022 | .. | 000 | .. | 60.9 | 1 5 6.8 | .. | + | 1.1 | 52 11 29.1 | - 0.1 |
| 17 | 301 36 | 8.7 | 9.0 | 23.8 | 4.8 | 40 | .. | 810 | .. | 670 | .. | 60.9 | 58 18 44.5 | .. | + | 1 35.7 | 109 26 41.4 | - 3.6 |
| 18 | 317 30 | 1.5 | 2.5 | 16.8 | 27.2 | 40 | .. | 740 | .. | 730 | .. | 60.9 | 42 24 37.5 | 42.0 | + | 54.1 | 93 31 52.8 | - 3.5 |
| 19 | 49 40 | 9.7 | 11.7 | 26.0 | 3.8 | 35 | 180 | 220 | 260 | 230 | 210 | 59.2 | 310 15 53.3 | 56.7 | - | 1 8.1 | 1 21 6.4 | - 0.9 |
| 20 | 343 56 | 4.9 | 8.3 | 21.1 | 2.1 | 39 | .. | .. | .. | 090 | 965 | 59.2 | 16 0 48.8 | 59.5 | + | 16.5 | 67 7 26.5 | + 0.6 |
| 21 | 337 32 | 11.8 | 14.8 | 28.5 | 8.0 | 38 | 540 | 545 | .. | .. | .. | 59.2 | 22 24 46.0 | 62.1 | + | 23.5 | 73 31 30.7 | .. |
| 22 | 337 0 | 10.5 | 13.2 | 26.9 | 6.0 | 37 | .. | .. | .. | 545 | 475 | 59.2 | 22 56 30.8 | .. | + | 24.2 | 74 3 16.2 | .. |
| 23 | 344 46 | 7.5 | 12.0 | 24.4 | 5.6 | 36 | .. | 010 | .. | 995 | .. | 59.2 | 15 10 4.8 | 63.5 | + | 15.4 | 66 16 41.4 | + 0.9 |
| 24 | 342 26 | 9.0 | 11.4 | 25.8 | 6.5 | 36 | 025 | 950 | .. | 835 | 760 | 59.2 | 17 30 4.0 | .. | + | 17.9 | 68 36 43.1 | .. |
| 25 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 26 | 339 56 | 11.4 | 15.4 | 28.2 | 7.4 | 31 | .. | .. | .. | 465 | .. | 59.2 | 19 58 59.2 | .. | + | 20.6 | 71 5 41.0 | + 2.7 |
| 27 | 337 18 | 9.7 | 15.0 | 28 5 | 6.5 | 34 | 250 | 225 | .. | 110 | 100 | 59.2 | 22 37 39.3 | 66.4 | + | 23.6 | 73 44 24.1 | + 2.0 |
| 28 | 320 40 | 13.0 | 15.2 | 28.4 | 10.0 | 37 | 025 | 960 | .. | 865 | 885 | 59.2 | 39 16 23.2 | 67.5 | + | 46.1 | 90 23 30.5 | + 1.0 |
| 29 | 319 46 | 9.3 | 12.6 | 26.0 | 6.0 | 34 | 780 | 735 | .. | 665 | 690 | 59.2 | 49 9 46.1 | .. | + | 47.6 | 91 16 54.9 | + 0.9 |
| 30 | 328 26 | 13.0 | 17.3 | 29.9 | 9.6 | 35 | 740 | 720 | .. | 650 | 610 | 59.2 | 31 30 5.0 | .. | + | 34.5 | 82 37 0.7 | + 2.0 |
| 31 | 347 48 | 9.5 | 14.9 | 27.0 | 6.9 | 31 | 790 | .. | .. | .. | 700 | 59.2 | 12 7 2.1 | .. | + | 12.1 | 63 13 35.4 | .. |
| 32 | 347 48 | 9.5 | 14.9 | 27.0 | 6.9 | 33 | .. | 440 | .. | 240 | .. | 59.2 | 12 7 26.3 | 07.7 | + | 12.1 | 63 13 59.6 | .. |
| 33 | 334 4 | 12.2 | 14.2 | 26.8 | 8.6 | 32 | .. | 035 | .. | 915 | .. | 59.6 | 25 51 6.5 | 59.0 | + | 27.8 | 76 57 55.5 | - 2.2 |
| 34 | 320 42 | 12.6 | 13.8 | 25.8 | 6.0 | 38 | .. | 915 | .. | 805 | .. | 59.6 | 30 14 51.5 | .. | + | 33.4 | 81 21 46.1 | - 3.8 |
| 35 | 333 38 | 13.8 | 14.5 | 27.5 | 7.3 | 38 | 925 | 870 | .. | 830 | 790 | 59.6 | 26 18 52.2 | .. | + | 28.4 | 77 25 41.8 | + 0.9 |
| 36 | 339 50 | 13.5 | 14.7 | 25.8 | 6.0 | 31 | .. | .. | .. | 900 | 845 | 59.6 | 20 5 5.4 | .. | + | 21.0 | 71 11 47.6 | - 0.8 |
| 37 | 335 36 | 12.8 | 14.5 | 26.3 | 6.2 | 35 | 890 | 880 | .. | .. | .. | 59.6 | 24 20 5.1 | .. | + | 26.0 | 75 26 52.3 | - 2.7 |
| 38 | 341 30 | 12.8 | 14.3 | 29.7 | 9.0 | 32 | .. | .. | .. | 585 | 595 | 59.6 | 18 25 17.1 | .. | + | 19.1 | 69 31 57.4 | + 2.7 |
| 39 | 318 2 | 14.6 | 15.5 | 29.2 | 8.0 | 35 | .. | 195 | .. | 140 | .. | 59.6 | 41 53 56.7 | .. | + | 51.5 | 93 1 9.4 | - 8.9 |
| 40 | 317 56 | 14.5 | 15.3 | 27.6 | 7.3 | 33 | 360 | 330 | .. | .. | .. | 59.6 | 41 59 27.3 | .. | + | 51.7 | 93 6 40.2 | - 9.2 |
| 41 | 323 12 | 11.5 | 12.9 | 25.0 | 6.7 | 30 | .. | .. | .. | 720 | 665 | 59.6 | 36 45 18.6 | .. | + | 42.9 | 87 52 22.7 | - 7 5 |
| 42 | 309 30 | 16.8 | 19.2 | 1.5 | 13 6 | 37 | .. | 580 | .. | 475 | .. | 59.6 | 50 26 36.2 | .. | + | 1 9.5 | 101 34 6.9 | -12.2 |
| 43 | 207 36 | 16.1 | 20.4 | 2.0 | 9.0 | 30 | 595 | 545 | .. | .. | .. | 59.6 | 152 18 48.0 | 57.2 | - | 30.2 | 78 48 3.4 | + 1.9 |
| 44 | 332 14 | 9.7 | 11.5 | 24.5 | 6.3 | 32 | .. | .. | .. | 395 | 345 | 59.6 | 27 41 10.9 | .. | + | 30.2 | 78 48 2.3 | + 0.8 |
| 45 | 349 26 | 12.3 | 12.9 | 26.4 | 5.0 | 32 | .. | 280 | .. | 235 | .. | 59.6 | 10 29 9.6 | .. | + | 10.7 | 61 35 41.5 | - 0.4 |
| 46 | 156 24 | 12.0 | 15.2 | 26.5 | 5.6 | 32 | 845 | 835 | .. | .. | .. | 59.6 | 203 31 18.2 | .. | + | 25.1 | 27 34 37.9 | - 2.0 |
| 47 | 23 28 | 15.1 | 16.4 | 0.4 | 8.0 | 38 | .. | .. | .. | 170 | 085 | 59.6 | 336 28 44.5 | .. | - | 25.1 | 27 34 40.6 | + 0.7 |
| 48 | 342 14 | 16.0 | 16.5 | 29.5 | 8.5 | 32 | 350 | 370 | .. | .. | .. | 59.6 | 17 41 13.9 | .. | + | 18.4 | 68 47 53.5 | + 0.5 |
| 49 | 323 44 | 12.5 | 13.5 | 26.0 | 6.5 | 34 | 600 | 980 | .. | .. | .. | 59.6 | 36 11 35.7 | .. | + | 42.2 | 87 18 39.1 | - 9.7 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " | " | " | " |
| 1 | 30.02 | 50.0 | 21 | - 3.3 | + 15 52.7 | .. | + 15 49.4 |
| 18 | 30.02 | 45.0 | 22 | - 3.1 | - 15 52.7 | .. | - 15 56.1 |
| 19 | 30.13 | 54.5 | 24 | - 2.2 | .. | 0.2 | - 2.4 |
| 20 | 30.11 | 56.8 | 31 | - 2.6 | + 12.1 | 0.0 | + 9.5 |
| 21 | 30.10 | 59.2 | 32 | - 2.6 | - 12.1 | .. | - 14.7 |
| 23 | 30.07 | 60.7 | | | | | |
| 27 | 30.07 | 64.0 | | | | | |
| 28 | 30.07 | 67.0 | | | | | |
| 32 | 30.05 | 65.2 | | | | | |
| 33 | 30.06 | 60.4 | | | | | |
| 43 | 30.06 | 59.0 | | | | | |

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|----------------|---------|------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|----------|------------------|--------------|----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar'nt | Clock adopted. | | |
| | | | | | | | | | | | | | | | | | | |
| 1876. May 4 | 1 | Crateris | P. | 56.3 | 58.9 | 0.6 | 6.9 | 9.0 | 11.1 | 17.4 | 19.0 | 21.6 | m. s. 13 8.98 | - 0.90 | + 2.02 | + 2.04 | h. m. s. 11 13 10.12 | 0.00 |
| | 2 | B. A. C. 3877 ¹ | P. | 15 7 18.3 | 19.8 | | | | | | | 38.0 | 40.6 | - 0.69 | | + 2.04 | 11 17 29.52 | - 1.88 |
| | 3 | B. A. C. 3877 ² | P. | | | 24.2 | 26.3 | 28.3 | 30.4 | 32.5 | | | 17 28.33 | - 0.69 | | + 2.04 | 11 17 29.68 | - 1.88 |
| | 4 | Juno | P. | 47.7 | 50.3 | 51.8 | 57.8 | 0.0 | 2.2 | 8.3 | 9.7 | 12.4 | 13 0.02 | - 0.72 | | + 2.03 | 12 13 1.33 | |
| | 5 | B. A. C. 4200 | P. | 18.3 | 20.9 | 22.5 | 28.7 | 30.7 | 32.7 | 38.8 | 40.4 | 43.0 | 21 30.67 | - 0.80 | | + 2.03 | 12 21 31.90 | - 1.98 |
| | 6 | Moon I, N | P. | 53.0 | 55.7 | 57.4 | 3.5 | 5.5 | 7.7 | 13.9 | 15.4 | 18.0 | 22 5.51 | - 0.80 | | + 2.03 | 12 22 6.77 | + 63.76 |
| | 7 | B. A. C. 4225 | P. | 4 7 7.3 | 8.6 | 15.0 | 17.1 | 19.0 | 25.3 | 26.7 | 29.3 | 25 17.03 | - 0.81 | | | + 2.02 | 12 25 18.24 | - 1.99 |
| | 8 | Virginis | P. | 12.7 | 15.2 | 16.6 | 23.0 | 25.0 | 27.0 | 33.2 | 34.7 | 37.2 | 30 24.99 | - 0.81 | | + 2.02 | 12 30 26.20 | - 2.00 |
| | 9 | 21 Cassiopeæ, S. P. | P. | | | 40.0 | 32.3 | 24.4 | 16.8 | 9.7 | | | 37 24.70 | - 1.83 | | + 2.02 | 0 37 24.89 | + 0.17 |
| | 10 | Lalande 23951 | P. | 46.6 | 49.2 | 50.9 | 57.3 | 59.3 | 1.3 | 7.5 | 9.2 | 11.8 | 44 59.23 | - 0.88 | | + 2.02 | 12 45 0.37 | - 2.01 |
| | 11 | Lalande 23995 | P. | 27.6 | 30.4 | 32.0 | 38.4 | 40.5 | 42.7 | 49.0 | 50.7 | 53.4 | 46 40.52 | - 0.93 | | + 2.02 | 12 46 41.61 | - 1.99 |
| | 12 | 12 ¹ Canum Venat. | P. | 57.8 | 1.0 | 3 0 | | | | 24.0 | 26.0 | 29.3 | 50 13.55 | - 0.42 | | + 2.02 | 12 50 15.15 | - 2.82 |
| | 13 | 12 ² Canum Venat. | P. | | | 9.5 | 12.1 | 14.7 | 17.5 | 20.0 | | | 50 14.74 | - 0.42 | + 2.00 | + 2.02 | 12 50 16.34 | + 0.02 |
| | 14 | B. A. C. 4307 | P. | | | | | | 5.4 | 9.5 | 11.0 | 13 6 | 50 1.16 | - 0.67 | | + 2.02 | 12 56 2.51 | - 2.26 |
| | 15 | B. A. C. 4389 | P. | | | 12.9 | 16.1 | 19.0 | 21.9 | 24.8 | | | 0 18.92 | - 0.34 | | + 2.02 | 13 0 20.60 | - 3.12 |
| | 16 | B. A. C. 4416 | P. | | | 22.0 | 25.8 | 29.7 | 33.5 | 37.3 | | | 4 20.63 | - 0.14 | | + 2.02 | 13 4 31.51 | - 3.84 |
| | 17 | Polaris, S. P. | P. | | | | | 25.5 | 38 3 | 34.5 | 42.4 | | 12 27.45 | - 15.23 | | + 2.02 | 1 12 14.24 | - 0.87 |
| | 18 | a Virginis | P. | 28.1 | 30.7 | 32.3 | 38.7 | 40.7 | 42.8 | 49.0 | 50.6 | 53.0 | 18 40.66 | - 0.86 | + 2.08 | + 2.02 | 13 18 41.82 | - 0.08 |
| | 19 | B. A. C. 4563 | P. | 33.6 | 36.3 | 37.9 | 44.5 | 46.0 | 48.9 | 55.4 | 57.0 | 59.8 | 34 46.67 | - 0.60 | | + 2.02 | 12 34 48.09 | - 2.46 |
| | 20 | Eunomia | P. | 2.2 | 5.2 | 6.9 | 13.8 | 16.3 | 18.5 | 25.7 | 27.4 | 30.3 | 42 16.26 | - 1.04 | | + 2.01 | 13 42 17.23 | |
| | 21 | Pallas | P. | 6.1 | 8.9 | 10.6 | 17.4 | 19.6 | 21.7 | 28.5 | 30.0 | 32.9 | 47 19.52 | - 0.58 | | + 2.01 | 13 47 20.95 | |
| | 22 | Diana | P. | 31.0 | 33.5 | 35.5 | 40.9 | 42.3 | | 40.3 | | | 51 44.52 | - 1.01 | | + 2.01 | 13 51 45.52 | |
| | 23 | B. A. C. 4737 | P. | | | 29.6 | 31.7 | 33.8 | 36.0 | 38.1 | | | 11 33.83 | - 0.65 | | + 2.01 | 14 11 35.11 | - 2.43 |
| | 24 | B. A. C. 4758 | P. | 27.8 | 31.0 | 33.0 | 41.0 | 43.7 | 46.4 | 54.3 | 56.2 | 59.6 | 14 43.67 | - 0.43 | | + 2.01 | 14 14 45.25 | - 2.90 |
| | 25 | Ceres | P. | 42.4 | 45.0 | 46.6 | 52.7 | 54.7 | 56.8 | 2.9 | 4.4 | 7.0 | 22 54.72 | - 0.80 | | + 2.01 | 14 22 55.93 | |
| | 26 | Asia | P. | 20.7 | 23.1 | 24.7 | 31.0 | 33.0 | 35.2 | 41.3 | 43.0 | 45.6 | 41 33.07 | - 0.88 | | + 2.01 | 14 41 34.20 | |
| | 27 | B. A. C. 4901 | P. | 55.1 | 58 3 | 0.2 | 7.7 | 10 2 | 12.8 | 20.3 | 22 2 | 25.4 | 58 10.26 | - 0.46 | | + 2.00 | 14 58 11.80 | - 2.73 |
| | 28 | B. A. C. 4996 | P. | 5 4 8.6 | 10.4 | 18.0 | 20.5 | 23.0 | 30.6 | 32.3 | 35.5 | 5 20.48 | - 1.13 | | | + 2.00 | 15 5 21.35 | - 2.59 |
| | 29 | B. A. C. 5026 | P. | 37.8 | 41.0 | 43.0 | 50.9 | 53.6 | 56.2 | 4.0 | 6.0 | 9 2 | 8 53.52 | - 0.13 | | + 2.00 | 15 8 55.09 | - 2.78 |
| | 30 | β Libræ | P. | | | | 21.3 | 23.4 | 25.5 | 29.6 | 31.1 | 33.7 | 10 21.31 | - 0.84 | + 2.01 | + 2.00 | 15 10 22.51 | - 0.04 |
| | 31 | B. A. C. 5065 | P. | 25.3 | 28.6 | 30.6 | 38.6 | 41.2 | 43.8 | 51.7 | 53.8 | 57.0 | 16 41.18 | - 1.19 | | + 2.00 | 15 16 41.99 | - 2.69 |
| | 32 | μ ¹ Bootis | P. | 34.0 | 37.3 | 39.5 | | | | 0.0 | 1.8 | 5.0 | 19 49 59 | - 0.45 | + 2.01 | + 2.00 | 15 19 51.14 | - 0.02 |
| | 33 | μ ² Bootis | P. | | | 45.7 | 48.4 | 51.0 | 53.0 | 56.1 | | | 19 50.94 | - 0.45 | | + 2.00 | 15 19 52. 9 | - 2.73 |
| | 34 | Antiope | P. | 25.4 | 27.9 | 29.6 | 36.0 | 38.3 | 40.7 | 46.8 | 48.3 | 51.1 | 26 38.23 | - 0.92 | | + 2.00 | 15 26 39.31 | |
| | 35 | Themis. | P. | 51.4 | 54.0 | 55.8 | 2.3 | 4 4 | 6.5 | 12.9 | 14.5 | 17.3 | 31 4.34 | - 0.94 | | + 2.00 | 15 31 5.40 | |
| | 36 | a Serpentis | P. | 58.3 | 1.0 | 2.5 | 8.7 | 10.7 | 12.7 | 18.8 | 20.4 | 23.0 | 38 10.68 | - 0.72 | + 2.05 | + 2.00 | 15 38 11.96 | - 0.03 |
| | 37 | Melpomene | P. | 29.4 | 31 6 | 33.2 | 39.3 | 41.3 | 43.5 | 49.5 | 51.0 | 53.5 | 41 41.37 | - 0.80 | | + 2.00 | 15 44 42.57 | |
| | 38 | Jupiter I, N | P. | 36.2 | 31.0 | 40.7 | | | | 57.8 | 59.4 | 2.1 | 46 49.22 | - 0.94 | | + 2.00 | 15 46 50.28 | |
| | 39 | Jupiter II, S. | P. | | | 48.0 | 50 2 | 52.3 | 54.4 | 56.6 | | | 46 52.29 | - 0.94 | | + 2.00 | 15 46 53.35 | |
| | 40 | δ Scorpion | P. | 48.2 | 51.0 | 52.6 | 59.2 | 1.5 | 3.8 | 10.4 | 12 0 | 14.8 | 53 1.50 | - 0.97 | + 2.15 | + 1.99 | 15 53 2.52 | - 0.15 |
| | 41 | B. A. C. 5316 | P. | 15.5 | 19.4 | 22.0 | 31.5 | 34.6 | 37 0 | 47.4 | 49.8 | 53 8 | 55 34.66 | - 0.29 | | + 1.99 | 15 55 36.36 | - 2.96 |
| | 42 | β ¹ Scorpion | P. | | | 12.9 | 15.2 | 17.3 | 19.4 | 23.7 | 25 4 | 28.0 | 58 15.08 | - 0.94 | + 2.02 | + 1.99 | 15 58 16.13 | 0.00 |
| | 43 | Weisse 47 | P. | | | | 33.5 | 35.5 | 37.7 | 39.8 | 41.9 | | 4 37.67 | - 0.88 | | + 1.99 | 16 4 38.78 | - 2.37 |
| | 44 | Astræa | P. | | | 41.5 | 46.6 | 48.7 | 50.9 | 53.0 | | | 4 48.73 | - 0.88 | | + 1.99 | 16 4 49.84 | |
| | 45 | B. A. C. 5432 ¹ | P. | 48.2 | 51.4 | 53.0 | | | | 12.8 | 14.7 | 17.8 | 10 3.00 | - 0.49 | | + 1.99 | 16 10 4.50 | - 2.49 |
| | 46 | B. A. C. 5432 ² | P. | | | 58.3 | 0.8 | 3.2 | 5.6 | 8.0 | | | 10 3.16 | - 0.49 | | + 1.99 | 16 10 4.66 | - 2.49 |
| | 47 | B. A. C. 5457 | P. | | | 12.6 | 15.3 | 17.7 | 20.2 | 22.8 | | | 16 17.70 | - 1.16 | | + 1.99 | 16 16 18.53 | - 2.73 |
| | 48 | B. A. C. 5499 | P. | | | 16 4 | 19.8 | 23.1 | 26.5 | 29.9 | | | 21 23.12 | - 0.25 | | + 1.99 | 16 21 24.86 | - 2.88 |
| | 49 | B. A. C. 5686 (R.) | P. | | | | | | | | | | | - 0.65 | | + 1.99 | 16 47 46.16 | - 2.21 |
| | 50 | B. A. C. 5686 | P. | | | | | 46.9 | 49.0 | 53 3 | 54.9 | 57.6 | 47 44.82 | | | | | |

1, 19, 23, 25, 33, 43 Thread B used.
6, 16, 23, 39, 49, 41, 47, 48. Bisections at sets B and D.
9. Bisections at set C.
17. Bisections at threads C₃, C₄, C₅, and D₁.
20, 22, 26, 34, 35, 37. Thread A used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom't. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | | | | | |
| 1 | 306 58 | 10 13.9 | 15.2 | 27.2 | 7.5 | 29 | 800 | 765 | .. | .. | 59.6 | 52 59 4.8 | .. | + 1 16.4 | 104 6 42.4 | + 0.8 | |
| 2 | 332 16 | 13.1 | 13.6 | 25.4 | 5.0 | 37 | 700 | .. | .. | 625 | 59.6 | 27 40 32.5 | .. | + 31.0 | 78 47 24.7 | - 7.4 | |
| 3 | 332 16 | 13.1 | 13.6 | 25.4 | 5.0 | 37 | .. | 590 | .. | 540 | 59.6 | 27 40 30.9 | 55.4 | + 31.0 | 78 47 23.1 | - 7.4 | |
| 4 | 327 12 | 14.1 | 15.5 | 28.0 | 8.5 | 35 | 575 | 610 | .. | .. | 59.6 | 32 44 48.1 | 54.0 | + 37.3 | 83 51 46.6 | - 2.7 | |
| 5 | 317 8 | 15.0 | 15.3 | 28.5 | 8.9 | 38 | 225 | 240 | .. | .. | 59.6 | 42 48 42.9 | .. | - 53.7 | 93 55 57.8 | - 14.3 | |
| 6 | 317 22 | 17.0 | 17.0 | 0.6 | 11.0 | 38 | 435 | .. | 580 | .. | 720 | 59.6 | 42 34 51.0 | .. | + 53.2 | 93 42 5.4 | .. |
| 7 | 316 42 | 17.0 | 17.5 | 0.8 | 10.0 | 39 | 535 | 515 | .. | .. | 59.6 | 43 15 4.6 | .. | + 54.5 | 94 22 20.3 | - 14.5 | |
| 8 | 315 54 | 13.6 | 14.1 | 27.5 | 8.0 | 34 | 865 | 835 | .. | 780 | 755 | 59.6 | 44 1 50.1 | .. | + 56.0 | 95 9 7.3 | - 14.8 |
| 9 | 66 42 | 13.4 | 13.4 | 26.0 | 5.0 | 37 | 005 | .. | 030 | .. | 035 | 59.6 | 293 14 22.7 | .. | - 2 14.3 | 344 18 29.6 | + 1.1 |
| 10 | 308 16 | 18.0 | 18.3 | 1.3 | 10.3 | 39 | 135 | 090 | .. | .. | 59.6 | 51 40 55.8 | .. | + 1 13.3 | 102 48 33.3 | - 16.6 | |
| 11 | 303 14 | 17.2 | 17.2 | 0.8 | 12.0 | 34 | .. | 035 | .. | 025 | 59.6 | 56 41 41.6 | .. | + 1 28.1 | 107 49 30.9 | - 17.5 | |
| 12 | 0 0 | 16.3 | 16.5 | 27.1 | 9.4 | 30 | .. | 130 | .. | 015 | 59.6 | 359 54 39.4 | .. | - 0.1 | 51 1 0.5 | - 6.1 | |
| 13 | 0 0 | 16.3 | 16.5 | 27.1 | 9.4 | 29 | .. | 260 | .. | 185 | 59.0 | 359 54 26.4 | .. | - 0.1 | 51 0 17.5 | + 0.3 | |
| 14 | 332 40 | 15.3 | 15.5 | 27.2 | 9.6 | 34 | .. | .. | .. | 520 | 505 | 59.6 | 27 15 47.6 | .. | + 29.9 | 78 22 38.7 | - 12.3 |
| 15 | 6 58 | 14.0 | 16.0 | 29.6 | 8.1 | 35 | .. | .. | .. | 075 | 070 | 59.6 | 352 57 55.6 | .. | - 7.2 | 44 4 9.6 | - 5.4 |
| 16 | 18 32 | 14.4 | 15.1 | 29.2 | 7.9 | 37 | 255 | 240 | .. | .. | 59.6 | 341 24 28.2 | .. | - 19.5 | 32 30 29.9 | - 3.6 | |
| 17 | 52 22 | 15.0 | 14.0 | 27.9 | 5.0 | 34 | .. | 575 | 615 | 615 | 665 | 59.6 | 307 33 46.6 | .. | - 1 15.4 | 358 38 52.4 | - 0.2 |
| 18 | 310 32 | 15.8 | 16.7 | 28.9 | 9.4 | 33 | 845 | 815 | .. | 745 | 715 | 59.6 | 49 23 36.2 | 53.1 | + 1 7.3 | 100 31 4.7 | + 0.3 |
| 19 | 341 42 | 13.7 | 14.1 | 26.3 | 5.4 | 29 | 645 | 640 | .. | .. | 59.6 | 18 15 1.9 | .. | + 19.2 | 69 21 42.3 | - 12.5 | |
| 20 | 292 30 | 16.1 | 16.1 | 0.2 | 9.6 | 40 | .. | 625 | .. | 475 | .. | 59.6 | 67 18 46.6 | .. | + 2 18.0 | 118 27 25.8 | - 3.8 |
| 21 | 344 36 | 14.0 | 15.1 | 28.3 | 8.1 | 35 | .. | 300 | .. | 245 | 59.6 | 15 19 57.0 | .. | + 15.9 | 66 26 34.1 | - 1.3 | |
| 22 | 295 56 | 16.1 | 16.7 | 0.8 | 11.8 | 36 | .. | 975 | .. | 900 | 59.6 | 63 57 52.2 | 52.8 | + 1 58.4 | 115 6 11.8 | - 3.9 | |
| 23 | 336 54 | 13.6 | 14.9 | 27.0 | 7.1 | 30 | .. | .. | .. | 175 | 105 | 59.6 | 23 3 11.2 | .. | + 24.8 | 74 9 57.2 | - 14.9 |
| 24 | 0 24 | 14.3 | 15.7 | 28.6 | 6.0 | 35 | .. | 370 | .. | 340 | 59.6 | 359 31 59.2 | .. | - 0.5 | 50 38 19.9 | - 12.2 | |
| 25 | 319 0 | 16.0 | 17.5 | 1.5 | 11.5 | 30 | .. | 590 | .. | 565 | 59.6 | 40 57 21.2 | .. | + 50.5 | 92 4 32.9 | - 3.4 | |
| 26 | 309 14 | 13.0 | 15.0 | 27.3 | 8.7 | 33 | .. | 810 | .. | 590 | 59.6 | 50 38 59.8 | 52.3 | + 1 10.7 | 101 46 31.7 | - 5.3 | |
| 27 | 350 44 | 15.7 | 16.4 | 28.4 | 7.7 | 36 | .. | 615 | .. | 525 | 59.6 | 3 12 18.6 | .. | + 3.3 | 54 18 43.1 | - 15.3 | |
| 28 | 285 28 | 14.3 | 16.2 | 0.8 | 9.5 | 34 | .. | 710 | .. | 935 | 59.6 | 74 27 49.7 | 52.2 | + 3 26.6 | 125 37 37.1 | - 16.2 | |
| 29 | 359 46 | 15.5 | 17.1 | 29.6 | 8.0 | 35 | 780 | 830 | .. | .. | 59.6 | 0 10 6.8 | .. | + 0.2 | 51 16 28.2 | - 15.8 | |
| 30 | 312 8 | 12.0 | 15.3 | 26.8 | 8.7 | 36 | .. | .. | .. | 555 | 560 | 59.6 | 47 48 17.6 | .. | + 1 4.1 | 98 55 42.9 | + 0.9 |
| 31 | 281 50 | 15.9 | 16.1 | 0.0 | 10.6 | 33 | 095 | 000 | .. | .. | 59.6 | 78 5 24.4 | .. | + 4 28.9 | 129 16 14.5 | - 15.5 | |
| 32 | 358 50 | 16.0 | 16.7 | 0.0 | 8.5 | 31 | 820 | .. | .. | 715 | 59.6 | 1 5 0.2 | .. | + 1.1 | 52 11 28.5 | - 0.4 | |
| 33 | 358 50 | 16.0 | 16.7 | 0.0 | 8.5 | 28 | .. | 880 | .. | 810 | 59.6 | 1 6 53.5 | .. | + 1.1 | 52 13 15.8 | - 16.4 | |
| 34 | 303 30 | 15.0 | 16.4 | 29.0 | 10.3 | 36 | .. | 980 | .. | 840 | 59.6 | 56 23 50.6 | .. | + 1 27.3 | 107 31 39.1 | - 3.9 | |
| 35 | 301 38 | 12.2 | 13.3 | 27.5 | 7.4 | 38 | .. | 920 | .. | 805 | 59.6 | 58 16 17.9 | .. | + 1 33.8 | 109 24 12.9 | - 3.6 | |
| 36 | 327 52 | 15.0 | 15.0 | 28.9 | 8.6 | 36 | 500 | 515 | .. | 450 | 445 | 59.6 | 32 4 16.9 | .. | + 36.5 | 83 11 14.6 | - 0.2 |
| 37 | 317 34 | 14.2 | 15.5 | 28.0 | 9.1 | 34 | .. | 140 | .. | 050 | 59.6 | 42 19 6.6 | .. | + 53.0 | 93 26 20.8 | - 3.5 | |
| 38 | 302 14 | 15.0 | 17.0 | 29.8 | 10.5 | 30 | .. | 420 | .. | 365 | 59.6 | 57 40 44.7 | .. | + 1 31.8 | 108 48 37.7 | .. | |
| 39 | 302 14 | 15.0 | 17.0 | 29.8 | 10.5 | 33 | 335 | .. | .. | .. | 220 | 59.6 | 57 41 29.0 | .. | + 1 31.8 | 108 49 22.0 | .. |
| 40 | 298 48 | 15.0 | 15.5 | 29.8 | 8.4 | 35 | 990 | .. | .. | .. | 890 | 59.6 | 61 8 8.8 | .. | - 1 44.7 | 112 16 14.7 | + 0.2 |
| 41 | 11 16 | 16.0 | 16.8 | 1.0 | 9.1 | 35 | 405 | .. | .. | .. | 430 | 59.6 | 348 40 2.0 | .. | - 11.9 | 39 46 11.3 | - 18.0 |
| 42 | 301 36 | 14.8 | 14.7 | 28.5 | 8.1 | 36 | .. | .. | .. | 090 | 030 | 59.6 | 58 20 10.8 | .. | + 1 34.1 | 109 28 6.1 | - 0.3 |
| 43 | 308 58 | 13.3 | 16.0 | 28.5 | 8.0 | 36 | 625 | .. | .. | .. | 690 | 59.6 | 51 0 51.4 | .. | + 1 11.8 | 102 8 24.4 | - 15.9 |
| 44 | 308 58 | 13.3 | 16.0 | 28.5 | 8.0 | 33 | .. | 790 | .. | 625 | 59.6 | 50 57 33.9 | .. | + 1 11.2 | 102 5 6.3 | - 4.3 | |
| 45 | 355 12 | 14.2 | 16.6 | 28.1 | 5.0 | 33 | .. | 480 | .. | 365 | 59.6 | 4 43 20.3 | .. | + 4.8 | 55 49 55.3 | - 18.9 | |
| 46 | 355 12 | 14.2 | 16.6 | 28.1 | 5.0 | 33 | .. | 205 | .. | 140 | 59.6 | 4 43 25.5 | .. | + 4.8 | 55 49 51.5 | - 18.9 | |
| 47 | 283 50 | 17.7 | 19.1 | 3.2 | 12.2 | 36 | .. | .. | .. | 980 | 945 | 59.6 | 76 6 28.1 | .. | + 3 51.1 | 127 16 40.4 | - 12.4 |
| 48 | 13 36 | 16.0 | 17.0 | 0.0 | 8.4 | 34 | 670 | 680 | .. | .. | 59.6 | 346 19 49.8 | .. | - 14.2 | 37 25 56.8 | - 19.4 | |
| 49 | 203 12 | 18.0 | 19.5 | 2.0 | 7.6 | 32 | 540 | 490 | .. | .. | 59.6 | 186 43 17.6 | .. | - 25.0 | 74 23 28.6 | - 18.5 | |
| 50 | 356 40 | 13.6 | 14.0 | 26.0 | 7.1 | 38 | .. | .. | .. | 115 | 075 | 59.6 | 23 16 40.8 | .. | + 25.0 | 74 23 27.0 | - 18.5 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " | " | " | " |
| 3 | 30.07 | 57.7 | 6 | - 38 1.2 | + 15 24.8 | .. | - 22 36.4 |
| 4 | 30.08 | 55.7 | 38 | - 1.7 | + 22.2 | .. | + 20.5 |
| 18 | 30.09 | 54.7 | 39 | - 1.7 | - 22.2 | .. | - 23.9 |
| 22 | 30.09 | 54.4 | | | | | |
| 26 | 30.10 | 54.0 | | | | | |
| 28 | 30.09 | 53.8 | | | | | |

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. | | |
|-------|---------|----------------------------------|-----------|--------------------------------|-------|-------|------|-------|-------|------|-------|------|------------|--------------|------------------|----------------|---------------------------|----------------------------|-------------|--------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock. appar nt. | Clock adopted. | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| 1876. | | | | | | | | | | | | | m. | s. | s. | s. | s. | h. m. | s. | s. |
| May 4 | 1 | Ursæ Minoris (R.) | P. | | | | | | | | | | | | | | | | | |
| | 2 | Ursæ Minoris. | P. | | | | 33.9 | 49.0 | 3.5 | 18.9 | | | 58 | 48.58 | + 1.83 | | + 1.99 | 16 58 52.40 | + 0.25 | |
| | 3 | B. A. C. 5841 | P. | 35.6 | 38.2 | 39.7 | 43.8 | 48.0 | 52.2 | 56.3 | 57.8 | 0.5 | 12 | 48.01 | - 0.70 | | + 1.98 | 17 12 49.29 | - 2.13 | |
| | 4 | B. A. C. 5886 ¹ | P. | 9 | 3 | 12.5 | 14.5 | | | | | | 19 | 24.73 | - 0.47 | | + 1.98 | 17 19 26.24 | - 2.18 | |
| | 5 | B. A. C. 5886 ² | P. | | | 19.9 | 22.5 | 25.0 | 27.6 | 30.1 | | | 19 | 25.00 | - 0.47 | | + 1.98 | 17 19 26.51 | - 2.18 | |
| | 6 | B. A. C. 5902 | P. | | | 7.2 | 11.0 | 14.1 | 18.6 | 22.5 | | | 21 | 14.79 | - 0.18 | | + 1.98 | 17 21 16.59 | - 2.54 | |
| | 7 | a Ophiuchi | P. | 58.9 | 1.6 | 3.1 | 9.4 | 11.5 | 13.5 | 19.8 | 21.4 | 24.0 | 29 | 11.47 | - 0.68 | + 2.01 | + 1.98 | 17 29 12.77 | 0.00 | |
| | 8 | O. Arg. S. 17123 | P. | 14.8 | 17.9 | 19.6 | 26.5 | 28.8 | 31.1 | 38.0 | 39.5 | 42.5 | 36 | 28.74 | - 1.03 | | + 1.98 | 17 36 29.69 | - 2.43 | |
| | 9 | Tran't Zones 36, 67 | P. | 8.3 | 11.1 | 12.9 | 19.6 | 22.0 | 24.3 | 31.1 | 32.9 | 35.8 | 37 | 22.00 | - 1.03 | | + 1.98 | 17 37 22.95 | - 2.43 | |
| | 10 | O. Arg. S. 17177 | P. | 31.7 | 34.6 | 36.4 | 43.3 | 45.5 | 47.9 | 54.7 | 56.5 | 59.3 | 38 | 45.54 | - 1.03 | | + 1.98 | 17 38 46.49 | - 2.42 | |
| | 11 | B. A. C. 6072 | P. | 34.7 | 37.5 | 39.2 | 46.2 | 48.4 | 50.9 | 57.9 | 59.6 | 2.5 | 50 | 48.54 | - 1.05 | | + 1.98 | 17 50 49.47 | - 2.42 | |
| | 12 | Hersch.'s Cat. 7234 ¹ | P. | 39.4 | 42.1 | 43.9 | | | | 1.5 | 3.3 | 6.1 | 54 | 52.74 | - 0.98 | | + 1.98 | 17 54 53.74 | - 2.30 | |
| | 13 | Hersch.'s Cat. 7234 ² | P. | | | 48.7 | 51.0 | 53.2 | 55.3 | 57.7 | | | 54 | 53.18 | - 0.98 | | + 1.98 | 17 54 54.18 | - 2.30 | |
| | 14 | XVIII. 4 | P. | | | 58.1 | 0.6 | 2.7 | 5.0 | 7.3 | | | 6 | 2.70 | - 1.06 | | + 1.97 | 18 6 3.61 | - 2.40 | |
| | 15 | XVIII. 7 | P. | 58.6 | 1.9 | 3.6 | 11.4 | 14.0 | 16.8 | 24.3 | 26.2 | 29.5 | 10 | 14.03 | - 1.16 | | + 1.97 | 18 10 14.84 | - 2.57 | |
| | 16 | δ Ursæ Minoris. | P. | | | | | | | 56.3 | 30.4 | | 12 | 21.45 | + 4.99 | | + 1.47 | 18 12 28.41 | + 0.18 | |
| | 17 | η Serpentis | P. | 42.2 | 44.7 | 46.3 | 52.1 | 54.7 | 56.5 | 2.6 | 4.1 | 7.7 | 14 | 54.44 | - 0.81 | + 1.94 | + 1.97 | 18 14 55.60 | + 0.09 | |
| | 18 | B. A. C. 6275 | P. | 49.0 | 43.1 | 45.0 | 52.3 | 54.7 | 57.2 | 4.4 | 6.2 | 9.4 | 21 | 54.70 | - 1.10 | | + 1.97 | 18 21 55.57 | - 2.41 | |
| | 19 | B. A. C. 6285 | P. | 43.7 | 46.9 | 48.6 | 55.0 | 58.3 | 0.7 | 8.1 | 9.8 | 12.9 | 22 | 58.31 | - 1.10 | | + 1.97 | 18 22 59.18 | - 2.42 | |
| | 20 | B. A. C. 6317 | P. | 6.0 | 9.0 | 10.8 | 18.0 | 20.6 | 23.0 | 30.3 | 32.2 | 35.3 | 27 | 20 57 | - 1.10 | | + 1.97 | 18 27 21.44 | - 2.40 | |
| | 21 | B. A. C. 6344 | P. | 9.6 | 12.5 | 14.4 | 21.7 | 24.3 | 26.6 | 34.2 | 35.9 | 38.9 | 31 | 21.23 | - 1.10 | | + 1.97 | 18 31 25.10 | - 2.39 | |
| | 22 | a Lyrae | P. | 28.9 | 32.2 | 34.1 | 42.0 | 44.6 | 47.2 | 55.0 | 57.2 | 0.3 | 32 | 44.59 | - 0.45 | + 1.97 | + 1.97 | 18 32 46.11 | + 0.02 | |
| | 23 | B. A. C. 6378 | P. | 50.2 | 53.4 | 55.5 | 3.5 | 6.1 | 8.8 | 16.9 | 19.0 | 22.3 | 39 | 6.19 | - 1.21 | | + 1.97 | 18 39 6.95 | - 2.57 | |
| | 24 | 51 Cephei, S. P. | P. | | | | 26.3 | 46.2 | | | | | 41 | 45.67 | - 7.60 | | + 1.97 | 6 41 46.04 | - 0.83 | |
| | 25 | B. A. C. 6477 | P. | 14.5 | 19.4 | 22.0 | 33.5 | 37.3 | 41.0 | 52.3 | 55.1 | 59.8 | 51 | 37.21 | - 0.19 | | + 1.97 | 18 51 38.99 | - 1.52 | |
| | 26 | B. A. C. 6495 | P. | 46 | 149.3 | 351.3 | 59.4 | 1.9 | 4.6 | 12.3 | 14.4 | 17.6 | 55 | 1.88 | - 0.46 | | + 1.97 | 18 55 3.39 | - 1.51 | |
| | 27 | c Aquilæ | P. | 30.3 | 32.0 | 34.6 | 40.8 | 43.0 | 45.1 | 51.4 | 53.0 | 55.6 | 5 | 42.98 | - 0.68 | + 1.97 | + 1.97 | 18 59 44.27 | + 0.08 | |
| | 28 | B. A. C. 6579 ¹ | P. | 33.3 | 37.3 | 39.6 | | | | 4.7 | 7.2 | 11.2 | 8 | 52.25 | - 0.33 | | + 1.96 | 19 8 53.88 | - 1.35 | |
| | 29 | B. A. C. 6579 ² | P. | | | 46.5 | 49.6 | 52.9 | 56.0 | 59.2 | | | 8 | 52.82 | - 0.33 | | + 1.96 | 19 8 54.45 | - 1.35 | |
| | 30 | B. A. C. 6593 | P. | | | | 33.7 | 36.3 | 39.0 | 41.7 | 49.0 | 52.1 | 11 | 36.33 | - 0.44 | | + 1.96 | 19 11 37.85 | - 1.37 | |
| | 31 | B. A. C. 6624 | P. | 33 | 336.7 | 38.6 | 46.6 | 49.4 | 52.0 | 0.0 | 2.0 | 5.3 | 14 | 49.32 | - 0.44 | | + 1.96 | 19 14 50.84 | - 1.35 | |
| | 32 | B. A. C. 6659 | P. | 49.2 | 53.3 | 55.7 | 5.3 | 8.4 | 11.6 | 21.1 | 23.5 | 27.5 | 20 | 8.40 | - 0.32 | | + 1.96 | 19 20 10.01 | - 1.10 | |
| | 33 | O. Arg. N. 19238 | P. | 2.1 | 4.4 | 10.8 | 14.0 | 17.1 | 20.3 | 23.5 | 29.8 | 32.3 | 21 | 17.14 | - 0.32 | | + 1.96 | 19 21 18.78 | - 1.22 | |
| | 34 | κ Aquilæ (R.) | P. | | | | | | | | | | | | | | | | | |
| | 35 | κ Aquilæ | P. | | | | | | | | | | | | | | | | | |
| | 36 | B. A. C. 6763 ¹ | P. | 11.4 | 15.4 | 17.8 | | | | 43.4 | 45.7 | 49.7 | 38 | 30.60 | - 0.32 | | + 1.96 | 19 38 32.24 | - 1.05 | |
| | 37 | B. A. C. 6763 ² | P. | | | 26.9 | 30.1 | 33.4 | 36.6 | 39.7 | | | 38 | 33.32 | - 0.32 | | + 1.96 | 19 38 34.06 | - 1.05 | |
| | 38 | B. A. C. 6876 | P. | 8.7 | 12.4 | 14.6 | 23.4 | 6 | 329.1 | 37.7 | 40.0 | 43.6 | 55 | 26.20 | - 0.39 | | + 1.96 | 19 55 27.77 | - 0.95 | |
| | 39 | B. A. C. 6934 | P. | 42.4 | 4.4 | 046.5 | 52.6 | 54.6 | 56.7 | 2.7 | 4.3 | 6.8 | 4 | 54.62 | - 0.80 | | + 1.96 | 20 4 55.78 | - 1.43 | |
| | 40 | a ² Capricorni. | P. | 55 | 2 | 0.8 | 2.5 | 8.7 | 10.8 | 13.0 | 19.2 | 20.8 | 23.4 | 11 | 10.82 | - 0.90 | + 2.04 | + 1.95 | 20 11 11.87 | - 0.05 |
| | 41 | κ Cephei | P. | | | 49.3 | 58.7 | 8.0 | 17.1 | 35.6 | 42.7 | 54.4 | 12 | 58.51 | + 0.78 | | + 1.95 | 20 13 1.24 | + 0.14 | |
| | 42 | B. A. C. 7022 | P. | 30.1 | 33.4 | 35.4 | 43.5 | 46.1 | 48.7 | 59.7 | 8.7 | 2.0 | 17 | 46.07 | - 0.46 | | + 1.95 | 20 17 47.56 | - 0.84 | |
| | 43 | ε Delphini | P. | 4.7 | 7.3 | 8.1 | 15.1 | 17.1 | 19.3 | 25.5 | 26.9 | 29.6 | 27 | 17.14 | - 0.72 | + 2.07 | + 1.95 | 20 27 18.37 | - 0.07 | |
| | 44 | B. A. C. 7149 | P. | 9.0 | 42.4 | 43.9 | 50 | 352.5 | 54.6 | 0.8 | 2.5 | 5.1 | 33 | 52.41 | - 0.68 | | + 1.95 | 20 33 53.68 | - 1.06 | |
| | 45 | a Cygni | P. | 54.0 | 57.7 | 59.7 | 8.4 | 11.3 | 14.2 | 22.8 | 24.9 | 28.5 | 37 | 11.28 | - 0.40 | + 2.00 | + 1.95 | 20 37 12.83 | - 0.03 | |
| | 46 | Polaris | E. | | | | | | | | | | | | | | | | | |
| 5 | 47 | Sun I, N. | E. | | | | | | | | | | | | | | | | | |
| | 48 | Sun II, S. | E. | | | | | | | | | | | | | | | | | |
| 10 | 49 | γ ¹ Leonis | E. | 55.9 | 58.8 | 0.5 | | | | 17.7 | 19.5 | 22.3 | 13 | 9.14 | - 0.39 | + 0.90 | + 0.89 | 10 13 9.64 | - 0.03 | |
| | 50 | γ ² Leonis | E. | | | 5.1 | 7.4 | 9.5 | 11.7 | 13.9 | | | 13 | 9.50 | - 0.39 | | + 0.89 | 10 13 10.00 | - 1.64 | |

1, 2, 6, 14, 25, 26, 32, 37, 41. Bisections at sets B and D.
11, 18, 21, 24, 33. Thread B used.
12, 13, 20. Thread A used.
33. Bisections at set C.
34. Bisections at threads I and III.
46. Bisections at threads B₁, C₁, C₃, and C₅.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellan'us Corrections. | | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|---------------------------|-------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | | | | | | |
| 1 | 136 36 | 10 12.6 | 18.0 | 28.7 | 6.0 | 33 | 100 | 105 | .. | .. | .. | 59.6 | 223 19 23.9 | .. | + | 54.9 | 7 46 2.4 | - 0.4 |
| 2 | 43 16 | 18.6 | 17.0 | 0.6 | 8.2 | 37 | .. | .. | .. | 560 | 550 | 59.6 | 316 40 35.9 | 51.8 | - | 54.9 | 7 46 2.2 | - 0.6 |
| 3 | 33 2 | 14.6 | 16.0 | 27.5 | 8.3 | 33 | .. | 030 | .. | 955 | .. | 59.6 | 27 53 23.3 | .. | + | 30.8 | 79 0 15.3 | -17.9 |
| 4 | 358 18 | 14.6 | 16.3 | 26.8 | 6.8 | 36 | .. | 440 | .. | 370 | .. | 59.6 | 1 38 15.2 | .. | + | 1.7 | 52 44 38.1 | -21.1 |
| 5 | 358 18 | 14.6 | 16.3 | 26.8 | 6.8 | 36 | .. | 645 | .. | 580 | .. | 59.6 | 1 38 18.4 | .. | + | 1.7 | 52 44 41.3 | -21.1 |
| 6 | 18 10 | 15.3 | 17.3 | 29.5 | 7.0 | 38 | .. | .. | .. | 745 | 715 | 59.6 | 341 46 52.0 | .. | - | 19.2 | 32 52 54.0 | -22.2 |
| 7 | 333 42 | 13.1 | 15.3 | 27.9 | 8.0 | 36 | 790 | 800 | .. | 740 | 6.5 | 59.6 | 26 14 20.3 | .. | + | 28.7 | 77 21 10.2 | - 0.2 |
| 8 | 293 40 | 17.3 | 19.0 | 1.9 | 9.7 | 33 | .. | 180 | .. | 130 | .. | 59.6 | 66 15 28.4 | .. | + | 2 11.7 | 117 24 1.3 | - 9.5 |
| 9 | 293 40 | 17.3 | 19.0 | 1.9 | 9.7 | 34 | .. | .. | .. | 295 | 260 | 59.6 | 66 15 46.2 | .. | + | 2 11.7 | 117 24 19.1 | - 9.5 |
| 10 | 293 40 | 17.3 | 19.0 | 1.9 | 9.7 | 30 | .. | .. | .. | 350 | 295 | 59.6 | 66 14 45.7 | .. | + | 2 11.6 | 117 23 18.5 | - 9.4 |
| 11 | 292 22 | 18.0 | 19.1 | 2.7 | 11.1 | 33 | .. | 125 | .. | 040 | .. | 59.6 | 67 36 0.4 | .. | + | 2 20.5 | 118 44 42.1 | - 8.4 |
| 12 | 298 0 | 16.7 | 17.0 | 1.9 | 11.0 | 36 | 430 | .. | .. | .. | 360 | 59.6 | 61 53 44.0 | .. | + | 1 48.7 | 113 1 53.9 | - 9.5 |
| 13 | 298 0 | 16.7 | 17.0 | 1.9 | 11.0 | 35 | .. | 900 | .. | 760 | .. | 59.6 | 61 53 35.5 | .. | + | 1 48.7 | 113 1 45.4 | - 9.5 |
| 14 | 291 30 | 17.3 | 18.0 | 0.6 | 9.3 | 32 | .. | .. | .. | 520 | 505 | 59.6 | 68 25 18.2 | .. | + | 2 26.3 | 119 34 5.7 | - 7.2 |
| 15 | 283 50 | 18.0 | 19.4 | 3.5 | 11.4 | 34 | 920 | 890 | .. | .. | .. | 59.6 | 76 5 55.2 | .. | + | 3 51.2 | 127 16 7.6 | - 5.0 |
| 16 | 47 38 | 15.5 | 15.9 | 29.5 | 6.8 | 37 | .. | .. | .. | 740 | 730 | 59.6 | 312 18 36.3 | .. | - | 1 4.0 | 3 23 53.5 | - 1.1 |
| 17 | 318 8 | 16.5 | 17.0 | 0.0 | 11.0 | 38 | .. | 320 | .. | 200 | .. | 59.6 | 41 48 45.8 | .. | + | 52.1 | 92 55 59.1 | + 1.3 |
| 18 | 288 2 | 19.0 | 20.3 | 3.8 | 12.8 | 42 | 230 | 170 | .. | .. | .. | 59.6 | 71 58 20.2 | .. | + | 2 57.2 | 123 7 38.6 | - 5.3 |
| 19 | 288 2 | 19.0 | 20.3 | 3.8 | 12.8 | 38 | .. | 700 | .. | 610 | .. | 59.6 | 71 54 54.5 | .. | + | 2 56.6 | 123 4 12.3 | - 5.2 |
| 20 | 288 2 | 19.0 | 20.3 | 3.8 | 12.8 | 29 | 170 | 150 | .. | .. | .. | 59.6 | 71 49 54.6 | .. | + | 2 55.8 | 122 59 11.6 | - 5.0 |
| 21 | 288 2 | 19.0 | 20.3 | 3.8 | 12.8 | 36 | 220 | 105 | .. | .. | .. | 59.6 | 71 56 47.8 | .. | + | 2 57.0 | 123 6 6.0 | - 4.7 |
| 22 | 359 42 | 16.3 | 18.0 | 0.4 | 9.0 | 34 | .. | 680 | .. | 615 | .. | 59.6 | 0 13 50.6 | .. | + | 0.2 | 51 20 12.0 | - 0.2 |
| 23 | 280 34 | 15.5 | 16.0 | 1.5 | 10.1 | 30 | .. | 740 | .. | 660 | .. | 59.6 | 79 20 49.5 | .. | + | 5 0.5 | 130 32 11.2 | + 2.1 |
| 24 | 53 48 | 17.5 | 17.9 | 0.7 | 7.6 | 30 | .. | 630 | 655 | 635 | .. | 59.6 | 306 9 21.3 | .. | - | 1 19.7 | 357 14 22.8 | - 1.1 |
| 25 | 18 22 | 15.1 | 15.9 | 29.0 | 7.4 | 37 | 640 | .. | .. | .. | 630 | 59.6 | 341 34 34.6 | .. | - | 19.4 | 3 40 36.4 | -24.0 |
| 26 | 0 4 | 13.0 | 14.1 | 26.4 | 6.6 | 32 | .. | .. | .. | 280 | 265 | 59.6 | 359 51 10.9 | .. | - | 0.1 | 50 57 32.0 | -22.0 |
| 27 | 334 44 | 15.0 | 15.1 | 28.2 | 8.6 | 37 | 815 | 800 | .. | 710 | 690 | 59.6 | 25 12 36.3 | .. | + | 27.5 | 76 19 25.0 | - 0.4 |
| 28 | 10 30 | 19.0 | 18.5 | 2.9 | 10.1 | 38 | 420 | .. | .. | .. | 280 | 59.6 | 349 16 49.6 | 51.0 | - | 11.0 | 40 22 59.8 | -23.3 |
| 29 | 10 30 | 19.0 | 18.5 | 2.9 | 10.1 | 37 | .. | 910 | .. | 830 | .. | 59.6 | 349 16 41.8 | .. | - | 11.0 | 40 22 52.0 | -23.3 |
| 30 | 1 10 | 14.5 | 16.0 | 0.0 | 7.4 | 32 | .. | .. | .. | .. | 970 | 59.6 | 358 45 24.8 | .. | - | 1.3 | 49 51 44.7 | -22.0 |
| 31 | 1 10 | 14.5 | 16.0 | 0.0 | 7.4 | 35 | 595 | 610 | .. | .. | .. | 59.6 | 358 46 3.2 | .. | - | 1.3 | 49 52 23.1 | -21.9 |
| 32 | 11 4 | 14.0 | 14.9 | 27.0 | 6.2 | 37 | 220 | .. | .. | .. | 150 | 59.6 | 348 52 26.3 | .. | - | 11.5 | 39 58 36.0 | -23.2 |
| 33 | 11 4 | 14.0 | 14.9 | 27.0 | 6.2 | 34 | 710 | .. | .. | .. | 720 | 59.6 | 348 54 20.8 | .. | - | 11.4 | 40 0 30.6 | -23.2 |
| 34 | 226 6 | 17.8 | 19.2 | 3.6 | 9.6 | 31 | 640 | 670 | .. | .. | .. | 59.6 | 133 49 5.6 | .. | - | 1 0.8 | 97 18 16.1 | + 3.6 |
| 35 | 313 46 | 19.0 | 20.2 | 3.0 | 12.7 | 38 | .. | .. | .. | 450 | 420 | 59.6 | 46 10 51.8 | .. | + | 1 0.8 | 97 18 13.8 | + 1.0 |
| 36 | 11 16 | 16.0 | 16.0 | 0.0 | 8.5 | 35 | .. | 005 | .. | 000 | .. | 59.6 | 348 39 55.3 | .. | - | 11.7 | 39 46 4.8 | -23.0 |
| 37 | 11 16 | 16.0 | 16.0 | 0.0 | 8.5 | 36 | 820 | .. | .. | .. | 740 | 59.6 | 348 40 22.2 | .. | - | 11.7 | 39 46 31.7 | -23.0 |
| 38 | 6 28 | 17.9 | 18.0 | 1.0 | 9.0 | 35 | .. | 345 | .. | 315 | .. | 59.6 | 353 28 1.7 | .. | - | 6.7 | 44 34 16.2 | -22.0 |
| 39 | 319 52 | 14.3 | 15.4 | 29.2 | 9.0 | 36 | .. | 380 | .. | 285 | .. | 59.6 | 40 4 14.7 | 50.6 | + | 49.2 | 91 11 25.1 | - 9.6 |
| 40 | 308 8 | 17.3 | 19.0 | 1.5 | 11.2 | 35 | .. | 820 | .. | 780 | .. | 59.6 | 51 48 9.2 | .. | + | 1 14.2 | 102 55 44.6 | + 0.4 |
| 41 | 38 22 | 13.8 | 14.5 | 25.5 | 5.5 | 37 | .. | .. | .. | 775 | 780 | 59.6 | 321 34 35.2 | .. | - | 46.3 | 12 40 10.1 | - 1.5 |
| 42 | 0 54 | 14.9 | 16.0 | 29.5 | 7.5 | 36 | .. | 770 | .. | 695 | .. | 59.6 | 359 2 21.1 | .. | - | 1.0 | 50 8 41.3 | -20.3 |
| 43 | 331 56 | 13.5 | 14.8 | 26.9 | 6.5 | 36 | .. | 820 | .. | 730 | .. | 59.6 | 28 0 20.0 | .. | + | 31.1 | 79 7 12.3 | - 0.6 |
| 44 | 336 32 | 14.1 | 16.2 | 29.0 | 8.0 | 38 | .. | 910 | .. | 845 | .. | 59.6 | 23 24 53.6 | .. | + | 25.3 | 74 31 40.1 | -13.6 |
| 45 | 5 52 | 13.4 | 15.1 | 28.0 | 5.0 | 34 | 670 | 665 | .. | 600 | 575 | 59.6 | 354 3 47.5 | 50.8 | - | 6.1 | 45 10 2.6 | - 1.0 |
| 46 | 49 40 | 11.6 | 14.0 | 27.8 | 5.3 | 34 | 930 | 975 | 950 | 945 | .. | 58.5 | 310 15 51.0 | 66.5 | - | 1 6.9 | 1 21 5.8 | - 2.3 |
| 47 | 337 48 | 9.6 | 15.5 | 29.4 | 6.6 | 34 | 600 | 565 | .. | .. | .. | 58.5 | 22 7 44.1 | 71.0 | + | 22.8 | 73 14 28.1 | .. |
| 48 | 337 16 | 12.3 | 18.5 | 2.5 | 9.5 | 33 | .. | .. | .. | 270 | 240 | 58.5 | 22 39 29.0 | .. | + | 23.4 | 73 46 13.6 | .. |
| 49 | 341 30 | 17.0 | 20.5 | 1.7 | 11.0 | 32 | 370 | .. | .. | .. | 270 | 58.8 | 18 25 15.8 | .. | + | 19.1 | 69 31 56.1 | + 1.8 |
| 50 | 341 30 | 17.0 | 20.5 | 1.7 | 11.0 | 32 | .. | 432 | .. | 368 | .. | 58.8 | 18 25 15.9 | .. | + | 19.1 | 69 31 57.2 | + 0.4 |

| No. | Barom. | At. Ther | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|----------|-----|-----------|------------|-------------------------|-----------|
| 2 | 30.10 | 53.8 | 47 | - 3.3 | + 15 52.7 | .. | + 15 49.4 |
| 28 | 30.10 | 52.6 | 48 | - 3.4 | - 15 52.7 | .. | - 15 56.1 |
| 39 | 30.13 | 52.7 | | | | | |
| 45 | 30.14 | 52.5 | | | | | |
| 46 | 30.18 | 65.5 | | | | | |
| 47 | 30.06 | 67.5 | | | | | |

For summary of the elements of reduction see page 3.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|--------|---------|-----------------------|-----------|--------------------------------|------|-------|------|--------|------|------|-------|------|------------|--------------|---------------|---------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't | Clock adopted | | |
| | | | | m. | s. | | | | | | | | | s. | s. | s. | h. m. s. | s. |
| 1876. | | | | | | | | | | | | | | | | | | |
| May 10 | 1 | 9 Draconis | E. | 44.0 | 55.0 | 1.6 | 27.7 | 36.3 | 45.0 | 10.8 | 17.5 | 28.0 | 21 36.21 | - 1.18 | . | + 0.89 | 10 24 35.92 | + 0.17 |
| | 2 | " Leonis | E. | . | 13.7 | 15.8 | 17.8 | 19.6 | 22.0 | 26.1 | 27.7 | 30.3 | 26 17.84 | - 0.36 | + 0.92 | + 0.89 | 10 26 18.37 | - 0.10 |
| | 3 | " Leonis | E. | 32.9 | 35.6 | 37.0 | 43.4 | 45.5 | 47.6 | 53.7 | 55.4 | 57.9 | 42 45.44 | - 0.37 | + 0.87 | + 0.89 | 10 42 45.96 | + 0.02 |
| | 4 | " Urse Majoris (Ref.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 5 | " Urse Majoris . . . | E. | . | . | . | . | 11.4 | 15.6 | 24.7 | 27.9 | 33.5 | 55 6.97 | - 0.69 | . | + 0.89 | 10 56 7.17 | + 0.11 |
| | 6 | 8 Leonis | D. | 19.6 | 21.8 | 23.6 | 30.9 | 32.2 | 34.3 | 10.9 | 42.6 | 45.4 | 7 32.29 | - 0.46 | + 0.85 | + 0.89 | 11 7 32.69 | - 0.02 |
| | 7 | Weisse (2) 249 . . . | E. | 51.0 | 54.0 | 55.9 | 3.2 | 5.6 | 8.0 | 15.0 | 16.9 | 20.2 | 14 5.53 | - 0.43 | . | + 0.89 | 11 14 5.99 | - 2.20 |
| | 8 | Weisse (2) 273 . . . | E. | 59.5 | 2.7 | 4.6 | 11.7 | 14.1 | 16.6 | 23.8 | 25.6 | 28.6 | 16 14.13 | - 0.43 | . | + 0.89 | 11 16 14.59 | - 2.22 |
| | 9 | Weisse (2) 316 . . . | E. | 4.3 | 7.6 | 9.5 | 16.7 | 19.1 | 21.6 | 28.8 | 30.6 | 33.6 | 18 19.09 | - 0.43 | . | + 0.89 | 11 18 19.55 | - 2.23 |
| | 10 | Weisse (2) 609 . . . | E. | 19.6 | 22.6 | 24.5 | 31.7 | 34.2 | 36.8 | 43.8 | 45.7 | 48.8 | 32 34.19 | - 0.43 | . | + 0.89 | 11 32 34.65 | - 2.30 |
| | 11 | Weisse (2) 661 . . . | E. | 54.1 | 57.2 | 59.0 | 6.4 | 8.8 | 11.4 | 18.5 | 20.3 | 23.4 | 35 8.79 | - 0.43 | . | + 0.89 | 11 35 9.25 | - 2.31 |
| | 12 | Weisse (2) 703 . . . | E. | 48.8 | 51.8 | 53.5 | 1.0 | 3.4 | 5.8 | 13.0 | 14.7 | 17 | 37 3.32 | - 0.43 | . | + 0.89 | 11 37 3.78 | - 2.32 |
| | 13 | Weisse (2) 707 . . . | E. | . | 16.3 | 18.7 | 21.2 | 23.7 | 26.1 | . | . | . | 37 21.20 | - 0.43 | . | + 0.89 | 11 37 21.66 | - 2.32 |
| | 14 | Lalande 22304 . . . | E. | 4.6 | 7.6 | 9.5 | 16.6 | 19.1 | 21.6 | 28.8 | 30.6 | 33.6 | 42 19.11 | - 0.43 | . | + 0.89 | 11 42 19.57 | - 2.33 |
| | 15 | Durch. 32°, 2109 . . | E. | 13.5 | 16.6 | 18.5 | 25.0 | 28.0 | 30.6 | 37.6 | 39.4 | 42 5 | 47 28.03 | - 0.43 | . | + 0.89 | 11 47 28.49 | - 2.35 |
| | 16 | Lalande 23472 . . . | E. | 24.6 | 27.7 | 29.4 | 36.6 | 39.0 | 41.5 | 48.7 | 50.4 | 53 6 | 49 39.06 | - 0.43 | . | + 0.89 | 11 49 39.52 | - 2.36 |
| | 17 | Lalande 22543 . . . | E. | 56.7 | 59.6 | 1.5 | 8.7 | 11 | 13.6 | 20.7 | 22.5 | 25.6 | 52 11.11 | - 0.43 | . | + 0.89 | 11 52 11.57 | - 2.38 |
| | 18 | Lalande 22622 . . . | E. | 34.5 | 37.5 | 39.3 | 46.0 | 49 | 51.4 | 58.6 | 0.5 | 3.4 | 55 48.98 | - 0.43 | . | + 0.89 | 11 55 49.44 | - 2.39 |
| | 19 | Lalande 22703 . . . | E. | 50.4 | 53.4 | 55.2 | 2.4 | 4.9 | 7.3 | 14.4 | 16.2 | 19.3 | 59 4.83 | - 0.43 | . | + 0.89 | 11 59 5.29 | - 2.40 |
| | 20 | Polaris, S. P. . . . | D. | . | . | . | 0.1 | 32.5 | 0.8 | 3.9 | 1.8 | . | 12 8.32 | + 9 55 | . | + 0.86 | 1 12 18.73 | - 0.02 |
| | 21 | " Virginis | D. | 29.0 | 1.4 | 33.3 | 39.3 | 41.3 | 43.4 | 49.8 | 51.2 | 53.6 | 18 41.37 | - 0.33 | + 0.84 | + 0.86 | 13 18 41.90 | 0.00 |
| | 22 | " Virginis | D. | 12.0 | 14.5 | 16 | 22.3 | 24.3 | 26.3 | 32.4 | 34.0 | 36.4 | 28 24.27 | - 0.34 | + 0.84 | + 0.86 | 13 28 24.79 | + 0.02 |
| | 23 | " Bootis | D. | . | 38.4 | 40.3 | 46.5 | 48.7 | 51.0 | 57.4 | 59.2 | 1.8 | 48 48.79 | - 0.39 | + 0.86 | + 0.86 | 13 48 49.26 | - 0.08 |
| 12 | 24 | Polaris | E. | . | . | 26.5 | 55.0 | 23.0 | 49.0 | 15.0 | . | . | 12 21.08 | + 0.83 | . | + 0.22 | 1 12 22.13 | + 1.88 |
| 13 | 25 | Sun I, N. | P. | 58.0 | 0.9 | 2.5 | 9.0 | 11.1 | 13.5 | 19.8 | 21.5 | 24.0 | 22 11.11 | - 0.48 | . | + 0.20 | 3 22 10.86 | . |
| | 26 | Sun II, S. | P. | 12.2 | 14.9 | 16.6 | 23.0 | 25.2 | 27.3 | 33.6 | 35.6 | 38.3 | 24 25.22 | - 0.48 | . | + 0.20 | 3 24 24.94 | . |
| | 27 | Mercury I, C. . . . | P. | 3.2 | 6.2 | 7.8 | 14.6 | 16.8 | 19.0 | 25.8 | 27.5 | 30.3 | 48 16.80 | - 0.46 | . | + 0.18 | 4 48 16.52 | + 0.17 |
| | 28 | " Tauri | P. | . | 22.8 | 25.1 | 27.5 | 29.9 | 32.1 | 38.8 | 38.5 | 41.4 | 18 27.47 | - 0.43 | + 0.15 | + 0.18 | 5 18 27.20 | + 0.01 |
| | 29 | " Orionis | P. | 15.5 | 18.0 | 19.6 | 25.9 | 28.0 | 30.0 | 36.1 | 37.6 | 40.2 | 48 27.88 | - 0.51 | + 0.20 | + 0.17 | 5 48 27.54 | + 0.06 |
| | 30 | " Geminorum | P. | 20.7 | 23.3 | 25.0 | 31.4 | 33.5 | 35.7 | 42.7 | 43.5 | 46.2 | 30 33.45 | - 0.48 | + 0.17 | + 0.16 | 6 30 33.16 | - 0.04 |
| | 31 | Venus I, N. | P. | 40.7 | 43.6 | 45.3 | 52.2 | 54.4 | 56.8 | 3.6 | 5.2 | 8.2 | 37 54.44 | - 0.46 | . | + 0.16 | 6 37 54.14 | + 0.99 |
| | 32 | Venus, S. | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 33 | " Virginis (Ref.) . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 34 | " Virginis | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 35 | Polaris, S. P. . . . | E. | . | . | 15.5 | 49.6 | 21.5 | 57.0 | 32.5 | . | . | 12 23.72 | - 1.44 | . | + 0.09 | 1 12 22.37 | + 1.85 |
| | 36 | " Virginis | E. | 30.0 | 32.6 | 34.0 | 40.4 | 42.4 | 44.5 | 50.7 | 52.3 | 54.8 | 18 42.41 | - 0.58 | + 0.05 | + 0.09 | 13 18 41.92 | - 0.02 |
| | 37 | 38 Cassiopeiæ, S. P. | E. | . | 11.3 | 5.2 | 59.7 | 53.6 | 47.8 | . | . | . | 21 59 56 | - 0.49 | . | + 0.09 | 1 21 59.16 | + 0.40 |
| | 38 | " Virginis | E. | 13.0 | 15.5 | 17.0 | 23.2 | 25.3 | 27.3 | 33.4 | 34.9 | 37.5 | 28 25.23 | - 0.56 | + 0.10 | + 0.09 | 13 28 25.76 | - 0.01 |
| | 39 | Pallas | E. | 59 3 | 2.2 | 3.9 | 10.6 | 12.8 | 15.0 | 21.7 | 23.4 | 26.4 | 42 12.81 | - 0.59 | . | + 0.09 | 13 42 12.40 | . |
| | 40 | Diana | E. | 7.6 | 10.6 | 12.5 | 19.2 | 21.4 | 23.6 | 30.3 | 32.3 | 35.0 | 44 21.42 | - 0.62 | . | + 0.09 | 13 44 20.88 | . |
| | 41 | " Bootis | E. | 36.7 | 39 | 340.9 | 47.6 | 49.7 | 51.9 | 58.4 | 59.9 | 2.7 | 48 49.68 | - 0.51 | + 0.12 | + 0.09 | 13 48 49.26 | - 0.08 |
| | 42 | Leucothea | E. | 32.5 | 35.4 | 36.9 | 43.7 | 45.8 | 48.1 | 54.9 | 56.6 | 59.2 | 0 45.90 | - 0.63 | . | + 0.08 | 14 0 45.35 | . |
| | 43 | Ceres | E. | 16.6 | 18.5 | 20.0 | 26.2 | 28.4 | 30.4 | 36.5 | 37.9 | 40.6 | 15 28.28 | - 0.56 | . | + 0.08 | 14 15 27.80 | . |
| | 44 | " Bootis (Ref.) . . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 45 | " Bootis | E. | . | . | . | . | . | . | 15.6 | 18.0 | 22.2 | 21 2.17 | - 0.45 | . | + 0.08 | 14 21 1.80 | - 0.10 |
| | 46 | Asia | E. | 18.6 | 21.4 | 23.0 | 29 | 0 31.1 | 33.2 | 39.5 | 41.0 | 43.8 | 33 31.18 | - 0.58 | . | + 0.08 | 14 33 30.68 | . |
| | 47 | B. A. C. 4954 . . . | E. | . | . | . | . | . | . | 30 | 232.2 | 35.6 | 57 19.46 | - 0.71 | . | + 0.08 | 14 57 18.83 | - 2.77 |
| | 48 | B. A. C. 5017 . . . | E. | 42.4 | 15.7 | 48.0 | 55.9 | 58.5 | 1.3 | 9.4 | 11.4 | 14.8 | 7 58.60 | - 0.72 | . | + 0.07 | 15 7 57.95 | - 2.82 |
| | 49 | B. A. C. 5035 . . . | E. | 36.5 | 10.0 | 41.8 | 49.9 | 52.7 | 55.5 | 3.2 | 5.4 | 8.7 | 10 52.63 | - 0.71 | . | + 0.07 | 15 10 51.99 | - 2.82 |
| | 50 | B. A. C. 5046 . . . | E. | 5.5 | 7.4 | 12.5 | 15.4 | 18.0 | 20.6 | 23.4 | 28.5 | 30.8 | 13 18.01 | - 0.71 | . | + 0.07 | 15 13 17.37 | - 2.82 |

7, 11, 14, 15, 16, 19, 49. Thread B used.

8, 17, 39, 40, 42, 46, 50. Thread A used.

37. Bisections at set C.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | | |
| | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | |
| 1 | 37 22 | 10 17.7 | 18.7 | 2.8 | 8.6 | 31 | 700 | 580 | .. | .. | .. | 58.8 | 322 33 5.9 | .. | — | 44.0 | 13 38 43.1 | — 0.6 |
| 2 | 331 0 | 12.5 | 14.3 | 27.7 | 5.5 | 37 | .. | .. | .. | 650 | 640 | 58.8 | 28 56 32.9 | 56.0 | + | 31.8 | 80 3 25.9 | + 0.2 |
| 3 | 332 16 | 22.7 | 24.2 | 6.9 | 14.4 | 39 | 540 | 520 | .. | 430 | 400 | 58.8 | 27 41 9.6 | .. | + | 30.2 | 78 48 1.0 | — 0.1 |
| 4 | 156 24 | 19.8 | 24.5 | 5.5 | 11.5 | 32 | 570 | 520 | .. | .. | .. | 58.8 | 203 31 19.9 | .. | + | 25.0 | 27 34 36.3 | — 2.9 |
| 5 | 23 28 | 25.7 | 28.6 | 12.5 | 17.5 | 37 | .. | .. | .. | 310 | 270 | 58.8 | 336 28 42.0 | .. | — | 25.0 | 27 34 38.2 | — 1.0 |
| 6 | 342 14 | 15.2 | 18.3 | 0.2 | 8.6 | 32 | .. | .. | .. | 322 | .. | 58.8 | 17 41 14.4 | .. | + | 18.4 | 68 47 54.0 | + 1.6 |
| 7 | 353 30 | 14.7 | 16.0 | 29.5 | 5.7 | 36 | .. | .. | .. | 220 | 145 | 58.8 | 6 28 41.7 | .. | + | 6.5 | 57 35 12.4 | 0.0 |
| 8 | 353 30 | 14.7 | 16.0 | 29.5 | 5.7 | 33 | .. | 910 | .. | 880 | .. | 58.8 | 6 23 2.8 | .. | + | 6.4 | 57 29 30.4 | — 0.1 |
| 9 | 353 30 | 14.7 | 16.0 | 29.5 | 5.7 | 34 | .. | 440 | .. | 345 | .. | 58.8 | 6 23 10.4 | .. | + | 6.5 | 57 29 38.1 | — 0.3 |
| 10 | 353 30 | 14.7 | 16.0 | 29.5 | 5.7 | 38 | 450 | 400 | .. | .. | .. | 58.8 | 6 26 45.0 | .. | + | 6.5 | 57 33 12.7 | — 1.2 |
| 11 | 353 30 | 14.7 | 16.0 | 29.5 | 5.7 | 31 | .. | 870 | .. | 780 | .. | 58.8 | 6 27 37.0 | .. | + | 6.5 | 57 34 4.7 | — 1.4 |
| 12 | 353 30 | 14.7 | 16.0 | 29.5 | 5.7 | 37 | .. | 450 | .. | 350 | .. | 58.8 | 6 26 30.0 | .. | + | 6.5 | 57 32 57.7 | — 1.5 |
| 13 | 353 30 | 14.7 | 16.0 | 29.5 | 5.7 | 38 | .. | 510 | .. | 470 | .. | 58.8 | 6 26 46.6 | .. | + | 6.5 | 57 33 14.3 | — 1.5 |
| 14 | 353 0 | 16.5 | 19.0 | 0.5 | 10.8 | 40 | 720 | 700 | .. | .. | .. | 58.8 | 6 59 55.0 | .. | + | 7.1 | 58 6 23.3 | — 2.0 |
| 15 | 353 0 | 16.5 | 19.0 | 0.5 | 10.8 | 35 | 595 | 545 | .. | .. | .. | 58.8 | 6 58 36.3 | .. | + | 7.1 | 58 5 4.6 | — 2.4 |
| 16 | 353 0 | 16.5 | 19.0 | 0.5 | 10.8 | 40 | 095 | 085 | .. | .. | .. | 58.8 | 6 59 45.7 | .. | + | 7.1 | 58 6 14.0 | — 2.5 |
| 17 | 353 0 | 16.5 | 19.0 | 0.5 | 10.8 | 29 | .. | 330 | .. | 200 | .. | 58.8 | 6 51 54.6 | .. | + | 6.9 | 57 58 22.7 | — 2.6 |
| 18 | 353 0 | 16.5 | 19.0 | 0.5 | 10.8 | 39 | 890 | 870 | .. | .. | .. | 58.8 | 6 57 10.0 | .. | + | 7.1 | 58 3 38.3 | — 2.9 |
| 19 | 353 0 | 16.5 | 19.0 | 0.5 | 10.8 | 39 | .. | 170 | .. | 140 | .. | 58.8 | 6 59 31.9 | .. | + | 7.1 | 58 6 0.2 | — 3.1 |
| 20 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 21 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 22 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 23 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 52.0 | .. | .. | .. | .. |
| 24 | 49 40 | 11.7 | 14.8 | 0.2 | 5.2 | 34 | .. | 870 | 815 | .. | .. | 58.4 | 310 15 49.3 | .. | — 1 | 6.9 | 1 21 3.6 | — 5.9 |
| 25 | 339 54 | 17.5 | 17.8 | 0.8 | 9.0 | 35 | 150 | 165 | .. | .. | .. | 58.4 | 20 1 56.5 | 65.0 | + | 20.7 | 71 8 38.4 | .. |
| 26 | 339 22 | 15.4 | 19.7 | 0.8 | 10.0 | 33 | .. | .. | .. | 780 | 735 | 58.4 | 20 33 37.4 | .. | + | 21.3 | 71 40 19.9 | .. |
| 27 | 345 52 | 10.5 | 19.5 | 29.8 | 9.6 | 33 | 325 | 340 | .. | 250 | 180 | 58.4 | 14 3 28.9 | 65.3 | + | 14.2 | 65 10 4.3 | .. |
| 28 | 349 32 | 17.5 | 10.8 | 1.9 | 10.4 | 32 | .. | 435 | .. | 325 | .. | 58.4 | 10 23 16.1 | .. | + | 10.4 | 61 29 47.7 | — 0.4 |
| 29 | 328 26 | 17.6 | 20.4 | 1.5 | 11.5 | 35 | 510 | 495 | .. | 390 | 360 | 58.4 | 31 30 3.1 | 64.9 | + | 34.8 | 82 36 59.1 | + 0.9 |
| 30 | 337 34 | 17.5 | 20.7 | 2.5 | 10.5 | 38 | .. | 966 | .. | 890 | .. | 58.4 | 22 22 56.7 | .. | + | 23.4 | 73 29 41.3 | + 0.6 |
| 31 | 347 31 | 15.7 | 18.5 | 1.2 | 9.2 | 35 | 625 | .. | .. | .. | 540 | 58.4 | 12 22 4.1 | .. | + | 12.5 | 63 28 37.8 | .. |
| 32 | 347 34 | 15.7 | 18.5 | 1.2 | 9.2 | 37 | .. | 385 | .. | 290 | .. | 58.4 | 12 22 30.8 | 63.8 | + | 12.5 | 63 29 4.5 | .. |
| 33 | 223 42 | 22.8 | 23.1 | 9.0 | 14.7 | 36 | 685 | 640 | .. | .. | .. | 58.5 | 136 14 25.8 | .. | — | 55.9 | 94 52 51.3 | + 1.3 |
| 34 | 316 10 | 23.3 | 24.5 | 7.0 | 17.7 | 33 | .. | .. | .. | 080 | 010 | 58.5 | 43 45 32.7 | .. | + | 55.9 | 94 52 49.8 | — 0.2 |
| 35 | 52 20 | 16.0 | 16.8 | 1.5 | 7.8 | 26 | 530 | .. | 565 | .. | 510 | 58.5 | 307 33 48.6 | 52.0 | — 1 | 15.9 | 358 38 53.9 | + 3.5 |
| 36 | 310 32 | 18.0 | 19.0 | 2.0 | 11.8 | 33 | .. | 670 | .. | 630 | .. | 58.5 | 49 23 35.7 | .. | + | 1 7.7 | 100 31 4.6 | + 0.2 |
| 37 | 71 22 | 12.9 | 12.8 | 24.0 | 2.3 | 35 | .. | 735 | .. | 680 | .. | 58.5 | 288 34 0.0 | .. | — 2 | 52.4 | 339 37 28.8 | — 0.3 |
| 38 | 321 6 | 16.3 | 18.0 | 2.3 | 10.5 | 38 | .. | 355 | .. | 315 | .. | 58.5 | 38 50 46.6 | .. | + | 47.1 | 89 57 54.9 | + 0.6 |
| 39 | 345 16 | 15.5 | 17.7 | 0.8 | 8.5 | 39 | .. | 010 | .. | 040 | .. | 58.5 | 14 38 22.7 | .. | + | 15.3 | 65 44 59.2 | — 1.1 |
| 40 | 296 40 | 13.6 | 17.0 | 29.7 | 8.5 | 36 | .. | 200 | .. | 010 | .. | 58.5 | 63 13 36.7 | .. | + | 1 55.4 | 114 21 53.3 | — 4.8 |
| 41 | 340 4 | 18.8 | 19.8 | 4.0 | 11.3 | 36 | .. | 312 | .. | 240 | .. | 58.5 | 19 52 16.9 | .. | + | 21.1 | 70 58 59.2 | + 0.4 |
| 42 | 297 31 | 18.8 | 20.5 | 4.1 | 13.2 | 35 | .. | 760 | .. | 740 | .. | 58.5 | 62 19 35.8 | .. | + | 1 51.2 | 113 27 48.2 | — 5.7 |
| 43 | 318 56 | 21.5 | 23.0 | 7.3 | 15.0 | 32 | .. | 750 | .. | 680 | .. | 58.5 | 40 59 25.4 | .. | + | 50.9 | 92 6 37.5 | — 3.0 |
| 44 | 166 24 | 20.1 | 23.5 | 5.9 | 12.0 | 33 | 035 | 030 | .. | .. | .. | 58.5 | 193 31 27.5 | .. | + | 14.1 | 37 34 39.6 | — 0.2 |
| 45 | 13 28 | 18.3 | 19.0 | 3.5 | 10.5 | 37 | .. | .. | .. | 285 | 235 | 58.5 | 346 28 32.7 | .. | — | 14.1 | 37 34 39.8 | 0.0 |
| 46 | 310 20 | 15.0 | 16.5 | 2.0 | 9.6 | 35 | .. | 430 | .. | 280 | .. | 58.5 | 49 33 26.4 | .. | + | 1 8.7 | 100 40 56.3 | — 5.3 |
| 47 | 280 32 | 24.5 | 24.5 | 10.2 | 17.5 | 34 | .. | .. | .. | 060 | 970 | 58.5 | 79 23 48.2 | .. | + | 5 3.6 | 130 35 13.0 | — 17.8 |
| 48 | 280 6 | 24.0 | 24.9 | 10.7 | 16.8 | 36 | .. | 415 | .. | 280 | .. | 58.5 | 79 50 23.2 | .. | + | 5 16.3 | 131 2 0.7 | — 17.3 |
| 49 | 280 52 | 19.8 | 20.6 | 6.2 | 14.5 | 44 | .. | 375 | .. | 265 | .. | 58.5 | 79 8 53.8 | .. | + | 4 57.0 | 130 20 12.0 | — 17.1 |
| 50 | 280 52 | 19.8 | 20.6 | 6.2 | 14.5 | 32 | .. | .. | .. | 630 | 400 | 58.5 | 79 0 48.0 | .. | + | 4 53.6 | 130 12 2.8 | — 17.0 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " " | " " | " " | " " |
| 2 | 29.94 | 58.5 | 25 | - 3.0 | + 15 50.7 | .. | + 15 47.7 |
| 23 | 29.98 | 55.0 | 26 | - 3.1 | - 15 50.7 | .. | - 15 53.8 |
| 25 | 30.11 | 64.7 | 27 | - 2.1 | .. | 0.3 | - 2.4 |
| 27 | 30.11 | 66.4 | 31 | - 2.9 | + 13.4 | .. | + 10.5 |
| 29 | 30.12 | 65.2 | 32 | - 2.9 | - 13.4 | + 0.3 | - 16.2 |
| 32 | 30.12 | 63.7 | | | | | |
| 35 | 30.12 | 54.5 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|-----------------|---------|-----------------------|-----------|--------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|--------------|----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar'nt | Clock adopted. | | |
| | | | | m. | s. | s. | s. | s. | h. m. | s. | s. | | | | | | | |
| 1876. May 13 | 1 | Lacaille 6328 . . . | E. | | | | | | | | | | | | | | | |
| | 2 | Antiope | E. | | | | | | | | | | | | | | | |
| | 3 | Themis | E. | 35.6 | 38.4 | 39.8 | 46.0 | 48.3 | 50.5 | 57.0 | 59.0 | 1.5 | 23 48.46 | — 0.61 | . . . | + 0.07 | 15 23 47.02 | . . . |
| | 4 | Coronæ Borealis . . | E. | 15.6 | 18.3 | 20.0 | 27.0 | 29.4 | 31.7 | 38.6 | 40.2 | 43.0 | 29 29.31 | — 0.50 | + 0.00 | + 0.07 | 15 29 28.88 | — 0.02 |
| | 5 | Melpomene | E. | 55.6 | 1.3 | 2.9 | 8.9 | 10.9 | 12.9 | 18.0 | 20.6 | 23.1 | 36 10.90 | — 0.56 | . . . | + 0.07 | 15 36 10.41 | . . . |
| | 6 | α Serpentis | E. | . . . | 8.4 | 10.5 | 12.6 | 14.7 | 16.7 | 20.0 | 22.4 | 25.0 | 38 12.60 | — 0.54 | + 0.06 | + 0.07 | 15 38 12.13 | + 0.03 |
| | 7 | ε Serpentis | E. | 28.7 | 31.4 | 32.9 | 39.0 | 41.0 | 43.2 | 49.4 | 50.8 | 53.4 | 44 41.09 | — 0.54 | + 0.06 | + 0.07 | 15 44 40.62 | + 0.01 |
| 14 | 8 | Polaris | P. | . . . | 26.0 | 21.0 | 49.0 | 14.0 | 42.0 | 8.0 | 1.0 | . . . | 12 14.09 | + 6.75 | . . . | + 0.07 | 1 12 20.91 | — 0.40 |
| | 9 | η Piscium | P. | 38.9 | 41.5 | 43.2 | 47.3 | . . . | 55.9 | 0.0 | 1.6 | 4.1 | 24 51.55 | — 0.58 | — 0.07 | — 0.07 | 1 24 50.93 | + 0.07 |
| | 10 | α Arietis | P. | 58.2 | 1.0 | 2.6 | 9.4 | 11.6 | 13.7 | 20.4 | 22.0 | 24.9 | 0 11.53 | — 0.53 | — 0.07 | — 0.07 | 2 0 10 93 | + 0.01 |
| 15 | 11 | Sun I, N. | P. | 52.0 | 51.8 | 56.4 | 2.9 | 5.0 | 7.2 | 13.0 | 15.3 | 18.0 | 30 5.02 | — 0.58 | . . . | — 0.07 | 3 30 4.37 | . . . |
| | 12 | Sun II, S. | P. | 6.4 | 8.0 | 10.7 | 17.1 | 19.3 | 21.5 | 28.0 | 29.6 | 32.3 | 32 19.31 | — 0.58 | . . . | — 0.07 | 3 32 18.66 | . . . |
| | 13 | ι Aurigæ | P. | 43.9 | 45.8 | 50.6 | 53.1 | 55.6 | 58.0 | 0.5 | 5.3 | 7.0 | 48 55.53 | — 0.53 | — 0.03 | — 0.07 | 4 48 54.93 | — 0.08 |
| | 14 | Mercury I, N. . . . | P. | 20.0 | 23.7 | 25.5 | 32.4 | 34.6 | 36.8 | 43.7 | 45.4 | 48.0 | 0 34.56 | — 0.58 | . . . | — 0.08 | 5 0 33.90 | + 0.27 |
| | 15 | Mercury S. | P. | | | | | | | | | | | . . . | . . . | . . . | . . . | . . . |
| | 16 | β Orionis | P. | 23.1 | 25.7 | 27.3 | 33.4 | 35.5 | 37.6 | 43.7 | 45.0 | 47.8 | 8 35.46 | — 0.76 | — 0.12 | — 0.08 | 5 8 34.62 | + 0.04 |
| | 17 | β Tauri | P. | 13.9 | 16.8 | 18.6 | 25.5 | 27.9 | 30.2 | 37.0 | 38.8 | 41.7 | 18 27.82 | — 0.56 | — 0.08 | — 0.08 | 5 18 27.18 | — 0.02 |
| | 18 | ε Orionis | P. | | | | | | | 4.2 | 5.8 | 8.4 | 29 56.11 | — 0.72 | — 0.16 | — 0.00 | 5 29 55.30 | + 0.06 |
| | 19 | μ Geminorum | P. | 15.0 | 17.9 | 19.6 | | | 28.4 | 30.7 | | | 15 28.40 | — 0.59 | — 0.08 | — 0.10 | 6 15 27.71 | — 0.06 |
| | 20 | γ Geminorum | P. | 21.0 | 23.7 | 25.3 | 31.7 | 33.9 | 36.0 | 42.4 | 43.9 | 46.6 | 30 33.83 | — 0.62 | — 0.05 | — 0.11 | 6 30 33.10 | — 0.09 |
| | 21 | α Canis Majoris . . . | P. | 29.0 | 31.7 | 33.3 | 39.6 | 41.8 | 43.9 | 50.3 | 51.9 | 54.6 | 39 41.79 | — 0.81 | — 0.19 | — 0.11 | 6 39 40.87 | 0.00 |
| | 22 | Venus I, N. | P. | 31.3 | 34.1 | 35.9 | 42.7 | 45.0 | 47.3 | 54.1 | 55.7 | 58.6 | 45 44.97 | — 0.57 | . . . | — 0.11 | 6 45 44.29 | + 1.01 |
| | 23 | Venus S. | P. | | | | | | | | | | | . . . | . . . | . . . | . . . | . . . |
| 19 | 24 | Moon II | P. | 17.5 | 20.2 | 21.8 | 28.1 | 30.2 | 32.3 | 38.7 | 40.2 | 43.0 | 6 30.22 | — 0.55 | . . . | — 0.38 | 1 6 29.29 | — 67.18 |
| | 25 | Polaris | P. | | | 12.0 | 38.0 | 4.0 | 30.0 | | | | 12 36.55 | — 12.12 | . . . | — 0.39 | 1 12 21.04 | — 0.35 |
| | 26 | β Arietis | P. | 35.4 | 38.3 | 39.8 | 46.3 | 48.5 | 50.7 | 52.8 | 58.8 | 1.5 | 47 48.50 | — 0.58 | — 0.44 | — 0.40 | 1 47 47.52 | + 0.06 |
| | 27 | α Arietis | P. | 58.7 | 1.5 | 3.2 | 9.8 | 11.9 | 14.2 | 20.8 | 22.5 | 25.2 | 0 11.95 | — 0.59 | — 0.36 | — 0.40 | 2 0 10.99 | — 0.03 |
| 20 | 28 | Sun I, N. | P. | 45.9 | 48.7 | 50.3 | 56.8 | 58.9 | 1.2 | 7.4 | 9.3 | 12.0 | 49 58.94 | — 0.44 | . . . | — 0.44 | 3 49 58.06 | . . . |
| | 29 | Sun II, S. | P. | 0.9 | 3.6 | 5.4 | 12.0 | 14.0 | 16.2 | 22.8 | 24.4 | 27.2 | 52 14.06 | — 0.44 | . . . | — 0.44 | 3 52 13.18 | . . . |
| | 30 | α Aurigæ | P. | | | 26.8 | 29.9 | 32.6 | 35.7 | 38.6 | | | 7 32.70 | — 0.51 | . . . | — 0.47 | 5 7 31.72 | + 0.12 |
| | 31 | β Orionis | P. | 23.0 | 25.7 | 27.3 | 33.5 | 35.5 | 37.6 | 43.6 | 45.2 | 47.9 | 8 35.48 | — 0.44 | — 0.46 | — 0.47 | 5 8 34.57 | — 0.01 |
| | 32 | β Tauri | P. | 14.3 | 17.3 | 19.0 | 25.9 | 28.3 | 30.6 | 37.5 | 39.3 | 42.2 | 18 28.27 | — 0.45 | — 0.63 | — 0.47 | 5 18 27.35 | + 0.14 |
| | 33 | δ Orionis | P. | 28.8 | 31.3 | 32.9 | 37.0 | 39.0 | 41.1 | 43.2 | 45.3 | . . . | 25 41.09 | — 0.44 | — 0.39 | — 0.48 | 5 25 40.17 | — 0.12 |
| | 34 | Mercury I, C. . . . | P. | 30.2 | 33.1 | 34.8 | 41.6 | 43.9 | 46.0 | 52.8 | 54.6 | 57.4 | 26 43.82 | — 0.45 | . . . | — 0.48 | 5 26 42.89 | + 0.30 |
| | 35 | ι Orionis | P. | | | 54.1 | 56.3 | 58.3 | 0.2 | 4.3 | 5.9 | 8.5 | 29 56.19 | — 0.44 | — 0.52 | — 0.48 | 5 29 55.27 | + 0.03 |
| | 36 | B. A. C. 1794 | P. | 18.6 | 22.7 | 26.9 | 29.0 | 31.0 | 33.2 | 35.0 | 39.2 | 43.2 | 34 30.98 | — 0.44 | . . . | — 0.48 | 5 34 30.06 | + 0.06 |
| | 37 | α Orionis | P. | 16.1 | 18.7 | 20.3 | 26.4 | 28.5 | 30.5 | 36.6 | 38.2 | 40.7 | 48 28.44 | — 0.43 | — 0.45 | — 0.49 | 5 48 27.52 | — 0.07 |
| | 38 | B. A. C. 1900 | P. | 1.7 | 4.7 | 6.8 | 14.5 | 17.0 | 19.6 | 27.2 | 29.2 | 32.4 | 51 17.03 | — 0.47 | . . . | — 0.49 | 5 51 16.07 | — 0.06 |
| | 39 | μ Geminorum | P. | 15.3 | 18.3 | 19.9 | 26.5 | 28.7 | 30.9 | 37.5 | 39.2 | 42.0 | 15 28.70 | — 0.44 | — 0.54 | — 0.49 | 6 15 27.77 | + 0.01 |
| | 40 | B. A. C. 2061 | P. | 2.2 | 4.8 | 6.5 | 13.0 | 15.1 | 17.2 | 23.5 | 25.2 | 27.9 | 17 15.04 | — 0.46 | . . . | — 0.49 | 6 17 14.09 | + 0.17 |
| | 41 | γ Geminorum | P. | 21.3 | 24.0 | 25.5 | 32.0 | 34.0 | 36.3 | 42.6 | 44.1 | 46.8 | 30 34.07 | — 0.44 | — 0.49 | — 0.50 | 6 30 33.13 | — 0.04 |
| | 42 | B. A. C. 2194 | P. | | | 15.0 | 17.3 | 19.5 | 21.7 | 23.9 | | | 36 19.46 | — 0.45 | . . . | — 0.50 | 6 36 18.51 | — 0.30 |
| | 43 | α Canis Majoris . . . | P. | 29.0 | 31.7 | 33.3 | 39.6 | 41.7 | 43.9 | 50.3 | 51.9 | 54.5 | 39 41.77 | — 0.46 | — 0.56 | — 0.50 | 6 39 40.81 | — 0.02 |
| | 44 | ε Canis Majoris . . . | P. | 31.7 | 34.7 | 36.4 | 43.5 | 45.7 | 48.0 | 55.0 | 56.8 | 59.7 | 53 45.72 | — 0.49 | — 0.34 | — 0.51 | 6 53 44.72 | — 0.22 |
| | 45 | Venus I, N. | P. | | | 17.7 | 20.0 | 22.3 | 24.6 | 26.8 | | | 4 22.26 | — 0.45 | . . . | — 0.51 | 7 4 21.30 | + 1.07 |
| | 46 | Venus S. | P. | | | | | | | | | | | . . . | . . . | . . . | . . . | . . . |
| | 47 | δ Geminorum | P. | 31.2 | 33.9 | 35.7 | 42.3 | 44.5 | 46.6 | 53.3 | 54.9 | 57.6 | 12 44.44 | — 0.44 | — 0.57 | — 0.51 | 7 12 43.49 | 0.00 |
| | 48 | B. A. C. 2162 | P. | 14.5 | 17.0 | 18.6 | 22.7 | 26.8 | 31.0 | 35.0 | 36.6 | 39.3 | 20 26.83 | — 0.44 | . . . | — 0.52 | 7 20 25.87 | — 0.40 |

1. Thread B used.
2, 5. Thread A used.
30. Bisections at set B.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | | | | External Thermom't. | Refraction. | Apparent North-Polar Distance. | | | | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|-------------|------|--------|---------------------|-------------|--------------------------------|--------|-------|---|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | 5. | ° | ' | " | | | ° | ' | " | ° | |
| | ° ' " | ° ' " | " | " | " | | | | | | | ° ' " | ° ' " | ° | ' | " | ° ' " | ° ' " | ° ' " | ° ' " | | |
| 1 | 280 52 | 10 19.8 | 20.6 | 6.2 | 14.5 | 36 | .. | .. | .. | .. | 535 | 58.5 | 79 6 55.3 | .. | + 4 | 56.2 | 130 18 12.7 | | - 17.0 | | | |
| 2 | 303 50 | 10.8 | 9.7 | 25.1 | 4.5 | 32 | .. | .. | .. | 420 | 300 | 58.5 | 56 2 35.6 | .. | + 1 | 26.9 | 107 10 23.7 | | - 3.9 | | | |
| 3 | 302 2 | 20.5 | 21.0 | 5.0 | 14.7 | 28 | .. | 140 | .. | 950 | .. | 58.5 | 57 52 12.4 | .. | + 1 | 33.2 | 109 0 6.8 | | - 3.6 | | | |
| 4 | 348 10 | 13.2 | 13.6 | 27.3 | 6.9 | 34 | .. | 560 | .. | 520 | .. | 58.5 | 11 45 44.6 | .. | + 12.2 | | 62 52 18.0 | | + 3.1 | | | |
| 5 | 318 20 | 14.5 | 16.0 | 1.3 | 9.5 | 38 | .. | 100 | .. | 940 | .. | 58.5 | 41 34 6.8 | .. | + 52.0 | | 92 41 20.0 | | - 3.5 | | | |
| 6 | 327 52 | 16.5 | 16.7 | 2.0 | 11.7 | 36 | .. | .. | .. | 210 | 200 | 58.5 | 32 4 14.8 | .. | + 36.8 | | 83 11 12.8 | | - 0.9 | | | |
| 7 | 325 54 | 18.0 | 18.5 | 2.0 | 13.5 | 35 | 600 | 590 | .. | 525 | 505 | 58.5 | 34 2 5.3 | 49.8 | + | 39.6 | 85 9 6.1 | | - 1.1 | | | |
| 8 | 49 40 | 13.3 | 15.5 | 29.0 | 5.7 | 35 | 170 | 200 | 220 | 140 | 150 | 58.2 | 310 15 54.7 | 65.0 | - 1 | 7.1 | 1 21 8.8 | | - 1.1 | | | |
| 9 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | | | |
| 10 | 343 56 | 11.7 | 14.9 | 26.9 | 7.3 | 38 | .. | 660 | .. | 625 | .. | 58.2 | 16 0 47.0 | 66.3 | + | 16 3 | 67 7 24.5 | | - 1.3 | | | |
| 11 | 340 22 | 10.5 | 13.5 | 26.6 | 5.0 | 33 | 775 | 780 | .. | .. | .. | 58.2 | 19 33 30.2 | .. | + | 19.9 | 70 40 11.3 | | .. | | | |
| 12 | 339 50 | 8.4 | 11.4 | 22.5 | 1.7 | 32 | .. | .. | .. | 470 | 415 | 58.2 | 20 5 9.0 | 72.5 | + | 20.5 | 71 11 50.7 | | .. | | | |
| 13 | 354 0 | 13.6 | 17.4 | 0.5 | 8.0 | 32 | .. | .. | .. | 840 | 760 | 58.2 | 5 55 20.7 | 77.3 | + | 5.8 | 57 1 47.7 | | + 1.6 | | | |
| 14 | 340 12 | 15.0 | 18.0 | 0.0 | 9.1 | 33 | 955 | .. | .. | .. | 785 | 58.2 | 13 43 37.0 | .. | + | 13.6 | 64 50 11.8 | | .. | | | |
| 15 | 346 12 | 15.0 | 18.0 | 0.0 | 9.1 | 34 | .. | 385 | .. | 310 | .. | 58.2 | 13 43 44.1 | .. | + | 13.6 | 64 50 18.9 | | .. | | | |
| 16 | 312 42 | 13.6 | 18.6 | 0.5 | 9.7 | 32 | .. | 925 | .. | 795 | .. | 58.2 | 47 13 21.2 | .. | + | 59.9 | 98 20 42.3 | | 0.0 | | | |
| 17 | 349 32 | 14.2 | 16.6 | 29.8 | 7.5 | 32 | 715 | 685 | .. | 635 | 630 | 58.2 | 10 23 17.5 | 77.6 | + | 10.4 | 61 29 49.1 | | + 0.9 | | | |
| 18 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | | | |
| 19 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | | | |
| 20 | 337 34 | 13.4 | 16.9 | 28.5 | 7.6 | 39 | 370 | 330 | .. | 270 | 260 | 58.2 | 22 22 58.6 | 79.3 | + | 22.7 | 73 29 42.5 | | + 1.9 | | | |
| 21 | 304 30 | 15.4 | 19.9 | 2.0 | 11.7 | 32 | 380 | 345 | .. | .. | .. | 58.2 | 55 25 14.3 | .. | + 1 | 19.9 | 106 32 55.4 | | + 1.9 | | | |
| 22 | 347 24 | 13.0 | 19.0 | 0.5 | 8.0 | 32 | 685 | .. | .. | .. | 965 | 58.2 | 12 31 8.4 | 79.2 | + | 12.3 | 63 37 41.9 | | .. | | | |
| 23 | 347 24 | 13.0 | 19.0 | 0.5 | 8.0 | 33 | .. | 850 | .. | 795 | .. | 58.2 | 12 31 35.7 | .. | + | 12.3 | 63 38 9.2 | | .. | | | |
| 24 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | | | |
| 25 | 49 40 | 21.1 | 23.7 | 5.8 | 11.1 | 34 | .. | 835 | 860 | 835 | 860 | 55.9 | 310 15 54.2 | 74.0 | - 1 | 5.8 | 1 21 9.6 | | - 1.3 | | | |
| 26 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | | | |
| 27 | 343 56 | 23.6 | 27.1 | 7.0 | 14.8 | 38 | .. | .. | .. | 180 | 140 | 55.9 | 16 0 48.7 | 75.8 | + | 10.0 | 67 7 25.9 | | + 0.4 | | | |
| 28 | 341 28 | 26.8 | 0.7 | 10.8 | 19.0 | 35 | 330 | 335 | .. | .. | .. | 55.9 | 18 28 7.2 | 80.2 | + | 18.4 | 69 34 46.8 | | .. | | | |
| 29 | 340 56 | 24.0 | 27.8 | 7.2 | 15.3 | 33 | .. | .. | .. | 900 | 895 | 55.9 | 18 59 44.1 | .. | + | 19.0 | 70 6 24.3 | | .. | | | |
| 30 | 6 54 | 21.5 | 27.0 | 5.5 | 12.6 | 32 | 825 | 830 | .. | .. | .. | 55.9 | 353 1 24.3 | .. | - | 6.7 | 44 7 38.8 | | - 0.2 | | | |
| 31 | 312 42 | 25.2 | 0.3 | 8.8 | 17.6 | 32 | .. | 390 | .. | 325 | .. | 55.9 | 47 13 21.1 | 82.9 | + | 59.2 | 95 20 41.5 | | 0.0 | | | |
| 32 | 349 32 | 21.0 | 23.5 | 3.4 | 11.7 | 32 | .. | 555 | .. | 425 | .. | 55.9 | 10 23 17.8 | .. | + | 10.1 | 61 29 49.1 | | + 0.7 | | | |
| 33 | 320 40 | 19.0 | 23.6 | 2.6 | 12.5 | 36 | 800 | 695 | .. | .. | .. | 55.9 | 39 16 21.5 | .. | + | 44.8 | 90 23 27.5 | | - 0.4 | | | |
| 34 | 316 28 | 20.8 | 25.4 | 4.6 | 12.3 | 37 | .. | 630 | .. | 520 | .. | 55.9 | 13 28 36.5 | .. | + | 13.1 | 64 35 10.8 | | .. | | | |
| 35 | 319 46 | 23.3 | 27.0 | 6.0 | 14.4 | 31 | .. | 160 | .. | 035 | .. | 55.9 | 40 9 45.0 | .. | + | 46.2 | 91 16 52.4 | | + 0.1 | | | |
| 36 | 319 2 | 21.6 | 25.0 | 5.1 | 12.1 | 32 | .. | 705 | .. | 670 | .. | 55.9 | 40 53 21.7 | 83.5 | + | 47.4 | 92 0 30.3 | | + 5.4 | | | |
| 37 | 328 26 | 22.0 | 26.2 | 4.5 | 13.5 | 35 | .. | 445 | .. | 360 | .. | 55.9 | 31 30 3.9 | .. | + | 33.6 | 82 36 58.7 | | + 1.0 | | | |
| 38 | 358 14 | 22.5 | 28.0 | 7.8 | 14.1 | 32 | .. | 570 | .. | 460 | .. | 55.9 | 1 41 21.4 | .. | + | 1.6 | 52 47 44.2 | | + 11.2 | | | |
| 39 | 343 38 | 23.5 | 27.1 | 4.8 | 15.0 | 37 | 930 | 950 | .. | .. | .. | 55.9 | 16 15 43.3 | 84.1 | + | 16.0 | 67 25 29.5 | | + 0.4 | | | |
| 40 | 303 10 | 17.6 | 22.3 | 2.1 | 10.6 | 35 | .. | 375 | .. | 315 | .. | 55.9 | 56 45 59.5 | .. | + 1 | 23.3 | 107 53 44.0 | | + 1.1 | | | |
| 41 | 337 34 | 21.1 | 25.0 | 3.6 | 11.5 | 39 | .. | 090 | .. | 015 | .. | 55.9 | 22 22 58.6 | .. | + | 22.5 | 73 29 12.3 | | + 1.8 | | | |
| 42 | 340 18 | 21.8 | 26.0 | 4.9 | 13.2 | 35 | .. | 890 | .. | 835 | .. | 55.9 | 13 38 11.0 | 84.5 | + | 13.3 | 64 44 45.5 | | + 9.0 | | | |
| 43 | 304 30 | 18.0 | 23.0 | 2.8 | 11.9 | 32 | 360 | 300 | .. | 235 | 220 | 55.9 | 55 25 13.2 | .. | + 1 | 19.1 | 106 32 53.5 | | + 0.8 | | | |
| 44 | 292 16 | 21.5 | 27.0 | 5.0 | 13.6 | 34 | 305 | 295 | .. | 220 | 155 | 55.9 | 67 39 46.0 | .. | + 2 | 12.0 | 118 48 19.2 | | - 0.2 | | | |
| 45 | 346 54 | 21.8 | 26.9 | 5.0 | 14.4 | 31 | 710 | .. | .. | .. | 680 | 55.9 | 13 1 53.8 | .. | + | 12.7 | 64 8 27.7 | | .. | | | |
| 46 | 346 54 | 21.8 | 26.9 | 5.0 | 14.4 | 36 | .. | 635 | .. | 575 | .. | 55.9 | 13 2 22.9 | .. | + | 12.7 | 64 8 57.8 | | .. | | | |
| 47 | 343 16 | 24.5 | 28.7 | 6.3 | 14.5 | 37 | 965 | 975 | .. | 860 | 810 | 55.9 | 16 40 44.3 | 84.4 | + | 16.4 | 67 47 21.9 | | + 1.9 | | | |
| 48 | 329 36 | 22.7 | 27.9 | 6.4 | 13.4 | 38 | 315 | 310 | .. | 240 | 165 | 55.9 | 30 20 48.7 | .. | + | 32.0 | 81 27 41.9 | | + 3.8 | | | |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sun. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " | " | " | " |
| 7 | 30.23 | 52.5 | 11 | — 2.9 | + 15 49.7 | .. | + 15 46.8 |
| 8 | 30.18 | 63.3 | 12 | — 3.0 | + 15 49.7 | .. | + 15 52.7 |
| 10 | 30.17 | 64.6 | 14 | — 2.2 | + 3.6 | .. | + 1.3 |
| 12 | 30.16 | 69.7 | 15 | — 2.2 | + 3.6 | 0.1 | + 5.8 |
| 13 | 30.14 | 74.1 | 22 | — 3.0 | + 13.7 | .. | + 10.7 |
| 17 | 30.14 | 75.2 | 23 | — 3.0 | + 13.7 | + 0.1 | + 16.6 |
| 20 | 30.11 | 79.1 | 28 | — 2.7 | + 15 48.7 | .. | + 15 46.0 |
| 22 | 30.10 | 76.2 | 29 | — 2.8 | + 15 48.7 | .. | + 15 51.5 |
| 25 | 30.16 | 73.8 | 34 | — 2.4 | .. | 0.3 | + 2.7 |
| 27 | 30.17 | 75.8 | 45 | — 3.3 | + 14.6 | .. | + 11.3 |
| 28 | 30.15 | 78.7 | 46 | — 3.3 | + 14.6 | + 0.1 | + 17.8 |
| 31 | 30.14 | 81.3 | | | | | |
| 36 | 30.14 | 82.4 | | | | | |
| 39 | 30.13 | 82.6 | | | | | |
| 42 | 30.12 | 82.3 | | | | | |
| 47 | 30.11 | 82.0 | | | | | |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections | |
|-----------------|---------|---------------------------------------|-----------|--------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|--------------|-----------------|-----------------|---------------------------|-----------|---------------------------|----|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock. apparnt. | Clock. adopted. | h. | m. | | s. |
| | | | | | | | | | | | | | | | | | | | | |
| 1876. May 20 | 1 | <i>a</i> ¹ Geminorum . . . | P. | 28.0 | 31.0 | 32.8 | | | | 52.2 | 54.0 | 56.9 | 26 42.50 | - 0.46 | . . . | - 0.52 | 7 26 41.52 | - 0.61 | | |
| | 2 | <i>a</i> ² Geminorum . . . | P. | | 38.0 | 40.5 | 42.9 | 45.2 | 47.6 | | | | 26 42.52 | - 0.46 | - 0.63 | - 0.52 | 7 26 41.84 | + 0.35 | | |
| 21 | 3 | B. A. C. 334 . . . | P. | 34.0 | 37.2 | 39.0 | 46.5 | 49.1 | 51.6 | 58.9 | 0.7 | 3.8 | 2 48.98 | - 0.43 | . . . | - 1.09 | 1 2 47.46 | + 0.17 | | |
| | 4 | Polaris . . . | P. | | | 28.5 | 56.0 | 24.0 | 48.0 | | | | 12 54.68 | - 27.61 | . . . | - 1.09 | 1 12 25.98 | - 0.02 | | |
| | 5 | <i>η</i> Piscium . . . | P. | 39.7 | 42.4 | 43.9 | 50.4 | 52.5 | 54.5 | 0.8 | 2.4 | 5.4 | 24 52.40 | - 0.20 | - 1.11 | - 1.09 | 1 24 51.12 | + 0.09 | | |
| | 6 | <i>β</i> Arietis . . . | P. | 35.7 | 38.5 | 40.2 | 46.7 | 48.9 | 51.1 | 57.0 | 59.2 | 1.0 | 47 48.87 | - 0.25 | - 1.00 | - 1.09 | 1 47 47.53 | + 0.02 | | |
| | 7 | <i>α</i> Arietis . . . | P. | 59.0 | 1.9 | 3.6 | 10.3 | 12.5 | 14.6 | 21.3 | 22.9 | 25.7 | 0 12.42 | - 0.28 | - 1.06 | - 1.08 | 2 0 11.06 | - 0.01 | | |
| | 8 | <i>α</i> Persei . . . | P. | 11.1 | 15.0 | 17.4 | 26.8 | 29.8 | 32.9 | 42.3 | 44.7 | 48.6 | 15 29.84 | - 0.71 | . . . | - 1.07 | 3 15 28.06 | + 0.20 | | |
| 22 | 9 | Sun I, N. | P. | 47.6 | 50.4 | 52.0 | 58.6 | 0.8 | 3.0 | 9.5 | 11.2 | 13.4 | 58 0.72 | - 0.30 | . . . | - 1.07 | 3 57 59.35 | + 67.71 | | |
| | 10 | Sun S. | P. | | | | | | | | | | | | | | | | | |
| | 11 | Mercury I, N. . . | P. | 58.9 | 1.8 | 3.5 | 10.4 | 12.5 | 14.8 | 21.6 | 23.3 | 26.0 | 35 12.53 | - 0.36 | . . . | - 1.05 | 5 35 11.12 | + 0.31 | | |
| | 12 | Mercury S. . . . | P. | | | | | | | | | | | | | | | | | |
| | 13 | <i>α</i> Orionis | P. | 16.3 | 19.0 | 20.6 | 26.7 | 28.8 | 30.9 | 37.1 | 38.5 | 41.1 | 48 28.78 | - 0.18 | - 1.04 | - 1.05 | 5 48 27.55 | - 0.04 | | |
| | 14 | B. A. C. 1900 . . . | P. | 2.2 | 5.4 | 7.2 | | | | 27.7 | 29.7 | 32.0 | 51 17.54 | - 0.52 | . . . | - 1.05 | 5 51 15.97 | - 0.07 | | |
| | 15 | <i>μ</i> Geminorum . . . | P. | 15.5 | 18.4 | 20.2 | 26.8 | 29.0 | 31.3 | 37.9 | 39.6 | 42.2 | 15 24.00 | - 0.32 | - 0.95 | - 1.04 | 6 15 27.63 | - 0.13 | | |
| | 16 | B. A. C. 2061 . . . | P. | 2.2 | 4.8 | 6.5 | 13.1 | 15.2 | 17.4 | 23.7 | 25.4 | 28.0 | 17 15.16 | + 0.01 | . . . | - 1.04 | 6 17 14.13 | + 0.21 | | |
| | 17 | <i>γ</i> Geminorum . . . | P. | 21.6 | 24.3 | 25.9 | 32.3 | 34.4 | 36.6 | 43.0 | 44.5 | 47.2 | 30 31.13 | - 0.26 | - 1.04 | - 1.04 | 6 30 33.13 | - 0.03 | | |
| | 18 | B. A. C. 2194 . . . | P. | 6.3 | 9.2 | 10.6 | 17.7 | 19.0 | 22.2 | 28.9 | 30.7 | 33.4 | 36 19.91 | - 0.36 | . . . | - 1.04 | 6 36 18.51 | - 0.30 | | |
| | 19 | <i>α</i> Canis Majoris . . | P. | 29.1 | 31.7 | 33.4 | 39.8 | 41.9 | 44.1 | 50.3 | 51.9 | 54.6 | 39 41.57 | 0.00 | - 1.13 | - 1.04 | 6 39 40.83 | + 0.01 | | |
| | 20 | Polaris | S. | | | 52.0 | 21.5 | | 17.0 | 13.0 | | | 12 48.08 | - 19.10 | . . . | - 1.37 | 1 12 27.61 | + 0.79 | | |
| | 21 | <i>α</i> Arietis | S. | 59.4 | 2.2 | 3.0 | 10.4 | 12.7 | 14.9 | 21.6 | 23.2 | 25.8 | 0 12.68 | - 0.19 | - 1.39 | - 1.38 | 2 0 11.11 | + 0.02 | | |
| | 22 | <i>β</i> Ursa Minoris, S. P. | S. | 47.5 | 41.3 | 26.6 | 18.8 | 11.2 | 3.0 | 55.7 | 40.9 | 34.4 | 51 11.04 | + 1.77 | . . . | - 1.39 | 14 51 11.42 | + 0.10 | | |
| 23 | 23 | Sun I, N. | S. | 49.4 | 52.0 | 53.7 | 0.2 | 2.6 | 4.7 | 11.4 | 12.8 | 15.6 | 2 2 49 | - 0.21 | . . . | - 1.40 | 4 2 0.88 | . . . | | |
| | 24 | Sun H, S. | S. | 5.1 | 7.8 | 9.4 | 16.0 | 18.2 | 20.3 | 26.8 | 28.4 | 31.3 | 4 18.14 | - 0.21 | . . . | - 1.40 | 4 4 16.53 | . . . | | |
| | 25 | <i>β</i> Orionis | S. | 23.7 | 26.4 | 27.9 | 31.9 | 36.0 | 40.3 | 44.2 | 45.9 | 48.3 | 5 36.07 | - 0.04 | - 1.44 | - 1.41 | 5 8 34.62 | + 0.03 | | |
| | 26 | <i>β</i> Tauri | S. | 15.0 | 18.0 | 19.6 | 26.6 | 29.0 | 31.3 | 38.2 | 40.0 | 42.8 | 18 28.04 | - 0.26 | - 1.47 | - 1.42 | 5 18 27.26 | + 0.03 | | |
| | 27 | Mercury I, C. . . . | S. | 46.0 | 48.6 | 50.6 | 57.3 | 59.5 | 1.9 | 8.7 | 10.3 | 13.0 | 38 59.54 | - 0.23 | . . . | - 1.45 | 5 38 57.86 | + 0.32 | | |
| | 28 | <i>α</i> Orionis | S. | 16.9 | 19.5 | 21.0 | 7.0 | 29.1 | 31.1 | 37.3 | 38.8 | 41.4 | 48 29.12 | - 0.11 | - 1.45 | - 1.46 | 5 48 27.55 | - 0.04 | | |
| | 29 | <i>μ</i> Geminorum | S. | 16.0 | 18.0 | 20.6 | 27.2 | 29.3 | 31.7 | 38.2 | 39.9 | 42.7 | 15 29.39 | - 0.22 | - 1.45 | - 1.48 | 6 15 27.69 | - 0.07 | | |
| | 30 | <i>γ</i> Geminorum | S. | 22.3 | 24.7 | 26.3 | 32.6 | 34.6 | 36.7 | 43.4 | 45.0 | 47.6 | 30 31.80 | - 0.17 | - 1.50 | - 1.49 | 6 30 33.14 | - 0.02 | | |
| | 31 | <i>α</i> Canis Majoris . . | S. | 29.7 | 32.2 | 33.9 | 37.9 | 40.3 | | | | | 30 42.38 | + 0.01 | - 1.65 | - 1.50 | 6 30 40.89 | + 0.07 | | |
| | 32 | Venus I, S. | S. | 34.2 | 37.0 | 38.6 | 45.6 | 47.7 | 50.1 | 56.8 | 58.4 | 1.2 | 14 47.73 | - 0.24 | . . . | - 1.52 | | | | |
| | 33 | Venus N. | S. | | | | | | | | | | | | | | | | | |
| | 34 | B. A. C. 4066 ¹ . . . | S. | 45.9 | 48.6 | 50.3 | | | | 7.8 | 9.6 | 12.2 | 57 59.09 | - 0.18 | . . . | - 1.70 | 11 57 57.21 | - 2.07 | | |
| | 35 | B. A. C. 4066 ² . . . | S. | | | 54.0 | 57.1 | 59.2 | 1.5 | 3.6 | | | 57 59.24 | - 0.18 | . . . | - 1.70 | 11 57 57.36 | - 2.07 | | |
| | 36 | Juno | S. | 37.0 | 39.6 | 41.3 | 45.4 | 47.5 | 49.5 | | 57.8 | | 10 49.48 | - 0.08 | . . . | - 1.70 | 12 10 47.70 | . . . | | |
| | 37 | <i>η</i> Virginis | S. | 25.1 | 27.8 | 29.1 | 35.2 | 37.3 | 39.4 | 45.9 | 46.9 | 49.5 | 13 37.27 | - 0.05 | - 1.62 | - 1.70 | 12 13 35.52 | - 0.10 | | |
| | 38 | Vesta | S. | 57.8 | 0.5 | 2.0 | 8.3 | 10.3 | 12.3 | 18.3 | 20.0 | 22.6 | 23 10.36 | - 0.10 | . . . | - 1.70 | 12 23 8.56 | . . . | | |
| | 39 | <i>β</i> Corvi | S. | 42.7 | 45.5 | 47.2 | 53.9 | 56.0 | 58.3 | 4.0 | 6.5 | 9.3 | 27 56.03 | + 0.06 | - 1.78 | - 1.70 | 12 27 54.39 | + 0.04 | | |
| | 40 | Lalande 23951 . . . | S. | 49.4 | 52.0 | 53.6 | 59.9 | 2.0 | 4.0 | 10.3 | 12.0 | 14.5 | 45 1.97 | + 0.02 | . . . | - 1.70 | 12 45 0.29 | - 1.93 | | |
| | 41 | 12 ¹ Canum Venat. . . | S. | 1.0 | 4.3 | 6.2 | | | | 27.1 | 29.2 | 32.2 | 50 16.71 | - 0.32 | . . . | - 1.70 | 12 50 14.69 | - 2.65 | | |
| | 42 | 12 ² Canum Venat. . . | S. | | | 12.9 | 15.4 | 17.9 | 20.7 | 23.2 | | | 50 18.60 | - 0.32 | - 1.54 | - 1.70 | 12 50 15.98 | - 0.16 | | |
| | 43 | B. A. C. 4389 | S. | 4.8 | 8.2 | 10.9 | 19.4 | 22.3 | 25.2 | 34.0 | 36.2 | 39.8 | 0 22.28 | - 0.41 | . . . | - 1.71 | 13 0 20.16 | - 2.91 | | |
| | 44 | B. A. C. 4416 | S. | 10.5 | 15.0 | 17.8 | 29.5 | 33.2 | 36.8 | 48.3 | 51.2 | 56.0 | 4 33.14 | - 0.63 | . . . | - 1.71 | 13 4 30.80 | - 3.52 | | |
| | 45 | Polaris, S. P. . . . | S. | | | 6.0 | 36.0 | 7.0 | 43.5 | | | | 12 10.72 | + 18.79 | . . . | - 1.71 | 1 12 27.80 | + 0.57 | | |
| | 46 | B. A. C. 4553 | S. | 0.0 | 2.7 | 4.5 | 11.2 | 13.5 | 15.9 | 22.2 | 23.9 | 26.7 | 32 13.40 | - 0.19 | . . . | - 1.71 | 13 32 11.50 | - 2.40 | | |
| | 47 | Pallas | S. | 10.4 | 13.4 | 14.9 | 21.5 | 23.8 | 26.0 | 32.8 | 34.5 | 37.2 | 38 23.83 | - 0.19 | . . . | - 1.71 | 13 38 21.93 | . . . | | |
| | 48 | B. A. C. 4627 | S. | 25.4 | 28.7 | 30.6 | 38.2 | 40.7 | 43.2 | 50.7 | 52.4 | 55.7 | 45 40.62 | - 0.28 | . . . | - 1.71 | 13 45 38.63 | - 2.72 | | |
| | 49 | B. A. C. 4649 | S. | | | 22.9 | 26.3 | 29.7 | 37.0 | 39.3 | 43.7 | 49 22.78 | - 0.56 | . . . | . . . | - 1.71 | 13 49 20.51 | - 3.43 | | |
| | 50 | Ceres | S. | 22.9 | 25.4 | 26.8 | 33.0 | 35.0 | 37.2 | 43.3 | 44.9 | 47.4 | 8 35.10 | - 0.02 | . . . | - 1.72 | 14 8 33.36 | . . . | | |
| | 51 | B. A. C. 4737 | S. | | | 39.2 | 41.3 | 45.5 | 47.0 | 49.7 | 11 37.01 | | | - 0.12 | . . . | - 1.72 | 14 11 35.17 | - 2.47 | | |
| | 52 | B. A. C. 4778 | S. | | | | | | | 35.7 | 37.7 | 40.6 | 18 25.42 | - 0.30 | . . . | - 1.72 | 14 18 23.40 | - 2.83 | | |

22, 32. Bisections at sets B and D.

23. Telescope micrometer reading decreased one revolution in reduction.

34, 35. The bisections in declination have been interchanged in reduction.

36, 38, 41, 42, 47, 52. Thread A used.

41. Bisections at threads II and III.

41, 42. The bisections in declination have been interchanged in the reductions.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | |
| 1 | 353 12 | 10 21.4 | 25.8 | 5.0 | 12.5 | 35 | 035 | .. | .. | .. | 880 | 55.9 | 6 43 57.1 | .. | 57 50 24.8 | +10.0 |
| 2 | 353 12 | 21.4 | 25.8 | 5.0 | 12.5 | 34 | .. | 775 | .. | 655 | .. | 55.9 | 6 43 53.2 | 84.2 | 57 50 20.9 | + 1.3 |
| 3 | 356 0 | 22.4 | 26.0 | 8.8 | 13.5 | 34 | 610 | 620 | .. | 540 | 520 | 55.2 | 3 55 51.9 | 74.3 | 55 2 16.9 | - 1.7 |
| 4 | 40 40 | 19.5 | 23.0 | 5.7 | 10.3 | 35 | .. | 005 | 015 | 900 | .. | 55.2 | 310 15 55.2 | .. | 1 21 11.3 | 0.0 |
| 5 | 335 40 | 27.7 | 29.0 | 9.9 | 14.1 | 38 | 145 | 045 | .. | 990 | 950 | 55.2 | 24 10 47.2 | .. | 75 17 33.2 | - 0.9 |
| 6 | 341 14 | 25.8 | 28.2 | 8.8 | 17.0 | 31 | 980 | 935 | .. | 870 | 845 | 55.2 | 18 41 13.2 | .. | 69 47 53.0 | + 1.1 |
| 7 | 343 56 | 24.2 | 27.8 | 6.8 | 14.6 | 38 | 320 | 305 | .. | 235 | 180 | 55.2 | 16 0 48.9 | 77.3 | 67 7 25.9 | + 0.5 |
| 8 | 10 28 | 24.8 | 28.5 | 8.2 | 15.3 | 37 | 550 | 540 | .. | 470 | 430 | 55.2 | 349 28 38.5 | 80.3 | 40 34 49.5 | - 1.0 |
| 9 | 341 52 | 27.0 | 1.0 | 12.2 | 18.3 | 36 | 195 | 125 | .. | .. | .. | 55.2 | 18 4 20.5 | .. | 69 10 59.5 | .. |
| 10 | 341 20 | 16.3 | 21.5 | 0.7 | 9.0 | 35 | .. | .. | .. | 240 | 210 | 55.2 | 18 35 57.0 | 81.8 | 69 42 30.5 | .. |
| 11 | 346 22 | 25.1 | 30.8 | 10.2 | 16.0 | 36 | 865 | .. | .. | .. | 655 | 55.2 | 13 34 28.2 | .. | 64 41 2.6 | .. |
| 12 | 346 22 | 25.1 | 30.8 | 10.2 | 16.0 | 37 | .. | 225 | .. | 120 | .. | 55.2 | 13 34 34.3 | 77.0 | 64 41 8.7 | .. |
| 13 | 328 26 | 28.2 | 2.0 | 10.8 | 15.0 | 35 | 190 | 140 | .. | 050 | 000 | 55.2 | 31 30 3.4 | .. | 82 36 58.1 | + 0.5 |
| 14 | 358 14 | 26.8 | 2.5 | 10.8 | 17.0 | 32 | .. | 305 | .. | 215 | .. | 55.2 | 1 41 20.5 | 79.2 | 52 47 43.5 | +11.0 |
| 15 | 343 38 | 23.1 | 27.7 | 5.5 | 13.7 | 38 | 045 | 960 | .. | .. | .. | 55.2 | 16 18 43.3 | .. | 67 25 20.4 | + 0.3 |
| 16 | 303 10 | 20.1 | 24.5 | 4.3 | 9.9 | 35 | .. | 370 | .. | 240 | .. | 55.2 | 56 45 59.7 | 82.3 | 107 53 43.4 | + 1.7 |
| 17 | 337 34 | 23.3 | 27.7 | 7.0 | 12.0 | 38 | 980 | 990 | .. | 855 | 870 | 55.2 | 22 22 58.2 | .. | 73 29 41.7 | + 1.3 |
| 18 | 346 18 | 23.0 | 27.3 | 6.3 | 13.0 | 35 | 940 | 865 | .. | .. | .. | 55.2 | 13 38 11.1 | 83.6 | 64 44 45.4 | + 9.0 |
| 19 | 304 30 | 19.8 | 25.1 | 4.4 | 14.0 | 32 | 425 | 395 | .. | 310 | 270 | 55.2 | 55 25 15.5 | .. | 106 32 54.9 | + 2.4 |
| 20 | 49 40 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 21 | 343 56 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 22 | 66 20 | 14.0 | 17.5 | 29.0 | 5.0 | 33 | 410 | .. | .. | .. | 460 | 57.6 | 293 35 27.5 | 60.0 | 344 39 37.9 | + 0.9 |
| 23 | 342 4 | 17.8 | 19.8 | 2.5 | 10.8 | 39 | 920 | 720 | .. | .. | .. | 57.6 | 17 52 53.3 | .. | 68 59 32.9 | .. |
| 24 | 341 32 | 15. | 20.7 | 29.3 | 7.8 | 37 | .. | .. | .. | 590 | 550 | 57.6 | 18 24 34.3 | 62.8 | 69 31 14.6 | .. |
| 25 | 312 42 | 15.6 | 20.7 | 1.1 | 9.4 | 32 | .. | 570 | .. | 590 | .. | 57.6 | 47 13 17.4 | .. | 98 20 40.2 | - 0.9 |
| 26 | 349 32 | 17.4 | 20.7 | 1.1 | 9.4 | 32 | .. | 470 | .. | 470 | .. | 57.6 | 10 23 16.4 | .. | 61 29 48.1 | - 0.5 |
| 27 | 346 16 | 16.0 | 20.2 | 1.5 | 9.6 | 34 | .. | 970 | .. | 960 | .. | 57.6 | 13 39 39.7 | .. | 64 46 14.8 | .. |
| 28 | 328 26 | 14.1 | 19.5 | 29.0 | 8.0 | 35 | .. | 610 | .. | 510 | .. | 57.6 | 31 30 1.6 | .. | 82 36 57.7 | + 0.2 |
| 29 | 343 38 | 15.4 | 20.0 | 0.1 | 8.6 | 38 | .. | .. | .. | 170 | 190 | 57.6 | 16 18 43.6 | .. | 67 25 21.5 | + 1.4 |
| 30 | 337 34 | 13.8 | 17.2 | 29.1 | 6.0 | 39 | .. | 340 | .. | 170 | .. | 57.6 | 22 22 57.1 | .. | 73 29 41.7 | + 1.3 |
| 31 | 304 30 | 15.3 | 21.5 | 1.7 | 9.7 | 32 | .. | 080 | .. | 980 | .. | 57.6 | 55 25 9.4 | .. | 106 32 52.9 | + 0.6 |
| 32 | 346 30 | 10.2 | 18.0 | 27.3 | 5.9 | 35 | 230 | .. | .. | .. | 180 | 57.6 | 13 25 53.9 | 66.0 | 64 32 28.7 | .. |
| 33 | 346 30 | 10.2 | 18.0 | 27.3 | 5.9 | 33 | .. | 160 | .. | 100 | .. | 57.6 | 13 25 22.2 | .. | 64 31 57.0 | .. |
| 34 | 343 12 | 12.7 | 17.8 | 26.0 | 3.9 | 37 | 340 | 300 | .. | .. | .. | 57.7 | 16 44 28.4 | .. | 67 51 6.9 | - 4.5 |
| 35 | 343 12 | 12.7 | 17.8 | 26.0 | 3.9 | 37 | .. | .. | .. | 430 | 390 | 57.7 | 16 44 25.4 | 59.1 | 67 51 3.9 | - 4.5 |
| 36 | 327 34 | 13.3 | 17.4 | 27.0 | 5.1 | 35 | .. | 950 | .. | 950 | .. | 57.7 | 32 19 32.2 | .. | 83 26 29.9 | - 1.9 |
| 37 | 321 4 | 15.3 | 18.5 | 28.1 | 6.2 | 34 | .. | 340 | .. | 250 | .. | 57.7 | 38 51 41.6 | .. | 89 58 49.3 | - 1.3 |
| 38 | 329 26 | 18.4 | 20.9 | 1.0 | 7.3 | 35 | .. | 510 | .. | 740 | .. | 57.7 | 30 27 33.2 | .. | 81 34 28.3 | - 2.3 |
| 39 | 298 22 | 17.6 | 20.0 | 0.4 | 9.5 | 38 | .. | 540 | .. | 490 | .. | 57.7 | 61 34 48.5 | .. | 112 42 56.2 | + 0.1 |
| 40 | 308 16 | 18.0 | 20.0 | 0.9 | 9.7 | 39 | .. | .. | .. | 050 | 940 | 57.7 | 51 40 56.9 | .. | 102 48 31.1 | -16.8 |
| 41 | 0 0 | 9.3 | 14.1 | 22.8 | 0.6 | 39 | 460 | 390 | .. | .. | .. | 57.7 | 359 54 34.8 | .. | 51 0 55.9 | - 2.6 |
| 42 | 0 0 | 9.3 | 14.1 | 22.8 | 0.6 | 40 | .. | .. | .. | 250 | 180 | 57.7 | 359 54 21.0 | .. | 51 0 42.1 | - 1.5 |
| 43 | 6 58 | 14.6 | 20.0 | 0.5 | 6.5 | 34 | 790 | 860 | .. | .. | .. | 57.7 | 352 57 50.0 | .. | 44 4 4.1 | - 1.5 |
| 44 | 15 32 | 17.4 | 22.0 | 2.5 | 7.2 | 36 | 800 | 740 | .. | .. | .. | 57.7 | 341 24 22.3 | .. | 32 30 24.0 | + 0.6 |
| 45 | 52 22 | 15.0 | 18.3 | 29.1 | 4.4 | 34 | .. | 360 | 350 | 390 | .. | 57.7 | 307 33 42.3 | .. | 358 38 48.3 | - 0.1 |
| 46 | 314 12 | 15.6 | 19.7 | 29.1 | 6.2 | 34 | 520 | 480 | .. | .. | .. | 57.7 | 15 43 44.8 | .. | 66 50 22.3 | - 8.9 |
| 47 | 345 28 | 12.6 | 16.4 | 26.1 | 3.7 | 37 | .. | 390 | .. | 320 | .. | 57.7 | 14 25 52.8 | 56.0 | 65 32 28.9 | - 1.1 |
| 48 | 356 26 | 15.6 | 19.4 | 29.1 | 6.2 | 37 | .. | 140 | .. | 060 | .. | 57.7 | 3 30 25.4 | .. | 54 36 50.0 | - 6.8 |
| 49 | 15 22 | 13.8 | 18.1 | 29.1 | 4.7 | 33 | .. | .. | .. | 950 | 600 | 57.7 | 344 53 35.3 | .. | 35 39 40.5 | - 3.3 |
| 50 | 318 40 | 5.5 | 9.5 | 19.7 | 28.6 | 34 | .. | 860 | .. | 750 | .. | 57.7 | 41 15 40.3 | .. | 92 22 52.5 | - 3.3 |
| 51 | 336 54 | 12.1 | 16.5 | 25.0 | 3.6 | 40 | .. | 050 | .. | 940 | .. | 57.7 | 23 3 6.3 | .. | 74 9 52.2 | -12.1 |
| 52 | 358 48 | 13.7 | 19.5 | 28.2 | 5.8 | 43 | .. | .. | .. | 920 | 970 | 57.7 | 1 7 37.0 | .. | 52 13 59.3 | - 8.3 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " | " | " | " |
| 2 | 30.11 | 81.9 | 9 | - 2.7 | + 15 48.5 | .. | + 15 45.8 |
| 3 | 29.85 | 74.2 | 10 | - 2.8 | - 15 48.5 | .. | - 15 51.3 |
| 7 | 29.86 | 77.3 | 11 | - 2.6 | + 3.1 | .. | + 0.5 |
| 8 | 29.85 | 79.4 | 12 | - 2.6 | + 3.1 | + 0.1 | - 5.6 |
| 16 | 29.83 | 80.6 | 23 | - 2.7 | + 15 50.8 | .. | + 15 48.1 |
| 12 | 29.78 | 79.8 | 24 | - 2.7 | - 15 50.8 | .. | - 15 53.5 |
| 14 | 29.77 | 81.5 | 27 | - 2.6 | - 0.2 | .. | - 2.8 |
| 16 | 29.76 | 82.9 | 32 | - 3.6 | - 15.9 | + 0.1 | - 19.4 |
| 18 | 29.75 | 83.0 | 33 | - 3.6 | + 15.9 | .. | + 12.3 |
| 22 | 30.18 | 61.8 | | | | | |
| 24 | 30.19 | 63.2 | | | | | |
| 32 | 30.22 | 70.0 | | | | | |
| 35 | 30.22 | 61.2 | | | | | |
| 47 | 30.24 | 57.8 | | | | | |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. |
|--------|---------|----------------------------------|-----------|--------------------------------|-----------|-----------|-----------|-----------|------|----------|---------|--------|--------------|-------------|----------------|---------------------------|----------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. m. s. | |
| 1876. | | | | | | | | | | | m. s. | s. | s. | s. | | s. | | |
| May 23 | 1 | B. A. C. 4853 . . . | S. | 37.9 40.3 | 42.0 48.3 | 50.4 52.4 | 58.8 0.3 | 2.8 | 35 | 50.36 | — 0.10 | . | — 1.72 | 14 35 48.51 | — 2.49 | | | |
| | 2 | B. A. C. 4870 . . . | S. | 44.3 47.0 | 50.0 58.0 | 0.6 3.4 | 11.4 13.4 | 16.8 | 39 | 0.61 | — 0.33 | . | — 1.72 | 14 38 58.56 | — 2.93 | | | |
| | 3 | B. A. C. 4903 . . . | S. | 49.7 44.4 | 46.7 55.6 | 58.6 1.8 | 10.3 12.7 | 16.4 | 44 | 58.58 | — 0.41 | . | — 1.72 | 14 44 56.45 | — 3.11 | | | |
| | 4 | B. A. C. 4917 . . . | S. | 28.6 31.8 | 34.0 43.2 | 46.2 49.2 | 58.2 0.3 | 4.0 | 47 | 46.10 | — 0.4 | . | — 1.73 | 14 47 43.06 | — 3.12 | | | |
| | 5 | B. A. C. 4961 . . . | S. | 58.6 1.7 | 3.6 11.4 | 13.7 16.1 | 23.7 25.5 | 28.7 | 58 | 13.67 | — 0.28 | . | — 1.73 | 14 58 11.66 | — 2.81 | | | |
| | 6 | B. A. C. 5026 . . . | S. | . | . | 51.8 54.5 | 57.0 59.6 | 2.2 | . | 8 57 00 | — 0.34 | . | — 1.73 | 15 8 54.96 | — 2.87 | | | |
| | 7 | Themis . . . | S. | 39.6 42.2 | 43.8 50.2 | 52.6 54.6 | 1.0 2.7 | 5.3 | 15 | 52.44 | + 0.06 | . | — 1.73 | 15 15 50.77 | . | | | |
| | 8 | Melpomene . . . | S. | 13.5 16.0 | 17.6 23.9 | 25.8 27.9 | 34.1 35.5 | 38.1 | 26 | 25.82 | — 0.02 | . | — 1.73 | 15 26 24.07 | . | | | |
| | 9 | Jupiter I, N. . . | S. | 51.4 54.0 | 55.5 | . | . | 12.8 14.3 | 27.1 | 37 4.20 | + 0.06 | . | — 1.73 | 15 37 2.53 | . | | | |
| | 10 | Jupiter II, S. . . | S. | . | . | 3.2 5.4 | 7.5 9.7 | 12.0 | . | 37 7.55 | + 0.06 | . | — 1.73 | 15 37 5.88 | . | | | |
| | 11 | Astræa . . . | S. | 11.4 14.0 | 15.5 | . | . | 32.3 33.9 | 36.4 | 47 23.94 | + 0.03 | . | — 1.73 | 15 47 22.24 | . | | | |
| | 12 | δ Scorpii . . . | S. | . | 0.2 | 2.5 4.6 | 6.8 9.0 | 13.5 15.0 | 17.7 | 53 4.60 | + 0.08 | — 1.73 | — 1.74 | 15 53 2.94 | 0.00 | | | |
| | 13 | β^1 Scorpii . . . | S. | 5.3 7.8 | 9.6 | . | . | 26.8 28.5 | 31.0 | 58 18.19 | + 0.07 | — 1.83 | — 1.74 | 15 58 16.52 | + 0.12 | | | |
| | 14 | β^2 Scorpii . . . | S. | . | . | 14 2 16.6 | 18.6 20.9 | 22.9 | . | 58 18.62 | + 0.07 | . | — 1.74 | 15 58 16.95 | — 2.70 | | | |
| | 15 | δ Ophiuchi . . . | S. | 43.0 45.4 | 47.0 53.1 | 55.2 57.2 | 3.2 4.8 | 7.5 | 7 | 55.16 | — 0.01 | — 1.65 | — 1.74 | 16 7 53.41 | — 0.07 | | | |
| | 16 | Iris . . . | S. | 5.2 7.9 | 9.8 16.5 | 18.6 20.7 | 27.6 29.4 | 31.9 | 53 | 18.62 | + 0.10 | . | — 1.75 | 16 53 16.97 | . | | | |
| 27 | 17 | 12 ¹ Canum Venat. . . | S. | . | . | . | . | 23 8 29.1 | 31.0 | 50 18.57 | — 0.49 | — 1.98 | — 2.22 | 12 50 15.86 | — 0.24 | | | |
| | 18 | Polaris, S. P. . . | S. | . | . | 14.5 45.5 | 20.5 5.2 | 29.0 | . | 12 20.92 | + 11.02 | . | — 2.23 | 1 12 29.71 | — 0.56 | | | |
| | 19 | α Virginis . . . | S. | 32 0 31 6 | 36.2 42.4 | 44.5 46.5 | 52.7 54.3 | 56.9 | 18 | 44.46 | — 0.36 | — 2.26 | — 2.23 | 13 18 41.87 | + 0.01 | | | |
| | 20 | ζ Virginis . . . | S. | 15.0 17 6 | 19.1 25.4 | 27.4 29.4 | 35 4 37.0 | 39.6 | 28 | 27.32 | — 0.37 | — 2.21 | — 2.23 | 13 28 24.72 | — 0.02 | | | |
| | 21 | Pallas . . . | S. | 16.3 19.1 | 20.8 27.6 | 29.9 32.0 | 38.7 40.4 | 43.3 | 37 | 29.79 | — 0.42 | . | — 2.23 | 13 37 27.14 | . | | | |
| | 22 | η Bootis . . . | S. | 38.9 41.6 | 43.3 49.8 | 52.0 54.0 | 0.4 2.0 | 4.9 | 43 | 51.88 | — 0.41 | — 2.21 | — 2.23 | 13 48 49.24 | — 0.97 | | | |
| | 23 | Ceres . . . | S. | . | . | . | . | 7 33.2 | 35.6 | 6 23.46 | — 0.36 | . | — 2.24 | 14 6 20.86 | . | | | |
| | 24 | B. A. C. 4870 . . . | S. | 45.3 48.7 | 50.7 58.9 | 1.7 4.4 | 12.5 14.5 | 17.8 | 39 | 1.61 | — 0.50 | . | — 2.24 | 14 38 58.87 | — 2.92 | | | |
| | 25 | B. A. C. 4903 . . . | S. | 41.5 45.4 | 47.7 56.6 | 59.4 2.6 | 11.3 13.5 | 17.2 | 44 | 59.41 | — 0.54 | . | — 2.25 | 14 44 56.65 | — 3.69 | | | |
| | 26 | B. A. C. 4917 . . . | S. | 28.8 32.6 | 34.9 44.0 | 47.0 50.0 | 58.8 1.2 | 4.8 | 47 | 46.90 | — 0.54 | . | — 2.25 | 14 47 44.11 | — 3.10 | | | |
| | 27 | B. A. C. 4961 . . . | S. | 59.5 2.6 | 4.5 12.0 | 14.6 17.1 | 24 7 26.6 | 29.7 | 58 | 14.59 | — 0.47 | . | — 2.25 | 14 58 11.87 | — 2.81 | | | |
| | 28 | Antiope . . . | S. | 59.4 2.1 | 3.7 7.8 | 11.9 16.2 | 20.8 22.4 | 24.5 | 8 | 12.00 | — 0.35 | . | — 2.25 | 15 8 9.49 | . | | | |
| | 29 | Themis . . . | S. | 42.8 45.5 | 47.3 53.6 | 55.9 58.1 | 4.3 6.0 | 8.4 | 12 | 55.77 | — 0.35 | . | — 2.25 | 15 12 53.17 | . | | | |
| | 30 | Melpomene . . . | S. | 28.7 31.3 | 33.3 39.0 | 41.3 43.0 | 49 2 50.8 | 53.3 | 22 | 41.07 | — 0.36 | . | — 2.26 | 15 22 38.45 | . | | | |
| | 31 | Jupiter I, S. . . | S. | 49.7 52.5 | 54.1 | . | . | 11.2 12.9 | 15.6 | 35 2.60 | — 0.35 | . | — 2.26 | 15 35 0.08 | . | | | |
| | 32 | Jupiter II, N. . . | S. | . | . | 1.7 3 8 | 5.9 8.1 | 10.3 | . | 35 5.95 | — 0.35 | . | — 2.26 | 15 35 3.34 | . | | | |
| | 33 | Astræa . . . | S. | 34.6 37.3 | 39.0 45.5 | 47.4 49.6 | 55.3 57.1 | 59.4 | 43 | 47.24 | — 0.35 | . | — 2.27 | 15 43 44.62 | . | | | |
| | 34 | δ Scorpii . . . | S. | 52.3 55.2 | 56.8 3.5 | 5 7 7.8 | 14.4 16.0 | 18.7 | 53 | 5.60 | — 0.35 | — 2.26 | — 2.27 | 15 53 2.98 | 0.00 | | | |
| | 35 | β^1 Scorpii . . . | S. | 6.3 8.9 | 10.5 | . | . | 27.7 29.3 | 32.0 | 58 19.14 | — 0.35 | — 2.31 | — 2.27 | 15 58 16.52 | + 0.07 | | | |
| | 36 | β^2 Scorpii . . . | S. | . | . | 15.2 17.4 | 19.6 21.6 | 23.9 | . | 58 19.52 | — 0.35 | . | — 2.27 | 15 58 16.90 | — 2.75 | | | |
| | 37 | δ Ophiuchi . . . | S. | 43.8 46.4 | 48.0 54.2 | 56.2 58.2 | 4 3 5.8 | 8.4 | 7 | 56.14 | — 0.36 | — 2.24 | — 2.28 | 16 7 53.50 | — 0.02 | | | |
| | 38 | Hera . . . | S. | 24.6 27.2 | 28.8 35.0 | 37.3 39.3 | 45.3 47.2 | 49.6 | 39 | 37.14 | — 0.35 | . | — 2.28 | 16 39 34.51 | . | | | |
| | 39 | Iris . . . | S. | 2.3 5.0 | 6.5 13.3 | 15.6 18.0 | 24 7 26.3 | 29.3 | 49 | 15.67 | — 0.35 | . | — 2.28 | 16 49 13.04 | . | | | |
| 28 | 40 | Polaris . . . | E. | . | . | . | . | 23.0 | 12 | 44.27 | — 13.87 | . | — 2.81 | 1 12 27.59 | — 3.69 | | | |
| | 41 | η Piscium . . . | E. | 41.9 44.5 | 46.1 52.5 | 54.6 56.7 | 3 0 4.6 | 7.3 | 24 | 54.58 | — 0.45 | — 2.85 | — 2.82 | 1 24 51.31 | + 0.10 | | | |
| | 42 | β Arietis . . . | E. | 37.8 40.7 | 42.3 48.9 | 51.0 53.2 | 59 7 1.3 | 4.0 | 47 | 50.99 | — 0.47 | — 2.81 | — 2.82 | 1 47 47.70 | + 0.01 | | | |
| | 43 | α Arietis . . . | E. | 1.3 4.0 | 5.7 12.3 | 14.6 16.7 | 23.4 25.0 | 27.8 | 0 | 14.53 | — 0.45 | — 2.86 | — 2.82 | 2 0 11.23 | — 0.01 | | | |
| 29 | 44 | Sun I, N. . . | E. | 10.2 13.0 | 14.7 21.3 | 23.7 25.9 | 32.3 34.2 | 36.5 | 26 | 23.53 | — 0.52 | . | — 2.85 | 4 26 20.16 | . | | | |
| | 45 | Sun II, S. . . | E. | 26.7 29.5 | 31.2 37.9 | 40.0 42.2 | 48 9 50.5 | 53.2 | 28 | 40.04 | — 0.52 | . | — 2.85 | 4 28 36.64 | . | | | |
| | 46 | Mercury I, C. . . | E. | 44.0 47.1 | 48.6 55.2 | 57.6 59.9 | 6.5 8.1 | 11.0 | 54 | 57.56 | — 0.53 | . | — 2.87 | 5 54 54.16 | + 0.36 | | | |
| | 47 | Geminorum (R) . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | | | |
| | 48 | Geminorum . . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | | | |
| | 49 | B. A. C. 2462 . . . | E. | 19.5 21.0 | 25.0 27.2 | 29.2 31.2 | 33.3 37.5 | 39.0 | 20 | 29.21 | — 0.47 | . | — 2.85 | 7 20 25.86 | — 0.36 | | | |
| | 50 | α^2 Geminorum . . . | E. | 30.6 33.7 | 35.5 42.8 | 45.3 47.7 | 54.8 56.6 | 59.7 | 20 | 45.19 | — 0.57 | — 2.94 | — 2.88 | 7 20 41.74 | + 0.30 | | | |

7, 8, 11, 16, 21, 23, 28, 29, 30, 33, 38, 39. Thread A used.

13. Bisections at threads II and III.

35. Telescope micrometer reading decreased one revolution in reduction.

43. Microscope VI has been increased 5" in reduction.

48. Thread B used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | | | | | | |
| 1 | 333 14 | 10 15.1 | 18.0 | 28.6 | 6.0 | 33 | 928 | 932 | .. | .. | 57.7 | 26 41 35.3 | .. | + | 29.3 | 77 48 25.8 | -13.5 | |
| 2 | 2 2 | 17.0 | 20.2 | 0.9 | 7.3 | 38 | .. | 195 | .. | 180 | .. | 57.7 | 357 54 43.3 | .. | - | 2.1 | 49 1 2.4 | -8.9 |
| 3 | 7 40 | 8.2 | 11.5 | 21.8 | 28.6 | 35 | 490 | 425 | .. | .. | 57.7 | 352 15 52.2 | .. | - | 7.9 | 43 22 5.5 | -8.4 | |
| 4 | 8 2 | 13.4 | 16.5 | 27.9 | 3.9 | 38 | .. | 092 | .. | 072 | .. | 57.7 | 351 54 38.4 | .. | - | 8.3 | 43 0 51.3 | -8.6 |
| 5 | 356 44 | 15.4 | 17.8 | 27.8 | 5.8 | 36 | .. | 340 | .. | 350 | .. | 57.7 | 3 12 12.9 | .. | + | 3.3 | 54 18 37.4 | -10.8 |
| 6 | 359 46 | 17.6 | 21.0 | 1.5 | 8.0 | 35 | 360 | 410 | .. | .. | 57.7 | 0 10 0.5 | .. | + | 0.2 | 51 16 21.9 | -10.9 | |
| 7 | 302 30 | 6.9 | 10.0 | 20.7 | 0.5 | 39 | .. | 480 | .. | 570 | .. | 57.7 | 57 24 20.6 | .. | + | 31.0 | 108 32 12.8 | -3.5 |
| 8 | 318 56 | 14.1 | 18.0 | 28.8 | 5.3 | 36 | .. | 985 | .. | 910 | .. | 57.7 | 40 57 48.3 | .. | + | 50.6 | 92 5 0.1 | -3.5 |
| 9 | 302 44 | 13.3 | 17.5 | 28.3 | 7.6 | 27 | .. | 775 | .. | 720 | .. | 57.7 | 57 10 0.9 | .. | + | 30.3 | 108 17 52.4 | .. |
| 10 | 302 44 | 13.3 | 17.5 | 28.3 | 7.6 | 30 | 850 | .. | .. | .. | 740 | 57.7 | 57 10 47.5 | .. | + | 30.3 | 108 18 39.0 | .. |
| 11 | 309 50 | 4.2 | 8.5 | 17.5 | 25.5 | 37 | .. | 110 | .. | 920 | .. | 57.7 | 50 3 39.1 | .. | + | 9.7 | 101 11 10.0 | -4.2 |
| 12 | 298 48 | 13.0 | 16.0 | 27.5 | 7.0 | 36 | .. | .. | .. | 075 | 090 | 57.7 | 61 8 8.4 | .. | + | 45.7 | 112 16 15.3 | +0.1 |
| 13 | 301 36 | 12.5 | 14.7 | 27.2 | 5.2 | 36 | 350 | 260 | .. | .. | .. | 57.7 | 58 20 9.7 | .. | + | 34.5 | 109 28 5.4 | -1.5 |
| 14 | 301 36 | 12.5 | 14.7 | 27.2 | 5.2 | 35 | .. | .. | .. | 370 | 350 | 57.7 | 58 19 56.4 | .. | + | 34.5 | 102 27 52.1 | -15.7 |
| 15 | 317 40 | 4.5 | 8.8 | 18.9 | 28.0 | 33 | .. | 750 | .. | 720 | .. | 57.7 | 42 15 23.6 | .. | - | 53.1 | 93 22 37.9 | -0.6 |
| 16 | 297 6 | 13.9 | 16.9 | 28.4 | 6.3 | 34 | .. | 850 | .. | 520 | .. | 57.7 | 62 47 13.3 | 50.9 | + | 53.6 | 113 55 28.1 | -4.3 |
| 17 | 0 0 | 1.2 | 5.3 | 13.3 | 21.7 | 29 | .. | .. | .. | 960 | 910 | 57.9 | 359 54 22.2 | 70.0 | - | 0.1 | 51 0 43.3 | +0.3 |
| 18 | 52 22 | 14.8 | 16.5 | 25.8 | 3.4 | 34 | 295 | .. | 260 | .. | 310 | 57.9 | 307 33 39.6 | .. | - | 12.9 | 358 38 47.9 | 0.0 |
| 19 | 310 32 | 10.7 | 14.6 | 23.1 | 3.9 | 34 | .. | 380 | .. | 292 | .. | 57.9 | 49 23 38.5 | .. | + | 5.4 | 100 31 5.1 | +0.9 |
| 20 | 321 6 | 13.6 | 16.5 | 26.4 | 7.2 | 38 | .. | .. | .. | 670 | 640 | 57.9 | 38 50 48.3 | .. | + | 45.2 | 89 57 54.7 | +1.3 |
| 21 | 345 24 | 8.5 | 13.0 | 21.6 | 1.5 | 36 | .. | 500 | .. | 430 | .. | 57.9 | 14 29 35.9 | .. | + | 14.6 | 65 36 11.7 | -1.1 |
| 22 | 340 4 | 9.3 | 12.9 | 21.7 | 1.8 | 36 | 960 | 890 | .. | .. | .. | 57.9 | 19 52 15.9 | .. | + | 20.3 | 70 58 57.4 | +0.6 |
| 23 | 318 28 | 14.0 | 15.1 | 26.0 | 6.4 | 39 | .. | .. | .. | 280 | 280 | 57.9 | 41 26 23.9 | .. | + | 49.7 | 92 33 34.8 | -3.2 |
| 24 | 2 2 | 14.7 | 17.4 | 27.4 | 5.5 | 38 | .. | 230 | .. | 252 | .. | 57.9 | 357 54 41.8 | .. | - | 2.1 | 49 1 0.9 | -8.0 |
| 25 | 7 40 | 10.8 | 14.6 | 24.6 | 2.8 | 35 | .. | 182 | .. | 190 | .. | 57.9 | 352 15 52.0 | .. | - | 7.7 | 43 22 5.5 | -7.4 |
| 26 | 8 2 | 9.9 | 14.0 | 24.6 | 2.3 | 38 | .. | .. | .. | 140 | 100 | 57.9 | 351 54 37.4 | .. | - | 8.0 | 43 0 50.6 | -7.5 |
| 27 | 356 44 | 13.5 | 16.4 | 24.6 | 2.9 | 36 | .. | 480 | .. | 400 | .. | 57.9 | 3 12 12.3 | .. | + | 3.2 | 54 18 36.7 | -9.8 |
| 28 | 304 24 | 10.4 | 14.0 | 22.4 | 2.9 | 38 | .. | 170 | .. | 260 | .. | 57.9 | 55 30 3.7 | .. | + | 22.1 | 106 37 47.0 | -3.9 |
| 29 | 302 40 | 6.9 | 11.5 | 20.6 | 29.0 | 36 | .. | 640 | .. | 690 | .. | 57.9 | 57 13 37.0 | .. | + | 27.6 | 108 21 25.8 | -3.5 |
| 30 | 319 6 | 12.8 | 15.1 | 25.7 | 5.6 | 38 | .. | 950 | .. | 790 | .. | 57.9 | 40 48 10.2 | .. | + | 48.8 | 91 55 26.2 | -3.5 |
| 31 | 302 52 | 10.7 | 13.1 | 22.9 | 4.0 | 37 | .. | 410 | .. | 380 | .. | 57.9 | 57 4 24.9 | .. | + | 27.2 | 108 12 13.3 | .. |
| 32 | 302 52 | 10.7 | 13.1 | 22.9 | 4.0 | 34 | 520 | .. | .. | .. | 410 | 57.9 | 57 3 39.9 | .. | + | 27.1 | 108 11 28.2 | .. |
| 33 | 309 58 | 11.0 | 14.6 | 24.7 | 5.1 | 37 | .. | 730 | .. | 670 | .. | 57.9 | 49 55 57.3 | .. | + | 7.2 | 101 3 25.7 | -4.1 |
| 34 | 298 48 | 11.9 | 14.6 | 26.0 | 6.4 | 36 | .. | 570 | .. | 510 | .. | 57.9 | 61 8 13.8 | .. | + | 42.4 | 112 16 17.4 | +2.1 |
| 35 | 301 36 | 9.0 | 12.0 | 23.0 | 1.8 | 37 | 780 | 720 | .. | .. | .. | 57.9 | 58 20 13.1 | .. | + | 31.7 | 109 28 6.0 | -0.9 |
| 36 | 301 36 | 9.0 | 12.0 | 23.0 | 1.8 | 35 | .. | .. | .. | 770 | 750 | 57.9 | 58 19 59.3 | .. | + | 31.6 | 109 27 52.1 | -15.8 |
| 37 | 317 40 | 6.8 | 11.0 | 20.6 | 0.8 | 33 | .. | 700 | .. | 650 | .. | 57.9 | 42 15 25.1 | .. | + | 51.5 | 93 22 37.8 | -0.3 |
| 38 | 307 2 | 8.8 | 12.6 | 21.5 | 2.6 | 39 | .. | 640 | .. | 620 | .. | 57.9 | 52 52 24.3 | .. | + | 14.8 | 104 0 0.3 | -4.4 |
| 39 | 297 20 | 4.0 | 8.9 | 18.9 | 27.6 | 40 | .. | 920 | .. | 805 | .. | 57.9 | 62 34 39.1 | 62.6 | + | 49.1 | 113 42 49.4 | -4.3 |
| 40 | 49 40 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 41 | 335 46 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 42 | 341 14 | 16.1 | 18.2 | 0.2 | 12.0 | 32 | .. | 140 | .. | 080 | .. | 57.1 | 18 41 9.8 | 74.0 | + | 18.8 | 69 47 49.8 | -1.5 |
| 43 | 343 56 | 13.5 | 13.8 | 26.5 | 4.7 | 38 | .. | 790 | .. | 710 | .. | 57.1 | 16 0 48.3 | .. | + | 15.9 | 67 7 25.4 | +0.4 |
| 44 | 343 4 | 7.7 | 13.6 | 20.9 | 0.8 | 37 | 410 | 290 | .. | .. | .. | 57.1 | 16 52 20.8 | .. | + | 16.5 | 67 58 58.5 | .. |
| 45 | 342 32 | 10.0 | 16.0 | 21.4 | 2.7 | 35 | .. | .. | .. | 475 | 420 | 57.1 | 17 23 55.4 | 82.4 | + | 17.1 | 68 30 33.7 | .. |
| 46 | 345 20 | 10.0 | 15.5 | 23.2 | 2.5 | 37 | .. | 500 | .. | 535 | .. | 57.1 | 14 36 26.4 | .. | + | 14.1 | 65 43 1.7 | .. |
| 47 | 202 18 | 15.0 | 19.8 | 29.2 | 4.5 | 31 | 905 | 895 | .. | .. | .. | 57.1 | 157 37 3.6 | 86.5 | - | 22.3 | 73 29 39.9 | -0.4 |
| 48 | 337 34 | 15.3 | 19.2 | 28.0 | 6.4 | 29 | .. | .. | .. | 250 | 280 | 57.1 | 22 22 57.6 | .. | + | 22.3 | 73 29 41.1 | +0.8 |
| 49 | 329 36 | 10.0 | 16.0 | 23.5 | 3.6 | 39 | .. | 030 | .. | 980 | .. | 57.1 | 30 20 49.5 | .. | + | 31.3 | 81 27 42.0 | +4.3 |
| 50 | 353 12 | 13.6 | 19.0 | 27.4 | 6.5 | 35 | .. | .. | .. | 130 | 110 | 57.1 | 6 43 54.4 | .. | + | 6.3 | 57 50 21.9 | +1.8 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " | " | " | " |
| 16 | 30.26 | 54.8 | 9 | - 1.7 | + 23.3 | .. | + 21.6 |
| 17 | 30.04 | 72.0 | 10 | - 1.7 | - 23.3 | .. | - 25.0 |
| 39 | 30.03 | 65.5 | 31 | - 1.7 | - 22.6 | .. | - 24.3 |
| 42 | 29.94 | 71.5 | 32 | - 1.7 | + 22.6 | .. | + 20.9 |
| 45 | 29.93 | 79.0 | 44 | - 2.5 | + 15 47.6 | .. | + 15 45.1 |
| 47 | 29.92 | 85.0 | 45 | - 2.6 | - 15 47.6 | .. | - 15 50.2 |
| | | | 46 | - 3.2 | .. | 0.1 | - 3.3 |

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|--------|--------|-------------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|---------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't | Clock adopted. | | |
| | | | | m. | s. | | | | | | | | | s. | s. | s. | h. m. s. | s. |
| 1876. | | | | | | | | | | | | | | | | | | |
| May 29 | 1 | a Canis Minoris | E. | 39.6 | 42.4 | 43.9 | 50.2 | 52.2 | 54.2 | 0.4 | 1.9 | 4.5 | 32 52.18 | - 0.46 | - 2.82 | - 2.88 | 7 32 48.84 | - 0.22 |
| | 2 | Venus I, N. | E. | 25.7 | 28.5 | 30.2 | 36.9 | 39.2 | 41.5 | 48.3 | 50.0 | 52.8 | 33 39.23 | - 0.52 | . | - 2.88 | 7 33 35.83 | + 1.21 |
| | 3 | β Geminorum | E. | 33.5 | 36.6 | 38.4 | 45.3 | 47.6 | 50.0 | 56.7 | 58.6 | 1.6 | 37 47.59 | - 0.55 | - 2.90 | - 2.88 | 7 37 44.16 | - 0.01 |
| | 4 | Moon I, N. | E. | 3.9 | 6.7 | 8.2 | 14.7 | 16.8 | 18.9 | 25.0 | 26.8 | 29.5 | 30 16.72 | - 0.48 | . | - 2.88 | 10 30 13.36 | + 67.09 |
| | 5 | a Ursæ Majoris (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 6 | a Ursæ Majoris | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 7 | δ Leonis | E. | 22.7 | 25.4 | 27.0 | 33.7 | 35.9 | 38.1 | 44.6 | 46.2 | 49.0 | 7 35.84 | - 0.51 | - 2.86 | - 2.88 | 11 7 32.45 | - 0.05 |
| | 8 | δ Crateris | E. | 0.3 | 3.0 | 4.7 | 11.0 | 13.3 | 15.4 | 21.6 | 23.1 | 25.7 | 13 13.12 | - 0.41 | - 2.86 | - 2.88 | 11 13 9.83 | - 0.04 |
| | 9 | γ Leonis | E. | 20.4 | 28.8 | 30.4 | 36.6 | 38.6 | 40.7 | 46.7 | 48.2 | 50.8 | 21 38.58 | - 0.45 | - 2.94 | - 2.88 | 11 21 35.25 | + 0.04 |
| | 10 | η Leonis | E. | 2.7 | 31.0 | 32.7 | 39.0 | 41.0 | 43.0 | 49.0 | 50.7 | 53.2 | 30 40.92 | - 0.44 | - 2.90 | - 2.88 | 11 30 37.60 | - 0.02 |
| | 11 | β Leonis | E. | 36.5 | 39.0 | 40.8 | 47.1 | 49.3 | 51.4 | 57.7 | 59.3 | 1.0 | 42 49.22 | - 0.49 | - 2.89 | - 2.89 | 11 42 45.84 | - 0.02 |
| | 12 | γ Ursæ Majoris | E. | 3.6 | 8.1 | 10.7 | 21.4 | 24.8 | 28.3 | 38.7 | 41.4 | 45.7 | 47 24.74 | - 0.80 | . | - 2.89 | 11 47 21.03 | + 0.21 |
| | 13 | α Virginis | E. | 46.4 | 48.9 | 50.5 | 56.8 | 58.9 | 0.9 | 7.0 | 8.6 | 11.2 | 58 58.80 | - 0.47 | - 2.94 | - 2.89 | 11 58 55.44 | + 0.03 |
| | 14 | 4 Draconis | E. | 32.9 | 45.7 | 53.5 | 23.9 | 34.0 | 44.1 | 11.0 | 21.7 | 31.0 | 6 33.76 | - 1.75 | . | - 2.90 | 12 6 29.11 | + 0.41 |
| | 15 | Vesta | E. | 39.8 | 42.5 | 44.6 | 50.3 | 52.4 | 54.5 | 0.6 | 2.1 | 4.8 | 24 52.33 | - 0.46 | . | - 2.90 | 12 25 48.97 | . |
| | 16 | 32 ¹ Camelopardalis (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 17 | 32 ² Camelopardalis (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 18 | 32 ¹ Camelopardalis | E. | . | . | 46.3 | 6.7 | 27.1 | 46.6 | 6.0 | . | . | 48 26.40 | - 3.63 | . | - 2.91 | 12 48 19.86 | - 12.52 |
| | 19 | 32 ² Camelopardalis | E. | . | . | 54.2 | 14.5 | 34.7 | 54.0 | 14.4 | . | . | 48 34.22 | - 3.64 | . | - 2.91 | 12 48 27.67 | + 1.04 |
| | 20 | Polaris, S. P. Comes | E. | 22.0 | 36.5 | 39.5 | 9.5 | 44.0 | 20.5 | 5.5 | 0.0 | 9.5 | 11 46.44 | + 14.58 | . | - 2.92 | 1 11 58.16 | + 49.49 |
| | 21 | Polaris, S. P. | E. | 53.0 | 9.0 | 5.0 | 41.5 | 14.5 | 46.5 | 31.5 | 27.0 | 37.5 | 12 16.18 | + 14.62 | . | - 2.92 | 1 12 27.88 | - 3.74 |
| | 22 | Pallas | E. | 57.9 | 0.7 | 2.5 | 9.1 | 11.4 | 13.7 | 20.4 | 22.0 | 24.8 | 37 11.39 | - 0.53 | . | - 2.93 | 13 37 7.93 | . |
| | 23 | B. A. C. 4595 | E. | 47.5 | 50.8 | 52.7 | 0.6 | 3.4 | 6.0 | 13.7 | 15.6 | 19.0 | 41 3.26 | - 0.62 | . | - 2.93 | 13 40 59.71 | - 2.75 |
| | 24 | B. A. C. 4600 | E. | 29.5 | 32.9 | 34.9 | 42.8 | 45.4 | 48.0 | 56.0 | 57.9 | 1.0 | 41 45.38 | - 0.62 | . | - 2.93 | 13 41 41.83 | - 2.75 |
| | 25 | η Bootis (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 26 | η Bootis | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 27 | Ceres | E. | 13.5 | 16.0 | 17.6 | 23.7 | 25.7 | 27.7 | 34.0 | 35.4 | 38.0 | 5 25.73 | - 0.44 | . | - 2.94 | 14 5 22.35 | . |
| | 28 | α Bootis (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 29 | α Bootis | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 30 | Themis | E. | 19.1 | 22.0 | 24.0 | 30.5 | 32.4 | 34.6 | 40.9 | 42.8 | 45.7 | 11 32.44 | - 0.41 | . | - 2.96 | 15 11 29.07 | . |
| | 31 | Melpomene | E. | 40.5 | 43.0 | 44.7 | 50.7 | 52.9 | 55.0 | 1.0 | 2.6 | 5.2 | 20 52.84 | - 0.44 | . | - 2.97 | 15 20 49.43 | . |
| | 32 | Jupiter I, N. | E. | 50.7 | 53.4 | 55.0 | . | . | . | 12.0 | 13.6 | 16.4 | 34 3.54 | - 0.41 | . | - 2.97 | 15 34 0.1 | . |
| | 33 | Jupiter II, S. | E. | . | . | 2.5 | 4.7 | 6.9 | 8.9 | 11.1 | . | . | 34 6.81 | - 0.41 | . | - 2.97 | 15 34 3.43 | . |
| | 34 | a Serpentis | E. | 3.3 | 5.9 | 7.5 | 13.6 | 15.6 | 17.7 | 23.9 | 25.5 | 28.0 | 38 15.67 | - 0.46 | - 2.96 | - 2.98 | 15 38 12.23 | 0.00 |
| | 35 | Astræa | E. | 50.6 | 53.2 | 54.9 | 1.0 | 3.1 | 5.3 | 11.3 | 12.8 | 15.5 | 42 3.07 | - 0.42 | . | - 2.98 | 15 41 59.67 | . |
| | 36 | ε Serpentis | E. | 31.9 | 34.5 | 36.0 | 42.1 | 44.2 | 46.4 | 52.4 | 54.0 | 56.5 | 44 44.22 | - 0.46 | - 2.99 | - 2.98 | 15 44 40.78 | + 0.01 |
| | 37 | δ Scorpïi | E. | 53.0 | 55.9 | 57.7 | 4.2 | 6.4 | 8.6 | 15.0 | 16.7 | 19.6 | 53 6.34 | - 0.40 | - 2.93 | - 2.98 | 15 53 2.96 | - 0.01 |
| | 38 | β ¹ Scorpïi | E. | 6.8 | 9.6 | 11.3 | . | . | . | 28.5 | 30.2 | 33.0 | 58 19.92 | - 0.40 | - 3.02 | - 2.98 | 15 58 16.54 | + 0.07 |
| | 39 | β ² Scorpïi | E. | . | . | 16.0 | 18.2 | 20.4 | 22.6 | 24.7 | . | . | 58 20.36 | - 0.40 | . | - 2.98 | 15 58 16.98 | - 2.77 |
| | 40 | δ Ophiuchi | E. | 41.7 | 47.1 | 48.8 | 55.0 | 57.0 | 59.1 | 5.2 | 6.7 | 9.3 | 7 56.99 | - 0.43 | - 3.00 | - 2.99 | 16 7 53.37 | + 0.03 |
| | 41 | B. A. C. 5499 | E. | 8.8 | 13.0 | 15.6 | 25.6 | 29.1 | 32.5 | 42.5 | 45.0 | 49.1 | 21 29.02 | - 0.76 | . | - 2.99 | 16 21 25.27 | - 3.16 |
| | 42 | B. A. C. 5559 | E. | 44.6 | 48.7 | 51.3 | 1.5 | 4.7 | 8.0 | 18.0 | 20.5 | 24.5 | 31 4.68 | - 0.76 | . | - 2.99 | 16 31 0.93 | - 3.12 |
| | 43 | Hera | E. | 37.9 | 40.6 | 41.9 | 48.0 | 50.1 | 52.2 | 55.3 | 0.0 | 2.5 | 37 50.10 | - 0.41 | . | - 2.99 | 16 37 46.70 | . |
| | 44 | O. Arg. S. 15973 | E. | 10.6 | 13.5 | 15.0 | 21.9 | 24.2 | 26.4 | 33.3 | 34.8 | 37.7 | 41 24.16 | - 0.40 | . | - 2.99 | 16 41 20.77 | - 2.95 |
| | 45 | Iris | E. | 58.5 | 1.3 | 2.9 | 9.6 | 11.8 | 14.0 | 20.7 | 22.4 | 25.2 | 47 11.82 | - 0.40 | . | - 2.99 | 16 47 8.43 | . |
| | 46 | Miriam | E. | . | . | 58.4 | . | . | . | 11.4 | 13.0 | 15.6 | 51 2.80 | - 0.41 | . | - 3.00 | 16 50 59.39 | . |
| 31 | 47 | Moon I, N. | E. | 30.3 | 33.0 | 34.5 | 40.5 | 42.9 | 45.0 | 51.2 | 52.5 | 55.3 | 7 42.83 | - 0.56 | . | - 3.50 | 12 7 38.77 | + 63.93 |
| | 48 | β Corvi | E. | 44.9 | 47.8 | 49.6 | 56.2 | 58.4 | 0.6 | 7.2 | 8.8 | 11.6 | 27 58.34 | - 0.59 | - 3.50 | - 3.51 | 12 27 54.24 | - 0.05 |
| | 49 | 12 ¹ Canum Venat. | E. | 3.2 | 6.4 | 8.3 | . | . | . | 29.3 | 31.3 | 34.6 | 50 18.88 | - 0.54 | . | - 3.51 | 12 50 14.83 | - 2.55 |
| | 50 | 12 ² Canum Venat. | E. | . | . | 14.9 | 17.5 | 20.0 | 22.8 | 25.4 | . | . | 50 20.10 | - 0.54 | - 3.52 | - 3.51 | 12 50 16.05 | + 0.01 |

20, 21. Bisections at threads B₁, C₁, C₃, C₅, and D₃.
22, 27, 30, 41, 43, 44, 46, 49, 50. Thread A used.
23, 42. Thread B used.
47. Bisections at sets B and D.
49, 50. The bisections in declination have been interchanged in reduction

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellan'us Corrections. |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|---------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " |
| 1 | 326 36 | 10 11.0 | 16.8 | 24.7 | 4.5 | 37 | 900 | 870 | .. | .. | .. | 57.1 | 33 20 32.5 | .. | 84 27 28.9 | - 0.5 |
| 2 | 345 34 | 8.5 | 13.8 | 20.6 | 1.9 | 35 | .. | .. | .. | 655 | 665 | 57.1 | 14 21 57.2 | .. | 65 28 32.1 | .. |
| 3 | 349 22 | 10.0 | 13.9 | 24.0 | 3.8 | 35 | 560 | 470 | .. | 460 | 415 | 57.1 | 10 33 55.4 | .. | 61 40 26.6 | + 1.8 |
| 4 | 332 6 | 23.3 | 28.7 | 5.5 | 15.0 | 36 | 140 | 280 | 485 | 675 | 820 | 56.5 | 27 50 22.6 | 83.5 | 78 57 12.5 | .. |
| 5 | 156 24 | 16.0 | 20.3 | 25.0 | 7.0 | 33 | .. | .. | 000 | .. | .. | 56.5 | 203 31 21.4 | .. | 27 34 36.1 | - 1.9 |
| 6 | 23 28 | 14.7 | 20.5 | 0.7 | 7.3 | 37 | .. | .. | .. | 975 | 970 | 56.5 | 336 28 39.8 | .. | 27 34 37.3 | - 0.7 |
| 7 | 342 14 | 13.5 | 21.5 | 28.7 | 8.5 | 32 | 420 | 400 | .. | 350 | 335 | 56.5 | 17 41 12.3 | .. | 68 47 50.9 | 0.0 |
| 8 | 306 56 | 15.0 | 20.2 | 29.1 | 8.0 | 32 | .. | .. | .. | 030 | 020 | 56.5 | 52 59 7.4 | .. | 104 6 40.9 | - 0.4 |
| 9 | 324 36 | 13.0 | 16.9 | 26.0 | 6.0 | 38 | .. | 840 | .. | 815 | .. | 56.5 | 35 20 48.3 | .. | 86 27 48.3 | + 0.5 |
| 10 | 320 54 | 16.5 | 21.0 | 29.2 | 7.5 | 33 | .. | 250 | .. | 200 | .. | 56.5 | 39 1 25.6 | .. | 90 8 31.2 | + 0.3 |
| 11 | 336 18 | 17.3 | 22.2 | 0.2 | 8.8 | 33 | .. | 205 | .. | 170 | .. | 56.5 | 23 37 26.2 | .. | 74 44 11.4 | + 1.7 |
| 12 | 15 26 | 13.8 | 18.6 | 28.1 | 6.3 | 38 | .. | 510 | .. | 460 | .. | 56.5 | 344 30 44.8 | .. | 35 36 50.8 | - 0.1 |
| 13 | 330 28 | 14.5 | 19.7 | 27.5 | 6.5 | 35 | .. | 385 | .. | 320 | .. | 56.5 | 29 27 56.7 | .. | 80 34 49.0 | 0.0 |
| 14 | 39 20 | 1.2 | 14.0 | 22.5 | 0.2 | 35 | .. | 490 | .. | 470 | .. | 56.5 | 320 35 55.2 | .. | 11 41 31.2 | - 2.0 |
| 15 | 328 46 | 19.8 | 23.3 | 0.5 | 8.1 | 27 | .. | 315 | .. | 210 | .. | 56.5 | 31 7 50.2 | 75.0 | 82 14 50.7 | - 2.9 |
| 16 | 134 46 | 13.0 | 21.1 | 27.8 | 4.5 | 40 | 055 | 970 | .. | .. | .. | 56.5 | 225 11 1.6 | .. | 5 54 24.1 | + 6.7 |
| 17 | 134 46 | 13.0 | 21.1 | 27.8 | 4.5 | 38 | 875 | 795 | .. | .. | .. | 56.5 | 225 10 43.6 | .. | 5 54 42.1 | + 0.2 |
| 18 | 45 6 | 16.7 | 20.3 | 29.0 | 5.0 | 31 | .. | .. | .. | 015 | 720 | 56.5 | 314 48 54.6 | .. | 5 54 20.3 | + 6.7 |
| 19 | 45 6 | 16.7 | 20.3 | 29.0 | 5.0 | 32 | .. | .. | .. | 235 | 005 | 56.5 | 314 49 13.8 | .. | 5 54 39.5 | - 2.4 |
| 20 | 52 22 | 14.0 | 17.5 | 26.8 | 2.2 | 33 | 500 | 230 | 240 | 250 | 540 | 56.5 | 307 33 22.6 | .. | 358 38 32.2 | + 5.2 |
| 21 | 52 22 | 14.0 | 17.5 | 26.8 | 2.2 | 34 | 370 | 180 | 170 | 260 | 480 | 56.5 | 307 33 37.0 | .. | 358 38 46.6 | - 1.0 |
| 22 | 345 20 | 12.3 | 16.3 | 25.6 | 3.9 | 34 | .. | 400 | .. | 360 | .. | 56.5 | 14 33 5.9 | .. | 65 39 41.5 | - 1.1 |
| 23 | 0 12 | 16.3 | 21.2 | 28.0 | 5.7 | 34 | 345 | 340 | .. | .. | .. | 56.5 | 359 46 14.1 | .. | 50 52 35.1 | - 4.6 |
| 24 | 0 12 | 16.8 | 21.2 | 28.0 | 5.7 | 35 | .. | 200 | .. | 175 | .. | 56.5 | 359 43 55.3 | .. | 50 50 16.2 | - 4.6 |
| 25 | 199 48 | 20.5 | 27.0 | 4.7 | 8.5 | 34 | 210 | 200 | .. | .. | .. | 56.5 | 160 7 43.8 | .. | 70 55 57.0 | + 2.5 |
| 26 | 340 4 | 12.8 | 15.7 | 24.2 | 2.5 | 36 | .. | .. | .. | 730 | 655 | 56.5 | 19 52 14.9 | .. | 70 53 55.7 | - 0.8 |
| 27 | 318 22 | 15.5 | 20.1 | 29.1 | 8.0 | 40 | 265 | 150 | .. | .. | .. | 56.5 | 41 32 36.2 | .. | 92 39 46.5 | - 4.0 |
| 28 | 199 0 | 17.0 | 22.7 | 0.3 | 3.7 | 36 | 410 | 365 | .. | .. | .. | 56.5 | 160 56 12.9 | .. | 70 10 27.5 | + 1.6 |
| 29 | 340 52 | 17.8 | 20.8 | 28.8 | 8.1 | 34 | .. | .. | .. | 485 | 465 | 56.5 | 19 3 46.0 | .. | 70 10 26.4 | + 0.5 |
| 30 | 302 46 | 18.5 | 22.0 | 1.1 | 9.0 | 39 | .. | 280 | .. | 245 | .. | 56.5 | 57 8 26.0 | .. | 108 16 13.0 | - 3.5 |
| 31 | 319 10 | 15.3 | 18.5 | 27.2 | 6.2 | 30 | .. | 230 | .. | 100 | .. | 56.5 | 40 44 36.9 | .. | 91 51 46.0 | - 3.4 |
| 32 | 302 56 | 17.4 | 21.3 | 29.1 | 9.1 | 37 | 570 | .. | .. | .. | 340 | 56.5 | 57 0 30.8 | .. | 108 8 17.4 | .. |
| 33 | 302 56 | 17.4 | 21.3 | 29.1 | 9.1 | 40 | .. | 410 | .. | 350 | .. | 56.5 | 57 1 15.7 | .. | 108 9 2.4 | .. |
| 34 | 327 52 | 15.0 | 17.8 | 26.5 | 5.5 | 36 | .. | 645 | .. | 615 | .. | 56.5 | 32 4 15.4 | .. | 83 11 11.4 | - 0.2 |
| 35 | 310 2 | 15.7 | 19.0 | 26.8 | 7.0 | 30 | .. | 850 | .. | 805 | .. | 56.5 | 49 52 47.4 | .. | 101 0 14.5 | - 4.1 |
| 36 | 325 54 | 18.5 | 21.8 | 29.0 | 9.7 | 35 | .. | 840 | .. | 775 | .. | 56.5 | 34 2 6.4 | .. | 85 9 5.2 | 0.0 |
| 37 | 298 48 | 14.0 | 16.3 | 26.2 | 6.2 | 36 | .. | 715 | .. | 605 | .. | 56.5 | 61 8 15.2 | .. | 112 16 17.0 | + 1.6 |
| 38 | 301 36 | 14.2 | 17.5 | 27.7 | 5.7 | 36 | 680 | .. | .. | .. | 520 | 56.5 | 58 20 14.8 | .. | 109 28 6.0 | - 0.9 |
| 39 | 301 36 | 14.2 | 17.5 | 27.7 | 5.7 | 35 | .. | 775 | .. | 715 | .. | 56.5 | 58 20 1.8 | .. | 109 27 53.0 | - 15.8 |
| 40 | 317 40 | 12.1 | 16.3 | 25.1 | 4.3 | 33 | .. | 555 | .. | 500 | .. | 56.5 | 42 15 26.1 | .. | 93 22 37.9 | 0.0 |
| 41 | 13 34 | 18.5 | 21.3 | 0.8 | 8.0 | 36 | .. | 490 | .. | 435 | .. | 56.5 | 346 19 43.2 | .. | 37 25 50.8 | - 11.7 |
| 42 | 13 34 | 18.5 | 21.3 | 0.8 | 8.0 | 34 | .. | 720 | .. | 695 | .. | 56.5 | 346 24 22.2 | .. | 37 30 29.9 | - 12.2 |
| 43 | 307 4 | 14.2 | 20.2 | 28.0 | 7.5 | 37 | .. | 260 | .. | 235 | .. | 56.5 | 52 49 52.6 | .. | 103 57 25.9 | - 4.4 |
| 44 | 295 44 | 16.4 | 20.2 | 0.7 | 7.2 | 34 | .. | 160 | .. | 120 | .. | 56.5 | 64 9 6.1 | .. | 115 17 21.9 | - 13.8 |
| 45 | 297 26 | 18.3 | 21.6 | 0.3 | 8.1 | 27 | .. | 710 | .. | 700 | .. | 56.5 | 62 28 2.0 | .. | 113 36 9.7 | - 4.3 |
| 46 | 303 52 | 16.0 | 19.1 | 28.2 | 7.5 | 35 | .. | .. | .. | 960 | 830 | 56.5 | 56 1 32.9 | 69.5 | 107 9 16.7 | - 4.5 |
| 47 | 319 8 | 6.9 | 11.0 | 19.0 | 29.2 | 36 | 800 | .. | 090 | .. | 360 | 58.3 | 40 48 17.0 | 65.2 | 91 55 27.3 | .. |
| 48 | 298 22 | 6.9 | 9.5 | 18.4 | 29.4 | 39 | .. | 370 | .. | 260 | .. | 58.3 | 61 34 50.5 | .. | 112 42 56.5 | + 0.3 |
| 49 | 0 0 | 3.2 | 7.6 | 13.9 | 23.5 | 39 | 890 | 840 | .. | .. | .. | 58.3 | 359 54 33.9 | .. | 51 0 55.0 | - 1.4 |
| 50 | 0 0 | 3.2 | 7.6 | 13.9 | 23.5 | 40 | .. | .. | .. | 730 | 660 | 58.3 | 359 54 21.0 | .. | 51 0 42.1 | - 0.3 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " " | " " | " " | " " |
| 4 | 29.86 | 81.5 | 2 | - 4.2 | + 16.5 | .. | + 12.3 |
| 15 | 29.85 | 76.0 | 4 | - 26 58.9 | + 15 53.2 | .. | - 11 5.7 |
| 46 | 29.87 | 70.0 | 32 | - 1.7 | + 22.5 | .. | + 20.8 |
| 47 | 30.20 | 68.0 | 33 | - 1.7 | - 22.5 | .. | - 24.2 |
| | | | 47 | - 36 51.2 | + 15 28.4 | .. | - 21 22.9 |

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number | OBJECT. | Observer | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | I. | II. | I. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | m. | | s. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 1876. | | | | | | | | | | | | | m. | s. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

4, 6, 10, 11. Thread A used.

8. Bisections at set C.

18. Reduced with thread A.

19. Bisections at threads D₁, D₂, and D₃.

40. Bisections at set D.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|--------|----|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| 1 | 52 22 | 10 7.8 | 10.4 | 19.4 | 25.7 | 34 | 720 | .. | 680 | .. | 710 | 58.3 | 307 33 39.6 | .. | 1 14.0 | 358 38 46.8 | - 0.6 | |
| 2 | 310 32 | 5.6 | 9.5 | 17.0 | 27.5 | 34 | .. | 522 | .. | 512 | .. | 58.3 | 49 23 36.0 | .. | 1 6.6 | 100 31 3.8 | - 0.4 | |
| 3 | 321 6 | 5.2 | 8.4 | 18.2 | 27.3 | 39 | .. | 140 | .. | 980 | .. | 58.3 | 38 50 45.5 | .. | 1 46.0 | 89 57 52.7 | - 0.5 | |
| 4 | 345 16 | 6.8 | 11.4 | 19.7 | 28.7 | 36 | .. | 640 | .. | 560 | .. | 58.3 | 14 37 36.4 | .. | 1 14.9 | 65 44 12.5 | - 1.1 | |
| 5 | 340 4 | 6.6 | 10.4 | 18.6 | 27.7 | 36 | .. | 910 | .. | 820 | .. | 58.3 | 19 52 13.0 | .. | 1 20.7 | 70 58 54.9 | - 1.3 | |
| 6 | 318 16 | 5.4 | 9.1 | 17.5 | 28.0 | 43 | .. | 600 | .. | 530 | .. | 58.3 | 41 39 21.2 | .. | 1 50.9 | 92 46 33.3 | - 3.2 | |
| 7 | 142 36 | 5.8 | 12.0 | 21.6 | 27.0 | 37 | 910 | 830 | .. | .. | .. | 58.3 | 217 20 26.0 | .. | 1 43.8 | 13 45 11.4 | - 1.6 | |
| 8 | 37 16 | 9.7 | 11.5 | 21.9 | 29.0 | 34 | .. | 100 | .. | 220 | .. | 58.3 | 322 39 33.7 | .. | 1 43.8 | 13 45 11.1 | - 1.9 | |
| 9 | 2 2 | 6.4 | 10.6 | 20.0 | 27.3 | 38 | .. | 740 | .. | 730 | .. | 58.3 | 357 54 42.1 | .. | 1 2.1 | 49 1 1.2 | - 7.0 | |
| 10 | 304 32 | 8.2 | 10 2 | 20.8 | 0.4 | 38 | .. | 120 | .. | 870 | .. | 58.3 | 55 21 58.2 | .. | 1 23.0 | 106 29 42.4 | - 3.8 | |
| 11 | 319 12 | 5.7 | 8.4 | 17.9 | 27.9 | 37 | .. | 130 | .. | 110 | .. | 58.3 | 40 41 42.5 | .. | 1 49.4 | 91 48 53.1 | - 3.4 | |
| 12 | 302 58 | 7.9 | 9.9 | 19.8 | 29.1 | 33 | .. | 510 | .. | 440 | .. | 58.3 | 56 57 21.8 | .. | 1 28.3 | 108 5 11.3 | .. | |
| 13 | 302 58 | 7.9 | 9.9 | 19.8 | 29.1 | 36 | 370 | .. | .. | .. | 310 | 58.3 | 56 58 5.5 | .. | 1 28.3 | 108 5 55.0 | .. | |
| 14 | 298 48 | 5.9 | 8.9 | 18.9 | 29.0 | 36 | .. | 740 | .. | 730 | .. | 58.3 | 61 8 10.7 | .. | 1 44.2 | 112 16 16.1 | + 0.6 | |
| 15 | 301 36 | 5.3 | 7.6 | 17.6 | 27.0 | 36 | 835 | 950 | .. | .. | .. | 58.3 | 58 20 10.9 | .. | 1 33.2 | 109 28 5.3 | - 1.6 | |
| 16 | 301 36 | 5.3 | 7.6 | 17.6 | 27.0 | 36 | .. | .. | .. | 000 | 980 | 58.3 | 58 19 58.7 | .. | 1 33.2 | 109 27 53.1 | - 15.8 | |
| 17 | 317 40 | 2.8 | 6.8 | 15.5 | 24.8 | 33 | .. | 890 | .. | 810 | .. | 58.3 | 42 15 23.4 | .. | 1 52.4 | 93 22 37.0 | - 0.7 | |
| 18 | 297 32 | 3.5 | 8.5 | 17.9 | 27.4 | 34 | 820 | 880 | .. | .. | .. | 58.3 | 62 21 6.0 | 57.0 | 1 49.9 | 113 29 17.1 | - 4.3 | |
| 19 | 49 40 | 8.6 | 11.7 | 21.2 | 29.5 | 35 | .. | .. | 470 | 500 | 455 | 59.1 | 310 15 56.9 | 61.5 | 1 7.4 | 1 21 10.7 | - 2.0 | |
| 20 | 341 14 | 7.8 | 11.1 | 19.3 | 1.2 | 32 | .. | 625 | .. | 560 | .. | 59.1 | 18 41 9.9 | .. | 1 19.3 | 69 47 50.4 | - 0.6 | |
| 21 | 32 50 | 10.5 | 13.4 | 24.0 | 2.5 | 32 | .. | .. | .. | 065 | 865 | 59.1 | 327 5 5.4 | 63.1 | 1 36.9 | 18 10 49.7 | - 2.5 | |
| 22 | 343 56 | 5.5 | 8.0 | 17.0 | 28.6 | 38 | .. | .. | .. | 995 | 970 | 59.1 | 16 0 46.1 | .. | 1 10.4 | 67 7 23.7 | - 1.1 | |
| 23 | 323 46 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 24 | 324 40 | 12.5 | 16.0 | 24.6 | 7.0 | 38 | 285 | 125 | .. | .. | .. | 59.1 | 35 16 40.2 | .. | 1 40.1 | 86 23 41.5 | - 2.2 | |
| 25 | 359 24 | 7.0 | 10.0 | 20.5 | 0.6 | 36 | .. | .. | .. | 185 | 090 | 59.1 | 0 32 5.0 | 66.6 | 1 0.5 | 51 35 26.7 | + 4.2 | |
| 26 | 169 24 | 13.3 | 19.4 | 28.0 | 5.0 | 33 | 035 | 910 | .. | .. | .. | 59.1 | 190 31 21.4 | .. | 1 10.5 | 40 34 49.3 | - 2.3 | |
| 27 | 10 26 | 11.5 | 15.1 | 25.7 | 4.1 | 30 | .. | .. | .. | 370 | 285 | 59.1 | 349 28 40.5 | .. | 1 10.5 | 40 34 51.2 | - 0.4 | |
| 28 | 344 46 | 10.8 | 14.5 | 23.3 | 4.3 | 35 | .. | .. | .. | 890 | 795 | 59.1 | 15 10 4.0 | 68.4 | 1 15.3 | 66 16 40.5 | + 0.1 | |
| 29 | 342 56 | 15.9 | 17.9 | 28.5 | 9.0 | 30 | 120 | 095 | .. | .. | .. | 59.1 | 16 58 39.0 | .. | 1 17.1 | 68 5 17.3 | .. | |
| 30 | 343 28 | 10.0 | 12.9 | 22.3 | 2.8 | 32 | .. | .. | .. | 195 | 120 | 59.1 | 16 27 6.4 | 72.5 | 1 16.5 | 67 33 44.1 | .. | |
| 31 | 172 58 | 11.8 | 18.1 | 26.9 | 4.1 | 37 | 845 | 810 | .. | .. | .. | 59.1 | 186 58 34.0 | .. | 1 6.8 | 44 7 40.4 | - 0.3 | |
| 32 | 6 54 | 9.5 | 13.3 | 22.3 | 2.5 | 33 | .. | .. | .. | 470 | 455 | 59.1 | 353 1 26.5 | 73.7 | 1 6.8 | 44 7 40.9 | + 0.2 | |
| 33 | 344 38 | 10.0 | 14.6 | 23.5 | 3.9 | 34 | .. | 890 | .. | 775 | .. | 59.1 | 15 17 47.4 | 75.7 | 1 15.2 | 66 24 23.8 | - 3.6 | |
| 34 | 345 38 | 12.8 | 17.6 | 24.8 | 6.5 | 38 | .. | 310 | .. | 235 | .. | 59.1 | 16 18 42.5 | .. | 1 16.2 | 67 25 19.9 | - 0.3 | |
| 35 | 303 10 | 15.1 | 19.4 | 28.9 | 8.0 | 34 | .. | .. | .. | 970 | 950 | 59.1 | 56 45 54.7 | .. | 1 24.4 | 107 53 40.3 | + 3.3 | |
| 36 | 337 34 | 10.5 | 14.6 | 23.2 | 3.2 | 39 | 470 | 465 | .. | 370 | 340 | 59.1 | 22 22 57.4 | .. | 1 22.8 | 73 29 41.4 | + 1.2 | |
| 37 | 346 18 | 10.5 | 15.0 | 23.5 | 4.2 | 36 | .. | 360 | .. | 310 | .. | 59.1 | 13 38 10.7 | .. | 1 13.4 | 64 44 45.3 | + 8.7 | |
| 38 | 304 30 | 13.0 | 18.6 | 26.9 | 8.0 | 32 | 215 | 125 | .. | 105 | 045 | 59.1 | 55 25 9.2 | 77.1 | 1 20.1 | 106 32 50.5 | - 0.3 | |
| 39 | 292 16 | 11.6 | 17.3 | 25.3 | 6.0 | 34 | .. | 300 | .. | 165 | .. | 59.1 | 67 39 39.9 | .. | 1 13.6 | 118 48 14.7 | - 2.4 | |
| 40 | 294 52 | 10.8 | 16.0 | 25.3 | 4.9 | 33 | .. | .. | .. | 770 | 780 | 59.1 | 65 3 32.6 | .. | 1 58.1 | 116 11 51.9 | + 1.1 | |
| 41 | 329 36 | 11.6 | 17.0 | 26.0 | 5.4 | 38 | .. | 605 | .. | 520 | .. | 59.1 | 30 20 46.4 | .. | 1 32.3 | 81 27 39.9 | + 4.5 | |
| 42 | 190 30 | 13.4 | 21.3 | 27.5 | 4.5 | 35 | 880 | 815 | .. | .. | .. | 59.1 | 169 26 5.4 | .. | 1 10.3 | 61 40 26.1 | + 1.2 | |
| 43 | 349 22 | 9.5 | 13.0 | 23.0 | 3.9 | 35 | .. | .. | .. | 215 | 230 | 59.1 | 10 33 53.9 | .. | 1 10.3 | 61 40 25.4 | + 0.5 | |
| 44 | 345 2 | 11.5 | 16.8 | 25.3 | 6.0 | 35 | 695 | .. | .. | .. | 680 | 59.1 | 14 54 2.6 | .. | 1 11.7 | 66 0 38.5 | .. | |
| 45 | 345 2 | 11.5 | 16.8 | 25.3 | 6.0 | 38 | .. | 030 | .. | 990 | .. | 59.1 | 14 54 38.0 | 78.4 | 1 14.7 | 66 1 13.9 | .. | |
| 46 | 297 8 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 47 | 343 12 | 14.6 | 19.4 | 26.7 | 5.5 | 37 | 360 | .. | .. | .. | 225 | 58.8 | 16 44 28.5 | 72.9 | 1 16.7 | 67 51 6.4 | - 3.6 | |
| 48 | 343 12 | 14.6 | 19.4 | 26.7 | 5.5 | 37 | .. | 165 | .. | 060 | .. | 58.8 | 16 44 25.6 | .. | 1 16.7 | 67 51 3.5 | - 3.6 | |
| 49 | 304 12 | 13.5 | 16.5 | 25.5 | 6.5 | 34 | 700 | 630 | .. | .. | .. | 58.8 | 55 43 46.0 | .. | 1 21.5 | 106 51 28.7 | - 17.0 | |
| 50 | 321 4 | 13.8 | 16.9 | 25.0 | 5.2 | 34 | 540 | 515 | .. | 485 | 480 | 58.8 | 38 51 44.2 | .. | 1 44.8 | 89 58 50.2 | + 0.1 | |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| 18 | in. | ° | 12 | — 1.7 | + 21.8 | .. | + 20.1 |
| 19 | 30.20 | 60.0 | 13 | — 1.7 | — 21.8 | .. | — 23.5 |
| 21 | 30.16 | 60.6 | 29 | — 2.5 | — 15 46.6 | .. | — 15 49.1 |
| 25 | 30.15 | 62.3 | 30 | — 2.5 | + 15 46.6 | .. | + 15 44.1 |
| 28 | 30.14 | 65.6 | 33 | — 3.6 | .. | .. | — 3.6 |
| 30 | 30.13 | 67.1 | 44 | — 4.6 | + 17.8 | .. | + 13.2 |
| 32 | 30.10 | 69.5 | 45 | — 4.6 | — 17.8 | + 0.2 | — 22.2 |
| 33 | 30.10 | 70.9 | | | | | |
| 38 | 30.08 | 73.7 | | | | | |
| 45 | 30.07 | 76.1 | | | | | |
| 47 | 30.04 | 75.4 | | | | | |
| 47 | 29.97 | 73.0 | | | | | |

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|-----------------|---------|----------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|----------|------------|--------------|----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | |
| | | | | m. | s. | m. | s. | m. | s. | m. | s. | m. | s. | s. | s. | s. | h. | m. |
| 1876. June 1 | 1 | B. A. C. 4185 . . . | P. | 51.6 | 56.3 | 59.2 | 10.6 | 14.4 | 18.3 | 20.5 | 32.5 | 37.1 | 19 14.39 | - 0.49 | . | - 3.83 | 12 19 10.07 | - 3.09 |
| | 2 | Vesta | P. | 52.5 | 55.0 | 50.6 | 2.8 | 4.9 | 7.0 | 13.2 | 14.7 | 17.2 | 26 4.85 | - 0.61 | . | - 3.83 | 12 26 0.44 | . |
| | 3 | Weisse 498 | P. | . | . | 12.4 | 14.5 | 16.5 | 18.7 | 20.6 | . | . | 31 16.53 | - 0.64 | . | - 3.84 | 12 31 12.05 | - 1.87 |
| | 4 | 21 Cassiopeæ, S. P. | P. | 16.6 | 7.0 | 1.5 | 38.4 | 30.7 | 23.3 | 0.7 | 55.1 | 46.3 | 37 31.07 | - 0.43 | . | - 3.84 | 0 37 26.80 | + 0.02 |
| | 5 | 12 Canum Venat. . | P. | 3.5 | 6.7 | 8.6 | . | . | . | 29.7 | 31.6 | 35.0 | 50 19.21 | - 0.53 | . | - 3.84 | 12 50 14.81 | - 2.54 |
| | 6 | 12 Canum Venat. . | P. | . | . | 15.0 | 17.9 | 20.6 | 23.1 | 25.8 | . | . | 50 20.46 | - 0.53 | - 3.90 | - 3.84 | 12 50 16.07 | + 0.04 |
| | 7 | Moon I, N. | P. | 13.0 | 15.6 | 17.1 | 23.6 | 25.6 | 27.7 | 31.0 | 35.7 | 38.2 | 54 25.61 | - 0.66 | . | - 3.84 | 12 54 21.11 | + 63.75 |
| | 8 | 50 Virginis | P. | 10.0 | 12.6 | 14.0 | 20.4 | 22.5 | 24.6 | 30.7 | 32.3 | 34.8 | 3 22.43 | - 0.66 | . | - 3.84 | 13 3 17.93 | - 2.01 |
| | 9 | Polaris, S. P. . . . | P. | . | . | 33.0 | 2.5 | 37.0 | 12.0 | 16.0 | . | . | 12 38.72 | - 0.81 | . | - 3.84 | 1 12 34.07 | + 0.25 |
| | 10 | B. A. C. 4482 . . . | P. | 47.7 | 50.9 | 53.0 | 0.8 | 3.5 | 6.0 | 14.0 | 16.0 | 19.3 | 19 3.47 | - 0.84 | . | - 3.85 | 13 18 58.78 | - 2.08 |
| | 11 | B. A. C. 4489 . . . | P. | . | . | 44.8 | 47.7 | 50.4 | 53.1 | 55.7 | . | . | 19 50.32 | - 0.86 | . | - 3.85 | 13 19 45.61 | - 2.10 |
| | 12 | Virginis | P. | 16.9 | 19.4 | 21.0 | 27.1 | 29.2 | 31.1 | 37.4 | 38.9 | 41.4 | 28 20.16 | - 0.63 | - 3.81 | - 3.85 | 13 28 21.68 | - 0.04 |
| | 13 | B. A. C. 4545 . . . | P. | 47.0 | 50.7 | 53.0 | 1.0 | 4.5 | 7.4 | 16.0 | 18.1 | 21.7 | 30 4.46 | - 0.51 | . | - 3.85 | 13 30 0.10 | - 2.85 |
| | 14 | Pallas | P. | 40.0 | 42.9 | 44.6 | 51.3 | 53.6 | 55.8 | 2.5 | 4.0 | 6.9 | 36 53.51 | - 0.56 | . | - 3.85 | 13 36 49.10 | . |
| | 15 | Ursæ Majoris (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 16 | Ursæ Majoris . . . | P. | . | . | 16.6 | 19.8 | 53.0 | 59.5 | 1.7 | 5.7 | 42 16.66 | - 0.50 | . | - 3.85 | 13 42 12.31 | + 0.01 | |
| | 17 | Boots | P. | 40.6 | 43.3 | 45.0 | 51.5 | 53.6 | 55.7 | 2.3 | 3.8 | 6.5 | 48 53.59 | - 0.56 | - 3.79 | - 3.85 | 13 48 49.18 | - 0.11 |
| | 18 | 50 Cassiopeæ, S. P. | P. | 33.7 | 25.4 | 29.6 | 0.9 | 54.4 | 17.9 | 28.0 | 23.3 | 15.5 | 52 54.41 | - 0.45 | . | - 3.86 | 1 52 50.10 | - 0.30 |
| | 19 | Ceres | P. | 57.2 | 59.7 | 1.3 | 7.5 | 9.5 | 11.6 | 17.6 | 19.1 | 21.7 | 4 9.17 | - 0.63 | . | - 3.86 | 14 4 4.98 | . |
| | 20 | a Bootis (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 21 | a Bootis | P. | . | . | . | . | . | . | . | . | . | . | . | . | - 3.86 | 2 18 50.31 | - 0.16 |
| | 22 | Cassiopeæ, S. P. . . | P. | 25.8 | 19.4 | 15.4 | 59.8 | 54.5 | 49.3 | 33.9 | 39.0 | 23.7 | 18 51.61 | - 0.41 | . | . | . | . |
| | 23 | Ursæ Minoris (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 24 | Ursæ Minoris . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 25 | e Bootis (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 26 | e Bootis | P. | . | . | . | . | . | . | . | . | . | . | . | . | - 3.87 | 14 47 44.35 | - 3.07 |
| | 27 | B. A. C. 4917 . . . | P. | 30.5 | 34.4 | 36.8 | 45.0 | 48.8 | 51.7 | 0.6 | 3.0 | 6.6 | 17 43.70 | - 0.48 | . | - 3.87 | 14 52 19.59 | - 3.19 |
| | 28 | Lalande (Fed.) 2545 | P. | 4.8 | 8.9 | 11.2 | 20.8 | 23.9 | 27.2 | 36.6 | 39.0 | 43.0 | 52 23.93 | - 0.47 | . | - 3.87 | 14 52 36.97 | - 3.77 |
| | 29 | B. A. C. 4967 . . . | P. | 16.2 | 21.3 | 24.6 | 37.3 | 41.3 | 45.6 | 58.0 | 1.1 | 6.1 | 58 41.25 | - 0.44 | . | - 3.87 | 15 0 25.20 | . |
| | 30 | Themis | P. | 19.8 | 22.5 | 24.3 | 39.7 | 32.8 | 35.0 | 41.3 | 42.9 | 45.5 | 9 32.76 | - 0.69 | . | - 3.87 | . | . |
| | 31 | B. A. C. 5077 . . . | P. | 39.7 | 43.9 | 46.3 | 56.6 | 59.7 | 3.3 | 13.2 | 15.7 | 20.1 | 17 59.83 | - 0.46 | . | - 3.87 | 15 17 55.50 | - 3.29 |
| | 32 | B. A. C. 5092 . . . | P. | 56.2 | 0.2 | 2.5 | 11.3 | 14.5 | 17.1 | 21.3 | 28.5 | 32.3 | 21 14.40 | - 0.45 | . | - 3.88 | 15 21 10.04 | - 3.09 |
| | 33 | Jupiter I, N. . . . | P. | 24.0 | 26.8 | 28.4 | . | . | 45.6 | 17.1 | 11.7 | 32 36.95 | - 0.61 | . | - 3.88 | 15 32 32.38 | . | |
| | 34 | Jupiter II, S. . . . | P. | . | . | 35.7 | 37.9 | 40.0 | 42.3 | 44.4 | . | . | 32 40.05 | - 0.69 | . | - 3.88 | 15 32 35.48 | . |
| | 35 | Anonymous | P. | . | . | 19.0 | 21.2 | 23.3 | 25.3 | 27.5 | . | . | 40 23.25 | - 0.65 | . | - 3.88 | 15 40 18.72 | - 2.67 |
| | 36 | O. Arg. N. 15653 . . | P. | 23.3 | 27.8 | 30.7 | 41.6 | 45.1 | 48.7 | 51.5 | 2.3 | 6.8 | 43 45.06 | - 0.13 | . | - 3.88 | 15 43 40.75 | - 3.40 |
| | 37 | O. Arg. N. 15662 . . | P. | . | . | 14.4 | 18.3 | 21.8 | 25.5 | 28.9 | . | . | 44 21.75 | - 0.45 | . | - 3.88 | 15 44 17.42 | - 3.40 |
| | 38 | B. A. C. 5248 . . . | P. | . | . | 39.0 | 12.7 | 46.3 | 49.8 | 53.5 | . | . | 41 46.23 | - 0.45 | . | - 3.88 | 15 41 41.90 | - 3.39 |
| | 39 | B. A. C. 5316 . . . | P. | 21.5 | 25.7 | 28.0 | 37.6 | 40.9 | 44.2 | 53.7 | 55.9 | 59.8 | 55 40.81 | - 0.46 | . | - 3.88 | 15 55 39.47 | - 3.14 |
| | 40 | B. A. C. 5341 . . . | P. | 43.0 | 47.0 | 49.8 | 0.1 | 3.5 | 7.0 | 17.2 | 19.7 | 23.9 | 59 3.47 | - 0.48 | . | - 3.88 | 15 59 50.14 | - 3.25 |
| | 41 | Weisse 47 | P. | 31.0 | 33.8 | 35.4 | 41.6 | 43.8 | 45.8 | 52.0 | 53.6 | 56.0 | 4 43.67 | - 0.65 | . | - 3.89 | 16 4 33.13 | - 2.73 |
| | 42 | Weisse 180 | P. | 11.8 | 14.5 | 16.0 | 22.3 | 24.4 | 25.5 | 32.7 | 34.3 | 36.9 | 11 24.33 | - 0.65 | . | - 3.89 | 16 11 19.84 | - 2.75 |
| | 43 | B. A. C. 5499 . . . | P. | 9.3 | 13.6 | 16.0 | 26.0 | 29.5 | 32.8 | 42.9 | 45.4 | 49.5 | 21 29.44 | - 0.45 | . | - 3.89 | 16 21 25.10 | - 3.16 |
| | 44 | B. A. C. 5523 . . . | P. | 24.9 | 28.6 | 30.6 | 38.9 | 41.7 | 44.1 | 52.6 | 54.6 | 57.9 | 21 41.58 | - 0.45 | . | - 3.89 | 16 21 37.21 | - 2.87 |
| | 45 | B. A. C. 5559 . . . | P. | 45.0 | 49.3 | 51.7 | 1.8 | 5.2 | 8.6 | 18.5 | 21.1 | 25.9 | 31 5.13 | - 0.45 | . | - 3.89 | 16 31 0.79 | - 3.13 |
| | 46 | Hera | P. | 55.6 | 58.4 | 59.9 | 6.3 | 8.4 | 10.5 | 16.8 | 18.3 | 20.9 | 35 8.31 | - 0.66 | . | - 3.89 | 16 35 3.79 | . |
| | 47 | η Herculis | P. | 30.2 | 33.4 | 35.4 | 43.3 | 46.0 | 48.6 | 56.5 | 58.5 | 1.7 | 33 45.96 | - 0.19 | - 3.95 | - 3.89 | 16 33 41.58 | + 0.07 |
| | 48 | Iris | P. | 50.9 | 53.6 | 55.4 | 2.0 | 4.3 | 6.5 | 13.0 | 14.7 | 17.6 | 44 4.22 | - 0.79 | . | - 3.89 | 16 43 59.63 | . |
| | 49 | Miriam | P. | 0.4 | 2.9 | 4.7 | 11.0 | 13.1 | 15.3 | 21.6 | 23.3 | 26.0 | 48 13.14 | - 0.67 | . | - 3.90 | 16 48 8.57 | . |

I, 3, 7, 11, 13, 18, 22, 28, 29, 32, 35, 39, 40, 41, 43, 44, 45. Bisections at sets B and D.
4, 23, 31. Bisections at set C.
20. Bisections at threads II and III.
30, 35, 36, 46, 48, 49. Thread A used.
37, 38, 41, 42. Thread B used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | | |
| | | T. | " | " | " | | | | | | | | | | | | | |
| 1 | 18 30 | 10 15.8 | 19.0 | 27.9 | 7.2 | 35 | .. | .. | .. | 145 | 140 | 58.8 | 341 25 56.6 | .. | - | 18.7 | 32 31 59.1 | + 5.1 |
| 2 | 328 26 | 16.4 | 19.6 | 25.4 | 6.8 | 36 | .. | 420 | .. | 280 | .. | 58.8 | 31 30 14.3 | .. | + | 34.2 | 82 37 9.7 | - 2.8 |
| 3 | 318 10 | 13.8 | 16.9 | 25.1 | 6.9 | 36 | .. | .. | .. | 500 | 505 | 58.8 | 41 46 15.3 | .. | + | 49.8 | 92 53 26.3 | -13.3 |
| 4 | 66 42 | 12.1 | 16.1 | 25.0 | 3.9 | 36 | 575 | .. | .. | .. | 590 | 58.8 | 293 14 15.0 | .. | - 2 | 9.1 | 344 18 27.1 | + 1.9 |
| 5 | 0 0 | 13.0 | 17.3 | 24.8 | 4.9 | 29 | 995 | .. | .. | .. | 885 | 58.8 | 359 54 34.7 | .. | - | 0.1 | 51 0 55.8 | - 1.2 |
| 6 | 0 0 | 13.0 | 17.3 | 24.8 | 4.9 | 29 | .. | 200 | .. | 050 | .. | 58.8 | 359 54 22.0 | .. | - | 0.1 | 51 0 43.1 | + 0.8 |
| 7 | 312 52 | 15.1 | 19.2 | 26.0 | 7.7 | 37 | 755 | .. | 920 | .. | 145 | 58.8 | 47 4 38.6 | 70.5 | + | 1 0 0 | 98 11 59.8 | .. |
| 8 | 311 24 | 13.0 | 16.9 | 24.5 | 6.5 | 39 | 140 | 090 | .. | .. | .. | 58.8 | 48 32 53.9 | .. | + | 1 3.4 | 99 40 18.5 | -16.1 |
| 9 | 52 22 | 13.7 | 15.3 | 24.3 | 1.6 | 34 | 320 | 265 | 275 | 305 | 330 | 58.8 | 307 33 39.4 | .. | - 1 | 12.6 | 358 38 48.0 | + 0.8 |
| 10 | 282 0 | 11.5 | 16.5 | 25.3 | 5.6 | 36 | 545 | 400 | .. | .. | .. | 58.8 | 77 56 12.6 | .. | + | 4 15.4 | 129 6 49.2 | -23.4 |
| 11 | 250 16 | 19.0 | 21.5 | 1.9 | 9.6 | 36 | .. | .. | .. | 115 | 130 | 58.8 | 79 40 14.5 | .. | + | 4 56.9 | 130 51 32.6 | -23.7 |
| 12 | 321 6 | 16.0 | 19.5 | 27.5 | 7.0 | 38 | .. | 445 | .. | 395 | .. | 58.8 | 38 50 46.4 | .. | + | 45.1 | 89 57 52.7 | - 0.4 |
| 13 | 5 52 | 12.1 | 15.5 | 23.5 | 2.2 | 35 | 265 | .. | .. | .. | 190 | 58.8 | 354 3 53.5 | .. | - | 5.8 | 45 10 8.9 | - 2.1 |
| 14 | 345 16 | 12.5 | 15.9 | 23.0 | 3.9 | 36 | .. | 480 | .. | 520 | .. | 58.8 | 14 40 13.7 | .. | + | 14.7 | 65 46 49.6 | - 1.1 |
| 15 | 168 54 | 18.0 | 23.0 | 1.0 | 7.6 | 35 | 835 | 810 | .. | .. | .. | 58.8 | 191 2 7.6 | .. | + | 11.0 | 40 4 2.6 | - 1.3 |
| 16 | 10 58 | 12.5 | 16.9 | 25.7 | 6.0 | 35 | .. | .. | .. | 935 | 930 | 58.8 | 348 57 53.8 | .. | - | 11.0 | 40 4 4.0 | + 0.1 |
| 17 | 340 4 | 13.8 | 18.1 | 25.2 | 5.1 | 36 | .. | 530 | .. | 375 | .. | 58.8 | 19 52 14.6 | .. | + | 20.3 | 70 58 56.1 | 0.0 |
| 18 | 69 10 | 15.0 | 17.7 | 24.5 | 4.5 | 32 | 630 | .. | .. | .. | 590 | 58.8 | 290 45 15.2 | 63.0 | - 2 | 27.0 | 341 49 9.4 | + 1.7 |
| 19 | 318 14 | 15.3 | 19.0 | 27.3 | 9.0 | 39 | .. | 230 | .. | 235 | .. | 58.8 | 41 42 59.4 | .. | + | 50.1 | 92 50 10.7 | - 3.2 |
| 20 | 199 0 | 18.8 | 23.1 | 0.0 | 5.9 | 36 | 150 | 170 | .. | .. | .. | 58.8 | 160 56 13.2 | .. | + | 19.4 | 70 10 27.4 | + 1.9 |
| 21 | 340 52 | 13.6 | 15.5 | 23.6 | 5.0 | 34 | .. | .. | .. | 665 | 580 | 58.8 | 19 3 46.2 | .. | + | 19.4 | 70 10 26.8 | + 1.3 |
| 22 | 74 8 | 12.7 | 14.9 | 23.0 | 2.5 | 33 | 755 | .. | .. | .. | 725 | 58.8 | 285 47 30.4 | .. | - 3 | 15.9 | 336 50 35.7 | + 1.6 |
| 23 | 142 36 | 13.5 | 20.0 | 28.5 | 5.9 | 37 | 280 | .. | .. | .. | 255 | 58.8 | 217 20 28.2 | .. | + | 42.9 | 13 45 10.1 | - 2.7 |
| 24 | 37 16 | 15.6 | 16.4 | 26.5 | 5.5 | 33 | .. | .. | .. | 625 | 515 | 58.8 | 322 39 33.7 | .. | - | 42.9 | 13 45 12.0 | - 0.8 |
| 25 | 191 14 | 18.0 | 23.5 | 1.8 | 7.2 | 36 | 335 | 370 | .. | .. | .. | 58.8 | 168 42 15.8 | .. | - | 11.2 | 62 24 16.6 | + 0.7 |
| 26 | 348 38 | 17.6 | 20.2 | 28.5 | 8.3 | 34 | .. | .. | .. | 290 | 215 | 58.8 | 11 17 44.8 | .. | + | 11.2 | 62 24 17.2 | + 1.3 |
| 27 | 8 2 | 14.1 | 18.0 | 27.8 | 6.1 | 37 | .. | 890 | .. | 810 | .. | 58.8 | 351 54 37.1 | .. | - | 8.0 | 43 0 50.3 | - 6.3 |
| 28 | 11 10 | 19.1 | 22.6 | 1.3 | 10.4 | 34 | .. | .. | .. | 210 | 145 | 58.8 | 348 45 45.2 | .. | - | 11.2 | 39 51 55.2 | - 6.1 |
| 29 | 21 44 | 14.5 | 19.0 | 28.5 | 6.0 | 37 | 635 | .. | .. | .. | 580 | 58.8 | 338 12 33.6 | 66.6 | - | 22.5 | 29 18 32.3 | - 5.0 |
| 30 | 302 52 | 13.5 | 17.1 | 23.5 | 6.0 | 33 | .. | 595 | .. | 535 | .. | 58.8 | 57 0 56.0 | .. | + | 1 26.6 | 108 8 43.8 | - 3.4 |
| 31 | 13 50 | 16.1 | 19.0 | 28.2 | 6.7 | 37 | 970 | .. | .. | .. | 895 | 58.8 | 346 6 39.0 | .. | - | 13.9 | 37 11 46.3 | - 7.3 |
| 32 | 8 32 | 17.8 | 21.0 | 0.0 | 6.7 | 35 | 350 | .. | .. | .. | 360 | 58.8 | 351 24 1.0 | .. | - | 8.5 | 42 30 13.7 | - 8.1 |
| 33 | 303 0 | 16.1 | 19.5 | 28.3 | 8.1 | 31 | 910 | .. | .. | .. | 750 | 58.8 | 56 55 51.7 | 65.0 | + | 1 26.4 | 108 3 39.3 | .. |
| 34 | 303 0 | 16.1 | 19.5 | 28.3 | 8.1 | 37 | .. | 765 | .. | 610 | .. | 58.8 | 56 56 35.6 | .. | + | 1 26.3 | 108 4 23.1 | .. |
| 35 | 310 2 | 17.9 | 19.9 | 23.0 | 8.8 | 29 | .. | .. | .. | 190 | 170 | 58.8 | 49 49 52.9 | .. | + | 1 6.8 | 100 57 20.9 | -15.8 |
| 36 | 16 50 | 14.4 | 17.9 | 27.5 | 5.8 | 32 | 725 | 700 | .. | .. | .. | 58.8 | 343 2 44.3 | .. | - | 17.2 | 34 8 48.3 | - 8.5 |
| 37 | 16 50 | 14.4 | 17.9 | 27.5 | 5.8 | 31 | .. | .. | .. | 845 | 825 | 58.8 | 343 7 38.5 | .. | - | 17.1 | 34 13 42.6 | - 8.5 |
| 38 | 16 50 | 14.4 | 17.9 | 27.5 | 5.8 | 35 | .. | .. | .. | 785 | 745 | 58.8 | 343 8 38.7 | .. | - | 17.1 | 34 14 42.8 | - 8.6 |
| 39 | 11 16 | 16.5 | 19.6 | 29.1 | 7.0 | 34 | 930 | .. | .. | .. | 865 | 58.8 | 343 39 53.2 | .. | - | 11.3 | 39 46 3.1 | - 9.7 |
| 40 | 14 18 | 16.7 | 20.2 | 28.3 | 8.2 | 36 | 875 | .. | .. | .. | 780 | 58.8 | 345 38 23.0 | .. | - | 14.5 | 36 44 29.7 | - 9.6 |
| 41 | 308 58 | 17.5 | 19.3 | 29.0 | 8.9 | 36 | 605 | .. | .. | .. | .. | 58.8 | 51 0 51.9 | .. | + | 1 9.8 | 102 8 22.9 | -15.2 |
| 42 | 308 28 | 15.5 | 18.8 | 27.0 | 8.5 | 34 | .. | 430 | .. | 360 | .. | 58.8 | 51 30 17.1 | .. | + | 1 11.0 | 102 37 49.3 | -15.0 |
| 43 | 13 36 | 15.2 | 19.8 | 28.3 | 6.3 | 31 | 180 | .. | .. | .. | 110 | 58.8 | 346 19 41.0 | .. | - | 13.8 | 37 25 48.4 | -10.8 |
| 44 | 3 12 | 17.0 | 20.6 | 29.8 | 7.1 | 37 | 585 | .. | .. | .. | 520 | 58.8 | 356 44 34.3 | .. | - | 3.2 | 47 50 52.3 | -11.6 |
| 45 | 13 32 | 14.5 | 18.3 | 26.5 | 5.4 | 36 | 900 | .. | .. | .. | 815 | 58.8 | 346 24 21.3 | .. | - | 13.7 | 37 30 28.8 | -11.3 |
| 46 | 307 8 | 14.1 | 17.8 | 25.1 | 6.7 | 40 | .. | 130 | .. | 940 | .. | 58.8 | 52 46 36.0 | .. | + | 1 14.4 | 103 54 11.6 | - 4.4 |
| 47 | 0 12 | 13.9 | 17.9 | 25.9 | 4.1 | 36 | .. | 740 | .. | 670 | .. | 58.8 | 359 44 18.4 | .. | - | 0.3 | 50 50 39.3 | + 1.2 |
| 48 | 297 36 | 16.0 | 19.1 | 28.0 | 7.6 | 36 | .. | 230 | .. | 685 | .. | 58.8 | 62 17 35.4 | .. | + | 1 47.5 | 113 25 47.1 | - 4.3 |
| 49 | 304 2 | 13.0 | 17.3 | 24.4 | 5.4 | 34 | .. | 525 | .. | 475 | .. | 58.8 | 55 51 10.4 | 62.4 | + | 1 23.4 | 106 58 55.0 | - 4.5 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| 7 | in. | ° | 7 | -40 51.0 | + 15 17.6 | .. | - 25 33.4 |
| 18 | 29.97 | 71.4 | 33 | - 1.7 | + 21 9 | .. | + 20.2 |
| 29 | 29.96 | 69.4 | 34 | 1.7 | - 21.9 | .. | - 23.6 |
| 33 | 29.94 | 68.6 | | | | | |
| 49 | 29.93 | 67.1 | | | | | |
| | | 64.3 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|-----------------|---------|--|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|---------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't | Clock adopted. | | |
| | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| 1876. June 1 | 1 | B. A. C. 5734 . . . | P. | | | | | 18.8 | 23.1 | 32.1 | 35.5 | 40.7 | 55 14.32 | - 0.41 | . | - 3.90 | 16 55 10.01 | - 3.51 |
| | 2 | B. A. C. 5785 ¹ . . . | P. | 32.4 | 36.7 | 39.3 | . | . | . | 7.6 | 10.1 | 14.6 | 2 53.48 | - 0.44 | . | - 3.90 | 17 2 49.14 | - 3.08 |
| | 3 | B. A. C. 5785 ² . . . | P. | . | . | 46.5 | 50.0 | 53.5 | 57.0 | 6.5 | . | . | 2 53.48 | - 0.44 | . | - 3.90 | 17 2 49.14 | - 3.08 |
| | 4 | B. A. C. 5841 . . . | P. | 41.8 | 44.4 | 46.0 | 52.4 | 54.4 | 56.4 | 2.6 | 4.2 | 6.8 | 12 54.33 | - 0.57 | . | - 3.90 | 17 12 49.86 | - 2.62 |
| | 5 | B. A. C. 5886 ¹ . . . | P. | 15.7 | 19.0 | 21.0 | . | . | . | 41.4 | 43.4 | 46.5 | 19 31.19 | - 0.49 | . | - 3.90 | 17 19 26.80 | - 2.67 |
| | 6 | B. A. C. 5886 ² . . . | P. | . | . | 26.3 | 29.0 | 31.5 | 34.0 | 36.5 | . | . | 19 31.44 | - 0.49 | . | - 3.90 | 17 19 27.05 | - 2.67 |
| | 7 | <i>a</i> Ophiuchi (R.) . . . | P. | . | . | . | . | . | . | . | . | . | 11 23.54 | - 0.55 | - 3.79 | - 3.91 | 17 29 13.21 | - 0.09 |
| | 8 | <i>a</i> Ophiuchi | P. | . | . | . | . | . | 19.8 | 21.8 | 26.0 | 27.7 | 30.2 | - 0.55 | - 3.79 | - 3.91 | 17 29 13.21 | - 0.09 |
| | 9 | <i>ω</i> Draconis (R.) . . . | P. | . | . | . | . | . | . | . | . | . | 37 48.73 | - 0.36 | . | - 3.91 | 17 37 44.46 | + 0.03 |
| | 10 | <i>ω</i> Draconis | P. | . | . | . | . | . | 59.9 | 11.4 | 15.7 | 22.3 | . | - 0.36 | . | - 3.91 | 17 37 44.46 | + 0.03 |
| | 11 | B. A. C. 6072 . . . | P. | 10.8 | 13.3 | 15.0 | 21.4 | 23.5 | 25.6 | 32.0 | 33.9 | 36.4 | 50 54.76 | - 0.72 | . | - 3.91 | 17 50 50.13 | - 3.14 |
| | 12 | Anonymous | P. | 10.8 | 13.3 | 15.0 | 21.4 | 23.5 | 25.6 | 32.0 | 33.9 | 36.4 | 11 23.54 | - 0.66 | . | - 3.91 | 18 14 18.97 | - 2.86 |
| | 13 | Anonymous | P. | . | . | 44.6 | 46.7 | 48.8 | 51.0 | 53.2 | . | . | 14 48.85 | - 0.66 | . | - 3.91 | 18 14 44.28 | - 2.85 |
| | 14 | B. A. C. 6298 ¹ , N. . . | P. | 42.4 | 45.6 | 47.6 | . | . | . | 8.5 | 10.0 | 13.9 | 24 58.13 | - 0.79 | . | - 3.92 | 18 24 53.42 | - 3.45 |
| | 15 | B. A. C. 6298 ² , S. . . | P. | . | . | 52.9 | 55.5 | 58.1 | 0.7 | 3.4 | . | . | 24 58.10 | - 0.79 | . | - 3.92 | 18 24 53.39 | - 3.45 |
| | 16 | XVIII, 18 | P. | 30.4 | 33.3 | 35.2 | 42.3 | 44.6 | 47.0 | 54.3 | 56.1 | 59.1 | 36 44.70 | - 0.74 | . | - 3.92 | 18 36 40.04 | - 3.17 |
| | 17 | <i>β</i> Cephei, S. P. . . . | P. | . | . | 5.6 | 22.5 | 38.7 | 56.2 | . | . | . | 41 39.98 | - 1.28 | . | - 3.92 | 6 41 34.78 | - 0.22 |
| | 18 | <i>β</i> Lyrae | P. | 22.0 | 25.3 | 27.1 | 34.4 | 36.9 | 39.2 | 46.6 | 48.5 | 51.5 | 45 36.83 | - 0.49 | - 3.90 | - 3.92 | 18 45 32.42 | + 0.01 |
| | 19 | B. A. C. 6495 | P. | 52.9 | 56.2 | 58.0 | 6.0 | 8.7 | 11.3 | 19.0 | 21.0 | 24.3 | 55 8.60 | - 0.48 | . | - 3.93 | 18 55 4.19 | - 2.27 |
| | 20 | <i>ζ</i> Aquilae | P. | 36.8 | 39.5 | 41.2 | 47.4 | 49.6 | 51.6 | 57.8 | 59.5 | 2.0 | 59 49.49 | - 0.55 | - 3.95 | - 3.93 | 18 59 45.01 | + 0.10 |
| | 21 | <i>ε</i> Draconis (R.) . . . | P. | . | . | . | . | . | . | . | . | . | 48 41.58 | - 0.33 | . | - 3.94 | 19 48 37.31 | + 0.33 |
| | 22 | <i>ε</i> Draconis | P. | . | . | 29.6 | 35.8 | 41.6 | 47.5 | 53.6 | . | . | . | . | . | . | . | . |
| | 23 | <i>τ</i> Aquilae (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 24 | <i>τ</i> Aquilae | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 25 | <i>α</i> ² Capricorni | P. | 4.8 | 7.4 | 9.0 | 15.3 | 17.3 | 19.3 | 25.6 | 27.3 | 29.7 | 11 17.30 | - 0.64 | - 3.83 | - 3.94 | 20 11 12.72 | - 0.07 |
| | 26 | <i>π</i> Capricorni | P. | 7.5 | 10.0 | 11.7 | 18.2 | 20.1 | 22.5 | 29.0 | 30.5 | 33.4 | 20 20.36 | - 0.66 | - 3.87 | - 3.94 | 20 20 15.76 | - 0.04 |
| | 27 | <i>ε</i> Delphini (R) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 28 | <i>ε</i> Delphini | P. | . | . | . | . | . | . | . | . | . | 12 39.25 | - 1.38 | . | - 3.94 | 1 12 33.93 | . |
| | 29 | Polaris | E. | . | . | . | . | . | . | . | . | . | 47 52.41 | - 0.69 | - 3.90 | - 3.95 | 1 47 47.77 | - 0.03 |
| | 30 | <i>β</i> Arietis | E. | 39.3 | 42.1 | 43.7 | 50.2 | 52.4 | 54.7 | 1.1 | 2.8 | 5.4 | 29.2 | - 0.68 | - 3.94 | - 3.95 | 2 0 11.35 | 0.00 |
| | 31 | <i>ε</i> Arietis | E. | 2.6 | 5.5 | 7.2 | 13.7 | 16.0 | 18.2 | 24.9 | 26.5 | 29.2 | 0 15.08 | - 0.73 | - 4.02 | - 3.96 | 2 55 48.15 | + 0.08 |
| | 32 | <i>α</i> Ceti | E. | . | . | 52.9 | 54.9 | 56.9 | . | . | . | 5.1 | 55 52.84 | - 0.73 | - 4.02 | - 3.96 | . | . |
| 2 | 33 | Sun I, N. | E. | 33.0 | 35.8 | 37.4 | 44.0 | 46.0 | 48.3 | 54.9 | 56.7 | 59.3 | 42 16.17 | - 0.74 | . | - 3.98 | 4 42 41.45 | . |
| | 34 | Sun II, S. | E. | 49.8 | 52.5 | 54.2 | 1.0 | 3.2 | 5.4 | 12.1 | 13.7 | 16.2 | 45 3 12 | - 0.74 | . | - 3.98 | 4 44 58.40 | . |
| | 35 | <i>a</i> Aurigæ (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 36 | <i>a</i> Aurigæ | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 37 | <i>α</i> ¹ Geminorum | E. | 31.4 | 34.4 | 36.3 | . | . | . | 55.6 | 57.5 | 0.5 | 26 45.97 | - 0.72 | . | - 4.01 | 7 26 41.24 | - 0.55 |
| | 38 | <i>α</i> ² Geminorum | E. | . | . | 41.5 | 44.0 | 46.5 | 48.8 | 51.3 | . | . | 26 46.40 | - 0.72 | - 4.01 | - 4.01 | 7 26 41.67 | + 0.24 |
| | 39 | <i>a</i> Canis Minoris . . . | E. | 41.3 | 43.8 | 45.4 | 51.6 | 53.6 | 55.6 | 1.8 | 3.3 | 5.9 | 32 53.59 | - 0.76 | - 3.94 | - 4.01 | 7 32 48.82 | - 0.23 |
| | 40 | <i>β</i> Geminorum | E. | 34.8 | 37.8 | 39.6 | 46.6 | 48.9 | 51.2 | 38.2 | 59.9 | 2.8 | 37 48.87 | - 0.68 | - 4.07 | - 4.01 | 7 37 44.18 | + 0.03 |
| | 41 | Venus I, N. | E. | 16.0 | 19.4 | 21.1 | 27.7 | 30.0 | 32.2 | 38.9 | 40.6 | 43.5 | 44 30.00 | - 0.73 | . | - 4.01 | 7 44 25.26 | + 1.28 |
| | 42 | Venus S. | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 43 | <i>η</i> Virginis | E. | 28.0 | 30.6 | 32.1 | 38.2 | 40.3 | 42.3 | 48.3 | 49.9 | 32.5 | 13 40.24 | - 0.48 | - 4.24 | - 4.24 | 12 13 35.52 | - 0.02 |
| | 44 | Vesta | E. | 19.6 | 22.1 | 23.7 | 30.9 | 32.0 | 34.0 | 40.3 | 41.7 | 44.3 | 26 31.97 | - 0.50 | . | - 4.25 | 12 26 27.22 | . |
| | 45 | <i>β</i> Corvi | E. | 45.6 | 48.5 | 50.1 | 56.8 | 59.0 | 1.2 | 7.9 | 9.5 | 12.4 | 27 59.00 | - 0.43 | - 4.33 | - 4.25 | 12 27 54.32 | + 0.04 |
| | 46 | 32 ¹ Camelopardalis . . | E. | . | . | 45.9 | 7.2 | 27.9 | 47.5 | 5.0 | . | . | 48 26.56 | - 3.79 | . | - 4.26 | 12 48 18.51 | - 11.81 |
| | 47 | 32 ² Camelopardalis . . | E. | . | . | 54.0 | 14.7 | 34.9 | 54.8 | 12.1 | . | . | 48 33.96 | - 3.80 | . | - 4.26 | 12 48 25.90 | - 0.02 |
| | 48 | 12 ² Canum Venat. . . | E. | 5.0 | 8.3 | 10.3 | 18.3 | 20.9 | 23.5 | 31.4 | 33.3 | 36.7 | 50 20.86 | - 0.66 | - 4.18 | - 4.26 | 12 50 15.94 | - 0.08 |
| | 49 | <i>a</i> Persei | F. | 14.5 | 18.4 | 20.9 | 30.5 | 33.4 | 36.5 | 46.1 | 48.5 | 52.2 | 15 33.44 | - 0.64 | . | - 4.51 | 3 15 28.29 | + 0.12 |
| | 50 | <i>ζ</i> Persei | F. | 11.0 | 14.1 | 15.9 | 23.2 | 25.4 | 27.8 | 35.0 | 36.8 | 39.9 | 46 25.49 | - 0.53 | - 4.59 | - 4.49 | 3 46 20.44 | + 0.09 |

1, 2, 3, 12, 19, 22. Bisections at sets B and D.

9. Bisections at threads I and III.

11, 17, 26. Thread B used.

12, 13. Thread A used.

17. Bisections at set C.

29. The transits are over six positions of the right-ascension micrometer thread.

46, 47. Bisections at threads B₁ and C₃.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|---------------------------|-------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | | r. " | " | " | " | | | | | | | | | | | | | |
| 1 | 23 36 | 10 16.8 | 19.9 | 29.9 | 6.7 | 37 | .. | .. | .. | 765 | 760 | 58.8 | 336 20 37.6 | .. | - | 24.8 | 27 26 34.0 | -12.1 |
| 2 | 15 40 | 18.1 | 21.0 | 1.7 | 8.5 | 35 | 415 | .. | .. | .. | 370 | 58.8 | 344 16 2.5 | .. | - | 16.0 | 35 22 7.7 | -12.7 |
| 3 | 15 40 | 18.1 | 21.0 | 1.7 | 8.5 | 35 | .. | 610 | .. | 560 | .. | 58.8 | 344 16 5.4 | .. | - | 16.0 | 35 22 10.6 | -12.7 |
| 4 | 332 2 | 14.5 | 18.0 | 25.4 | 6.2 | 32 | .. | 865 | .. | 775 | .. | 58.8 | 27 53 19.3 | .. | + | 30.0 | 79 0 10.5 | -13.1 |
| 5 | 358 18 | 18.7 | 22.0 | 29.5 | 9.4 | 35 | .. | .. | .. | 655 | .. | 58.8 | 1 38 7.4 | .. | + | 1.6 | 52 44 30.2 | -13.5 |
| 6 | 358 18 | 18.7 | 22.0 | 29.5 | 9.4 | 35 | .. | .. | .. | .. | 825 | 58.8 | 1 38 10.6 | .. | + | 1.6 | 52 44 33.4 | -13.5 |
| 7 | 206 10 | 12.5 | 17.4 | 25.4 | 0.5 | 34 | 520 | 440 | .. | .. | .. | 58.8 | 153 45 41.6 | .. | - | 28.0 | 77 21 7.6 | +2.3 |
| 8 | 333 42 | 12.5 | 15.6 | 24.5 | 5.0 | 36 | .. | .. | .. | 595 | 610 | 58.8 | 26 14 16.4 | .. | + | 28.0 | 77 21 5.6 | +0.3 |
| 9 | 150 0 | 12.4 | 17.8 | 25.9 | 4.2 | 29 | 765 | 695 | .. | .. | .. | 58.8 | 209 54 29.3 | .. | + | 32.7 | 21 11 19.2 | -2.4 |
| 10 | 29 50 | 12.8 | 15.5 | 24.0 | 3.6 | 33 | .. | .. | .. | 590 | 570 | 58.8 | 330 5 31.0 | .. | - | 32.7 | 21 11 19.5 | -2.1 |
| 11 | 292 22 | 19.5 | 22.8 | 1.0 | 9.6 | 33 | 490 | 470 | .. | .. | .. | 58.8 | 67 36 5.3 | .. | + | 2 17.0 | 118 44 43.5 | -8.8 |
| 12 | 303 48 | 16.2 | 18.5 | 28.5 | 8.2 | 39 | .. | .. | .. | 825 | 735 | 58.8 | 56 6 34.4 | .. | + | 1 24.5 | 107 14 20.1 | -8.5 |
| 13 | 303 48 | 16.2 | 18.5 | 28.5 | 8.2 | 31 | .. | .. | .. | 320 | 410 | 58.8 | 56 4 26.0 | .. | + | 1 24.5 | 107 12 11.7 | -8.4 |
| 14 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 15 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 16 | 289 34 | 16.8 | 19.1 | 28.0 | 7.3 | 36 | .. | .. | .. | 850 | 795 | 58.8 | 70 22 22.8 | .. | + | 2 38.2 | 121 31 22.2 | -4.7 |
| 17 | 53 48 | 15.2 | 16.0 | 25.2 | 4.4 | 30 | 330 | 385 | 345 | 430 | 390 | 58.8 | 306 9 13.3 | .. | - | 1 17.8 | 357 14 16.7 | -0.1 |
| 18 | 354 16 | 17.5 | 20.6 | 29.2 | 7.7 | 37 | .. | .. | .. | 585 | 540 | 58.8 | 5 40 35.7 | .. | + | 5.7 | 56 47 2.6 | +0.2 |
| 19 | 0 4 | 12.5 | 15.5 | 23.3 | 3.6 | 31 | .. | .. | .. | 915 | 910 | 58.8 | 359 51 3.3 | 59.2 | - | 0.1 | 50 57 24.4 | -14.8 |
| 20 | 334 44 | 14.1 | 16.0 | 24.3 | 5.6 | 37 | .. | 650 | .. | 570 | .. | 58.8 | 25 12 31.6 | .. | + | 26.8 | 76 19 19.6 | -0.3 |
| 21 | 148 52 | 11.9 | 16.6 | 25.7 | 4.9 | 30 | 310 | 260 | .. | .. | .. | 58.8 | 211 2 36.9 | .. | + | 34.4 | 20 3 9.9 | -1.8 |
| 22 | 30 58 | 13.5 | 15.0 | 23.7 | 3.7 | 33 | .. | .. | .. | 125 | 040 | 58.8 | 328 57 21.1 | .. | - | 34.4 | 20 3 7.9 | -3.8 |
| 23 | 211 52 | 15.0 | 19.0 | 27.0 | 4.0 | 29 | 915 | 850 | .. | .. | .. | 58.8 | 148 2 33.6 | .. | - | 35.7 | 83 4 23.3 | +2.6 |
| 24 | 327 58 | 12.1 | 14.5 | 22.6 | 3.5 | 33 | .. | .. | .. | 225 | 140 | 58.8 | 31 57 22.8 | .. | + | 35.7 | 83 4 19.7 | -1.0 |
| 25 | 308 8 | 12.0 | 16.1 | 23.8 | 5.4 | 35 | .. | 940 | .. | 870 | .. | 58.8 | 51 48 4.7 | .. | + | 1 12.6 | 102 55 38.5 | -1.9 |
| 26 | 302 28 | 14.6 | 17.0 | 26.4 | 6.5 | 29 | .. | 950 | .. | 780 | .. | 58.8 | 57 29 6.3 | .. | + | 1 29.6 | 108 36 57.1 | -1.2 |
| 27 | 207 56 | 15.5 | 21.0 | 28.2 | 4.5 | 34 | 235 | 210 | .. | .. | .. | 58.8 | 151 59 41.1 | .. | - | 30.5 | 79 7 10.6 | +2.9 |
| 28 | 331 56 | 13.0 | 16.3 | 23.5 | 5.0 | 36 | .. | .. | .. | 485 | 470 | 58.8 | 28 0 14.6 | 56.8 | + | 30.5 | 79 7 6.3 | -1.4 |
| 29 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 30 | 341 14 | 7.6 | 11.0 | 19.0 | 1.6 | 32 | .. | 725 | .. | 690 | .. | 56.8 | 18 41 9.3 | .. | + | 18.9 | 69 47 49.4 | -1.5 |
| 31 | 343 56 | 18.2 | 22.0 | 1.5 | 10.7 | 38 | .. | 420 | .. | 325 | .. | 56.8 | 16 0 40.9 | 71.5 | + | 16.0 | 67 7 24.1 | -0.6 |
| 32 | 324 40 | 12.2 | 15.3 | 25.3 | 5.5 | 38 | .. | .. | .. | 470 | 430 | 56.8 | 35 16 42.7 | .. | + | 39.1 | 86 23 43.0 | -0.6 |
| 33 | 343 36 | 7.3 | 9.8 | 18.4 | 0.9 | 33 | 745 | 830 | .. | .. | .. | 56.8 | 16 19 24.4 | .. | + | 16.0 | 67 26 1.6 | .. |
| 34 | 343 4 | 5.6 | 4.3 | 14.1 | 27.6 | 32 | .. | .. | .. | 380 | 380 | 56.8 | 16 51 0.2 | 81.5 | + | 16.5 | 67 57 37.9 | .. |
| 35 | 172 58 | 12.3 | 19.0 | 29.3 | 7.4 | 37 | 945 | 890 | .. | .. | .. | 56.8 | 186 58 34.9 | .. | + | 6.7 | 44 7 39.0 | -1.2 |
| 36 | 6 54 | 12.5 | 16.4 | 27.0 | 5.0 | 33 | .. | .. | .. | 405 | 360 | 56.8 | 353 1 26.3 | .. | - | 6.7 | 44 7 40.8 | 0.0 |
| 37 | 353 12 | 17.0 | 22.3 | 1.0 | 9.5 | 35 | .. | 000 | .. | 990 | .. | 56.8 | 6 43 54.6 | .. | + | 6.4 | 57 50 22.2 | +9.4 |
| 38 | 353 12 | 17.0 | 22.3 | 1.0 | 9.5 | 35 | .. | .. | .. | 100 | 060 | 56.8 | 6 43 56.8 | .. | + | 6.4 | 57 50 24.4 | +4.1 |
| 39 | 326 36 | 17.0 | 22.7 | 0.3 | 9.4 | 37 | .. | 480 | .. | 440 | .. | 56.8 | 33 20 32.1 | .. | + | 35.7 | 84 27 29.0 | -0.2 |
| 40 | 349 22 | 16.8 | 20.2 | 0.5 | 9.6 | 35 | .. | 120 | .. | 040 | .. | 56.8 | 10 33 55.2 | .. | + | 19.1 | 61 40 26.5 | +1.6 |
| 41 | 344 50 | 13.8 | 19.0 | 27.2 | 6.6 | 32 | 570 | .. | .. | .. | 490 | 56.8 | 15 5 13.7 | .. | + | 14.6 | 66 11 49.5 | .. |
| 42 | 344 50 | 13.8 | 19.0 | 27.2 | 6.6 | 34 | .. | 930 | .. | 790 | .. | 56.8 | 15 5 49.2 | .. | + | 14.6 | 66 12 25.0 | .. |
| 43 | 321 4 | 19.5 | 24.0 | 1.8 | 10.8 | 34 | 405 | 385 | .. | 315 | 305 | 56.2 | 38 51 45.5 | .. | + | 44.1 | 89 58 50.8 | +0.7 |
| 44 | 328 18 | 20.3 | 22.6 | 2.0 | 9.5 | 35 | .. | 285 | .. | 215 | .. | 56.2 | 31 37 58.8 | .. | + | 33.8 | 82 44 53.8 | -2.3 |
| 45 | 298 22 | 18.2 | 20.2 | 0.3 | 9.5 | 39 | .. | 060 | .. | 965 | .. | 56.2 | 61 34 54.7 | 78.0 | + | 1 40.9 | 112 42 56.8 | +0.6 |
| 46 | 45 6 | 15.8 | 17.8 | 28.5 | 3.2 | 31 | 200 | .. | 295 | .. | .. | 56.2 | 314 48 53.0 | .. | - | 55.2 | 5 54 19.0 | +7.2 |
| 47 | 45 6 | 15.8 | 17.8 | 28.5 | 3.2 | 32 | 420 | .. | 515 | .. | .. | 56.2 | 314 49 11.7 | .. | - | 55.2 | 5 54 37.7 | -3.8 |
| 48 | 0 0 | 15.5 | 17.7 | 26.5 | 5.2 | 29 | .. | 140 | .. | 050 | .. | 56.2 | 359 54 20.0 | .. | - | 0.1 | 51 0 41.1 | -1.0 |
| 49 | 10 28 | 15.6 | 16.8 | 26.4 | 6.3 | 38 | .. | 324 | .. | 216 | .. | 53.7 | 349 28 38.1 | 81.9 | - | 10.1 | 40 34 49.2 | -2.6 |
| 50 | 352 34 | 22.6 | 25.0 | 1.7 | 11.0 | 37 | .. | .. | .. | 576 | 490 | 53.7 | 7 22 33.9 | .. | + | 7.0 | 58 29 2.1 | -2.2 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|----------|
| | in. | ° | | " " | " " | " " | " " |
| 19 | 29.91 | 63.0 | 33 | -2.4 | +15 48.1 | .. | +15 45.7 |
| 28 | 29.90 | 61.6 | 34 | -2.5 | -15 48.1 | .. | -15 50.6 |
| 31 | 29.93 | 71.0 | 41 | -4.7 | +17.8 | .. | +13.1 |
| 34 | 29.91 | 78.5 | 42 | -4.7 | -17.8 | +0.1 | -22.4 |
| 45 | 29.84 | 79.5 | | | | | |
| 49 | 29.88 | 80.6 | | | | | |

| DATE. | Number | OBJECT. | Observer | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. |
|--------|--------|---------------------------------|----------|--------------------------------|------|------|------|------|------|------|-------|----------|--------------|---------|----------------|---------------------------|-------|--------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | m. | |
| 1876. | | | | | | | | | | | | m. | s. | s. | s. | s. | s. | s. | |
| June 3 | 1 | Sun I, N. | F. | 39.6 | 42.3 | 44.0 | 50.7 | 52.9 | 55.1 | 1.7 | 3.5 | 6.0 | 46 52.87 | - 0.52 | . | - 4.46 | 4 46 | 47.89 | . |
| | 2 | Sun II, S. | F. | 56.6 | 59.4 | 1.0 | 7.7 | 9.9 | 12.1 | 18.7 | 20.4 | 23.1 | 49 9.88 | - 0.52 | . | - 4.46 | 4 49 | 49.90 | . |
| | 3 | α Aurigæ (R.) | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 4 | α Aurigæ. | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 5 | δ Orionis. | F. | 32.9 | 35.5 | 37.1 | 43.2 | 45.4 | 47.4 | 53.4 | 54.9 | 57.4 | 25 45.24 | - 0.48 | - 4.42 | - 4.44 | 5 25 | 40.32 | - 0.05 |
| | 6 | ϵ Orionis. | F. | 48.0 | 50.6 | 52.1 | 58.0 | 0.3 | 2.4 | 8.4 | 9.9 | 12.4 | 30 0.23 | - 0.48 | - 4.46 | - 4.44 | 5 29 | 55.31 | + 0.01 |
| | 7 | η Geminorum | F. | 19.5 | 22.2 | 23.8 | 30.5 | 32.7 | 34.9 | 41.5 | 43.2 | 45.9 | 15 32.69 | - 0.52 | - 4.42 | - 4.41 | 6 15 | 27.76 | - 0.03 |
| | 8 | γ Geminorum | F. | . | . | . | 40.2 | 42.4 | 44.5 | 48.2 | 50.8 | 30 38.00 | - 0.51 | - 4.40 | - 4.41 | 6 30 | 33.14 | - 0.04 | |
| | 9 | α Canis Majoris | F. | 32.8 | 35.5 | 37.1 | 43.5 | 45.7 | 47.7 | 54.1 | 55.7 | 58.3 | 39 45.60 | - 0.48 | - 4.40 | - 4.40 | 6 39 | 40.72 | - 0.08 |
| | 10 | Venus N. | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 11 | Venus S. | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| 5 | 12 | α Bootis (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 13 | α Bootis | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 14 | θ Bootis (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 15 | θ Bootis | P. | . | . | . | . | . | 21.4 | 23.9 | 27.9 | 20 7.97 | - 0.55 | . | - 5.47 | 14 21 | 1.95 | + 0.27 | |
| | 16 | Anonymous | P. | . | . | 47.0 | 49.4 | 51.6 | 53.7 | 55.8 | . | 30 51.48 | - 0.45 | . | - 5.48 | 14 30 | 45.55 | - 2.47 | |
| | 17 | ϵ^1 Bootis | P. | 29.0 | 31.9 | 33.6 | . | . | . | 52.0 | 53.7 | 56.7 | 39 42.84 | - 0.46 | . | - 5.48 | 14 39 | 36.90 | - 2.63 |
| | 18 | ϵ^2 Bootis | P. | . | . | 38.2 | 40.8 | 43.0 | 45.2 | 47.6 | . | 39 42.94 | - 0.46 | - 5.54 | - 5.48 | 14 39 | 37.90 | + 0.04 | |
| | 19 | α^2 Libræ | P. | 56.9 | 59.6 | 1.2 | 7.6 | 9.6 | 11.7 | 18.0 | 19.6 | 22.2 | 44 9.60 | - 0.44 | - 5.42 | - 5.48 | 14 44 | 3.68 | - 0.07 |
| | 20 | β Ursæ Minoris | P. | . | . | 2.2 | 10.3 | 18.0 | 25.3 | 33.2 | . | 51 17.75 | - 0.87 | . | - 5.48 | 14 51 | 11.40 | + 0.57 | |
| | 21 | β Bootis | P. | 9.2 | 12.6 | 14.6 | 23.0 | 25.5 | 28.0 | 30.3 | 38.0 | 41.5 | 57 25.41 | - 0.49 | . | - 5.48 | 14 57 | 19.44 | + 0.05 |
| | 22 | Jupiter I, N. | P. | 32.8 | 35.5 | 37.0 | . | . | . | 54.3 | 55.9 | 58.6 | 30 45.70 | - 0.44 | . | - 5.49 | 15 30 | 39.77 | . |
| | 23 | Jupiter II, S. | P. | . | . | 44.5 | 46.7 | 49.0 | 50.9 | 53.2 | . | 30 48.85 | - 0.44 | . | - 5.49 | 15 30 | 42.92 | . | |
| | 24 | Moon S. | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 25 | α Scorpii | P. | . | . | 52.7 | 55.0 | 57.2 | 59.5 | 1.9 | . | 21 57.24 | - 0.45 | - 5.37 | - 5.50 | 16 21 | 51.29 | - 0.14 | |
| | 26 | ζ Ophiuchi | P. | 16.0 | 18.8 | 20.3 | 26.6 | 28.6 | 30.7 | 37.0 | 38.5 | 41.0 | 30 28.61 | - 0.44 | - 5.45 | - 5.50 | 16 30 | 22.67 | - 0.05 |
| | 27 | η Herculis | P. | 31.8 | 35.2 | 37.3 | 45.1 | 47.8 | 50.4 | 8.2 | 0.2 | 3.5 | 38 47.72 | - 0.48 | - 5.60 | - 5.50 | 16 35 | 41.74 | + 0.20 |
| | 28 | κ Ophiuchi | P. | 44.2 | 46.8 | 48.4 | 54.7 | 56.7 | 58.8 | 4.9 | 6.5 | 9.0 | 51 56.67 | - 0.44 | - 5.61 | - 5.51 | 16 51 | 50.72 | + 0.14 |
| | 29 | ϵ Ursæ Minoris. | P. | 36.7 | 48.4 | 0.5 | 45.6 | 0.5 | 15.4 | 0.7 | 11.9 | 30.7 | 59 0.49 | - 1.42 | . | - 5.51 | 16 58 | 53.56 | + 0.75 |
| 20 | 30 | θ Virginis | S. | 36.0 | 38.7 | 40.2 | 46.4 | 48.5 | 50.6 | 56.6 | 58.0 | 0.7 | 3 48.41 | - 0.52 | - 14.15 | - 14.15 | 13 3 | 33.74 | - 0.04 |
| | 31 | Polaris, S. P. | S. | . | . | 49.5 | 21.5 | 58.0 | 31.5 | 5.5 | . | 12 57.82 | + 7.05 | . | - 14.15 | 1 12 | 50.72 | - 0.01 | |
| | 32 | α Virginis | S. | 44.0 | 46.4 | 48.0 | 54.4 | 56.4 | 58.5 | 4.6 | 6.2 | 8.7 | 18 56.36 | - 0.52 | - 14.15 | - 14.15 | 13 18 | 41.60 | - 0.02 |
| | 33 | ζ Virginis | S. | 27.0 | 29.6 | 31.1 | 37.1 | 39.3 | 41.4 | 47.5 | 49.0 | 51.5 | 28 39.28 | - 0.51 | - 14.16 | - 14.15 | 13 28 | 24.62 | + 0.01 |
| | 34 | η Bootis | S. | 50.8 | 53.5 | 55.1 | 1.7 | 3.8 | 6.0 | 12.4 | 14.0 | 16.7 | 49 3 78 | - 0.52 | - 14.15 | - 14.15 | 13 48 | 49.11 | - 0.05 |
| 26 | 35 | α Bootis | E. | 8.4 | 11.0 | 12.6 | 19.3 | 21.5 | 23.6 | 30.0 | 31.6 | 34.5 | 10 21.39 | - 0.63 | - 18.13 | - 18.18 | 14 10 | 2.58 | - 0.05 |
| | 36 | B. A. C. 4813 | E. | 46.7 | 50.0 | 52.0 | 0.2 | 3.0 | 5.8 | 13.9 | 15.8 | 19.3 | 28 2.97 | - 0.77 | . | - 18.18 | 14 27 | 44.02 | - 2.54 |
| | 37 | ϵ^1 Bootis | E. | 41.6 | 44.6 | 46.3 | . | . | . | 4.7 | 6.4 | 9.3 | 30 55.50 | - 0.63 | . | - 14.19 | 14 39 | 36.68 | - 2.49 |
| | 38 | ϵ^2 Bootis | E. | . | . | 51.0 | 53.3 | 55.6 | 58.0 | 0.2 | . | 39 55.60 | - 0.63 | - 18.17 | - 18.19 | 14 39 | 36.78 | - 0.04 | |
| | 39 | α^2 Libræ | E. | 9.8 | 12.4 | 14.1 | 20.6 | 22.7 | 24.7 | 31.0 | 32.7 | 35.4 | 44 22.60 | - 0.66 | - 18.25 | - 18.19 | 14 44 | 3.75 | + 0.05 |
| | 40 | 48 Cephei, S. P. | E. | 50.5 | 39.4 | 32.6 | 4.1 | 54.7 | 45.6 | 17.6 | 10.5 | 59.4 | 4 54.93 | + 0.36 | . | - 18.21 | 3 4 | 37.08 | - 0.33 |
| | 41 | B. A. C. 5035 | E. | 54.8 | 58.0 | 0.2 | 8.2 | 10.9 | 13.6 | 21.7 | 23.6 | 27.0 | 11 10.89 | - 0.76 | . | - 18.21 | 15 10 | 51.92 | - 2.95 |
| | 42 | B. A. C. 5046 | E. | 20.3 | 23.6 | 25.8 | 33.8 | 36.4 | 39.1 | 47.0 | 49.0 | 52.4 | 13 36.33 | - 0.76 | . | - 18.21 | 15 13 | 17.41 | - 2.97 |
| | 43 | α Serpentis (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 44 | α Serpentis | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 45 | ϵ Cor. Borealis (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 46 | ϵ Coronæ Borealis | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 47 | Weisse 47 | E. | 45.6 | 48.0 | 49.9 | 56.0 | 58.0 | 0.3 | 6.5 | 8.0 | 10.7 | 4 58.11 | - 0.65 | . | - 18.25 | 16 4 | 39.21 | - 2.85 |
| | 48 | B. A. C. 5432 ¹ , S. | E. | 8.8 | 11.8 | 13.7 | . | . | . | 33.4 | 35.3 | 38.3 | 10 23.53 | - 0.63 | . | - 18.26 | 16 10 | 4.64 | - 2.76 |
| | 49 | B. A. C. 5432 ² , N. | E. | . | . | 18.7 | 21.3 | 23.7 | 26.0 | 28.6 | . | 10 23.64 | - 0.63 | . | - 18.26 | 16 10 | 4.75 | - 2.76 | |
| | 50 | A Draconis (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 51 | A Draconis | E. | . | . | 25.4 | 31.2 | 37.0 | 42.4 | 48.1 | . | 28 36.78 | - 0.87 | . | - 18.27 | 16 28 | 17.64 | - 0.32 | |

2. Telescope micrometer reading increased two revolutions in reduction.
 16, 20. Bisections at threads B and D.
 16, 42, 48, 49. Thread A used.
 28, 41. Thread B used.
 29. Bisections at set C.
 43. Bisections at threads II and III.
 51. Bisections at threads V and VI.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom't. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | |
| | ° ' " | r. " | " " | " " | " " | | | | | | | ° ' " | ° ' " | ° ' " | ° ' " | " " |
| 1 | 343 44 | 10 11.3 | 16.8 | 22.8 | 2.5 | 36 | 714 | 736 | .. | .. | .. | 53.7 | 16 12 10.5 | + | 15.7 | 67 18 47.4 |
| 2 | 343 12 | 8.5 | 14.3 | 20.8 | 29.1 | 33 | .. | .. | .. | 048 | 904 | 53.7 | 16 43 42.6 | + | 16.2 | 67 50 20.0 |
| 3 | 172 58 | 21.7 | 28.0 | 5.3 | 11.9 | 37 | 588 | 556 | .. | .. | .. | 53.7 | 186 58 33.6 | + | 6.6 | 44 7 41.0 |
| 4 | 6 54 | 20.1 | 24.7 | 1.8 | 11.1 | 33 | .. | .. | .. | 194 | 170 | 53.7 | 353 1 26.8 | - | 6.6 | 44 7 41.4 |
| 5 | 320 40 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 6 | 319 46 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 7 | 343 38 | 21.1 | 26.2 | 0.9 | 11.2 | 38 | .. | 276 | .. | 186 | .. | 53.7 | 16 18 43.4 | + | 15.7 | 67 25 20.3 |
| 8 | 337 34 | 16.0 | 20.1 | 27.8 | 7.6 | 39 | .. | .. | .. | 418 | 372 | 53.7 | 22 22 57.5 | + | 22.0 | 73 29 40.7 |
| 9 | 304 30 | 19.0 | 23.7 | 1.7 | 12.3 | 32 | .. | 316 | .. | 276 | .. | 53.7 | 55 25 11.6 | + | 17.5 | 106 32 50.3 |
| 10 | 344 40 | 11.2 | 14.5 | 21.9 | 2.6 | 38 | .. | .. | .. | 328 | .. | 53.7 | 15 16 35.9 | + | 14.6 | 66 23 11.7 |
| 11 | 344 40 | 11.2 | 14.5 | 21.9 | 2.6 | 40 | .. | .. | .. | .. | 570 | 53.7 | 15 17 10.8 | + | 14.6 | 66 23 46.6 |
| 12 | 199 0 | 18.4 | 23.8 | 0.1 | 4.7 | 36 | 390 | 335 | .. | .. | .. | 57.4 | 160 56 14.3 | - | 19.6 | 70 10 26.5 |
| 13 | 340 52 | 15.0 | 18.1 | 25.5 | 5.5 | 31 | .. | .. | .. | 600 | 565 | 57.4 | 19 3 45.5 | + | 10.6 | 70 10 26.3 |
| 14 | 166 24 | 21.0 | 26.9 | 3.4 | 9.7 | 33 | 535 | 485 | .. | .. | .. | 57.4 | 193 31 33.6 | + | 13.6 | 37 34 34.0 |
| 15 | 13 28 | 20.5 | 24.1 | 1.7 | 9.3 | 37 | .. | .. | .. | 000 | 925 | 57.4 | 316 28 28.0 | - | 13.6 | 37 34 35.6 |
| 16 | 299 32 | 14.9 | 18.1 | 26.8 | 6.6 | 39 | .. | .. | .. | 370 | 400 | 57.4 | 60 22 25.7 | + | 39.4 | 111 30 26.3 |
| 17 | 348 38 | 16.5 | 20.5 | 27.0 | 6.2 | 34 | 270 | .. | .. | .. | 250 | 57.4 | 11 17 41.8 | + | 11.3 | 62 24 14.3 |
| 18 | 348 38 | 16.5 | 20.5 | 27.0 | 6.2 | 34 | .. | 515 | .. | 445 | .. | 57.4 | 11 17 41.9 | + | 11.3 | 62 24 17.4 |
| 19 | 305 32 | 16.6 | 20.0 | 27.2 | 7.9 | 35 | .. | .. | .. | 965 | 955 | 57.4 | 54 24 8.4 | + | 19.1 | 105 31 48.7 |
| 20 | 35 42 | 12.3 | 15.4 | 23.0 | 1.1 | 38 | .. | .. | .. | 300 | 285 | 57.4 | 324 14 38.8 | - | 40.9 | 15 20 19.1 |
| 21 | 1 54 | 17.6 | 20.1 | 29.0 | 6.0 | 31 | .. | 460 | .. | 390 | .. | 57.4 | 358 0 58.9 | - | 2.0 | 49 7 18.1 |
| 22 | 303 6 | 16.5 | 19.8 | 27.6 | 8.2 | 35 | 295 | .. | .. | .. | 235 | 57.4 | 56 49 57.0 | + | 26.8 | 107 57 45.0 |
| 23 | 303 6 | 16.5 | 19.8 | 27.6 | 8.2 | 38 | .. | 050 | .. | 045 | .. | 57.4 | 56 50 39.7 | + | 26.9 | 107 58 27.8 |
| 24 | 293 56 | 17.7 | 20.3 | 23.0 | 7.6 | 31 | .. | .. | 385 | .. | .. | 57.4 | 65 58 58.2 | + | 7.3 | 117 7 26.7 |
| 25 | 294 56 | 15.5 | 17.7 | 25.5 | 4.2 | 32 | .. | 015 | .. | 925 | .. | 57.4 | 65 1 4.3 | + | 1.8 | 116 9 27.3 |
| 26 | 310 44 | 16.0 | 19.4 | 26.5 | 5.9 | 31 | .. | 030 | .. | 950 | .. | 57.4 | 49 11 36.6 | + | 6.0 | 100 19 3.8 |
| 27 | 0 12 | 15.9 | 19.5 | 26.5 | 4.5 | 36 | .. | 705 | .. | 625 | .. | 57.4 | 359 44 17.5 | - | 0.3 | 50 50 38.4 |
| 28 | 330 33 | 14.9 | 17.9 | 25.6 | 5.1 | 30 | .. | 175 | .. | 100 | .. | 57.4 | 29 19 9.0 | + | 32.1 | 80 26 2.3 |
| 29 | 43 16 | 14.0 | 14.8 | 24.5 | 1.5 | 37 | 405 | 430 | 360 | 330 | 375 | 57.4 | 316 40 25.5 | - | 53.8 | 7 45 52.9 |
| 30 | 316 10 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 31 | 52 22 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 32 | 310 32 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 33 | 321 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 34 | 340 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 35 | 340 52 | 3.0 | 0.5 | 2.0 | 3.7 | 34 | .. | .. | .. | 215 | 235 | 67.6 | 19 3 44.3 | + | 18.6 | 70 10 24.1 |
| 36 | 280 8 | 9.8 | 7.7 | 11.3 | 11.8 | 32 | .. | 985 | .. | 950 | .. | 67.6 | 79 47 31.6 | + | 48.7 | 130 58 41.5 |
| 37 | 348 38 | 4.7 | 3.0 | 4.6 | 6.5 | 33 | 650 | .. | .. | .. | 645 | 67.6 | 11 17 37.2 | + | 10.8 | 62 24 9.2 |
| 38 | 348 38 | 4.7 | 3.0 | 4.6 | 6.5 | 33 | .. | 795 | .. | 780 | .. | 67.6 | 11 17 39.2 | + | 10.8 | 62 24 11.2 |
| 39 | 305 32 | 9.0 | 7.5 | 9.2 | 11.5 | 35 | .. | 575 | .. | 560 | .. | 67.6 | 54 24 10.8 | + | 15.3 | 105 31 47.3 |
| 40 | 63 44 | 6.7 | 2.8 | 6.6 | 6.9 | 35 | .. | 330 | .. | 290 | .. | 67.6 | 296 12 1.9 | - | 49.5 | 347 16 33.6 |
| 41 | 280 52 | 9.2 | 6.6 | 10.1 | 11.8 | 45 | .. | 885 | .. | 855 | .. | 67.6 | 79 9 20.9 | + | 34.1 | 130 20 16.2 |
| 42 | 280 52 | 9.2 | 6.6 | 10.1 | 11.8 | 34 | .. | 300 | .. | 220 | .. | 67.6 | 79 1 17.2 | + | 30.7 | 130 12 9.1 |
| 43 | 212 0 | 6.0 | 3.8 | 7.0 | 5.4 | 34 | 630 | 800 | .. | .. | .. | 67.6 | 147 55 41.3 | - | 34.1 | 83 11 14.0 |
| 44 | 327 52 | 8.5 | 6.2 | 7.5 | 10.1 | 35 | .. | .. | .. | .. | 770 | 67.6 | 32 4 13.8 | + | 34.1 | 83 11 9.1 |
| 45 | 191 36 | 5.8 | 5.3 | 6.5 | 5.6 | 37 | 895 | 890 | .. | .. | .. | 67.6 | 168 20 41.9 | - | 11.2 | 62 45 50.5 |
| 46 | 348 16 | 9.3 | 6.6 | 8.0 | 10.2 | 32 | .. | .. | .. | 010 | 005 | 67.6 | 11 39 16.6 | + | 11.2 | 62 45 49.0 |
| 47 | 308 56 | 7.2 | 5.0 | 7.0 | 10.8 | 38 | .. | 630 | .. | 590 | .. | 67.6 | 51 0 55.6 | + | 7.3 | 102 8 24.1 |
| 48 | 355 12 | 7.2 | 5.0 | 7.0 | 8.7 | 41 | 975 | .. | .. | .. | 965 | 67.6 | 4 43 13.6 | + | 4.5 | 55 49 39.3 |
| 49 | 355 12 | 7.2 | 5.0 | 7.0 | 8.7 | 42 | .. | 255 | .. | 215 | .. | 67.6 | 4 43 17.4 | + | 4.5 | 55 49 43.1 |
| 50 | 149 48 | 6.5 | 7.5 | 9.4 | 10.5 | 34 | 980 | 930 | .. | .. | .. | 67.6 | 210 7 53.5 | + | 31.8 | 20 57 50.9 |
| 51 | 30 4 | 6.2 | 2.0 | 5.2 | 7.2 | 35 | .. | .. | .. | 235 | 165 | 67.6 | 329 52 2.1 | - | 31.8 | 20 57 51.5 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|------------|
| | in. | ° | | " " | " " | " " | " " |
| 2 | 29.86 | 84.0 | 1 | 2.4 | + 15 46.3 | .. | + 15 43.9 |
| 7 | 29.84 | 88.0 | 2 | 2.5 | - 15 46.3 | .. | - 15 48.8 |
| 12 | 30.00 | 66.3 | 10 | 4.8 | + 17.5 | 0.1 | + 12.6 |
| 21 | 30.00 | 65.1 | 11 | 4.8 | - 17.5 | .. | - 22.3 |
| 25 | 29.99 | 63.2 | 22 | 1.7 | + 21.4 | .. | + 19.7 |
| 29 | 29.99 | 61.4 | 23 | 1.7 | - 21.4 | .. | - 23.1 |
| 35 | 29.75 | 86.0 | 24 | 49 29.6 | - 14 49.8 | .. | - 1 4 19.4 |
| 51 | 29.90 | 81.0 | | | | | |

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. |
|---------|---------|--------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|-------|--------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | m. | s. | |
| 1876. | | | | | | | | | | | | | m. s. | s. | s. | s. | | | | s. |
| June 26 | 1 | B. A. C. 5841 . . | E. | 56.4 | 59.0 | 0.6 | 6.8 | 9.0 | 11.0 | 17.0 | 18.7 | 21.4 | 13 8.88 | - 0.62 | . . | -18.30 | 17 12 | 49.96 | - 2.84 | |
| | 2 | B. A. C. 5886 ¹ . . | E. | 30.2 | 33.5 | 35.4 | . . | . . | . . | 55.9 | 58.0 | 1.2 | 19 45.72 | - 0.64 | . . | -18.31 | 17 18 | 26.77 | - 2.82 | |
| | 3 | B. A. C. 5886 ² . . | E. | . . | . . | 40.9 | 43.6 | 46.0 | 48.7 | 51.1 | . . | . . | 19 46.04 | - 0.64 | . . | -18.31 | 17 19 | 27.09 | - 2.82 | |
| | 4 | XVII. 9 | E. | 13.5 | 16.6 | 18.4 | 25.8 | 28.0 | 30.5 | 37.6 | 39.4 | 42.5 | 24 28.03 | - 0.72 | . . | -18.31 | 17 24 | 9.00 | - 3.54 | |
| | 5 | XVII. 10 | E. | 59.8 | 2.8 | 4.5 | 11.7 | 14.0 | 16.5 | 23.6 | 25.4 | 28.5 | 30 14.09 | - 0.71 | . . | -18.32 | 17 25 | 55.06 | - 3.54 | |
| | 6 | O. Arg. S. 17123 . | E. | 35.9 | 38.6 | 40.5 | 47.4 | 49.6 | 52.0 | 59.0 | 0.7 | 3.6 | 36 49.70 | - 0.70 | . . | -18.32 | 17 36 | 30.68 | - 3.46 | |
| | 7 | Tran. Zones 36, 67 | E. | 29.1 | 31.9 | 33.7 | 40.7 | 43.0 | 45.3 | 52.2 | 53.9 | 56.7 | 37 42.94 | - 0.70 | . . | -18.32 | 17 37 | 23.92 | - 3.47 | |
| | 8 | O. Arg. S. 17177 . | E. | 52.6 | 55.4 | 57.3 | 4.4 | 6.6 | 8.9 | 15.7 | 17.4 | 20.5 | 39 6.53 | - 0.70 | . . | -18.32 | 17 38 | 47.51 | - 3.47 | |
| | 9 | Ursæ Minoris . . | E. | 26.0 | 9.5 | 36.0 | 20.0 | 55.0 | 29.5 | . . | . . | . . | 12 54.00 | - 3.05 | . . | -18.35 | 18 12 | 32.60 | + 0.60 | |
| | 10 | Aquæ | E. | 37.3 | 39.0 | 41.4 | 47.6 | 49.7 | 51.8 | 58.0 | 59.5 | 2.0 | 28 49.69 | - 0.64 | -18.37 | -18.36 | 18 28 | 30.69 | + 0.08 | |
| | 11 | " Lyrae | E. | 50.5 | 53.6 | 55.6 | 3.5 | 6.2 | 8.8 | 16.7 | 18.6 | 22.0 | 33 6.17 | - 0.63 | -18.37 | -18.36 | 18 32 | 47.18 | + 0.03 | |
| | 12 | 51 Cephei, S. P. . . | E. | . . | . . | 32.5 | 50.5 | 8.5 | 26.5 | 2.0 | 31.5 | 37.5 | 41 51.30 | + 2.83 | . . | -18.37 | 6 41 | 35.76 | + 0.97 | |
| | 13 | 3 Lyrae | E. | 37.0 | 40.2 | 42.0 | 49.5 | 51.9 | 54.1 | 1.5 | 3.4 | 6.5 | 45 51.82 | - 0.62 | -18.36 | -18.37 | 18 45 | 32.83 | + 0.02 | |
| | 14 | " Tauri | F. | 55.1 | 57.0 | 59.5 | 5.9 | 8.0 | 10.0 | 16.5 | 18.0 | 20.9 | 29 7.93 | - 0.58 | -18.50 | . . | . . | . . | . . | |
| 27 | 15 | Sun I, N. | F. | 25.3 | 28.0 | 29.9 | 36.7 | 38.8 | 41.0 | 47.8 | 49.4 | 52.2 | 26 38.79 | - 0.63 | . . | -18.51 | 6 26 | 19.65 | . . | |
| | 16 | Sun II, S. | F. | 43.2 | 45.8 | 47.7 | 54.4 | 56.4 | 58.7 | 5.4 | 7.1 | 9.9 | 28 56.51 | - 0.63 | . . | -18.51 | 6 28 | 37.37 | . . | |
| | 17 | a ² Geminorum . . | F. | . . | . . | 56.0 | 58.6 | 0.9 | 3.4 | 5.7 | . . | . . | 27 0.90 | - 0.66 | -18.50 | . . | . . | . . | . . | |
| | 18 | " Canis Minoris . . | F. | . . | . . | 4.0 | 6.0 | 8.2 | 10.1 | 12.1 | . . | . . | 33 8.07 | - 0.62 | -18.52 | . . | . . | . . | . . | |
| | 19 | Venus I, N. . . . | F. | 26.5 | 29.1 | 30.8 | 37.3 | 39.5 | 41.6 | 48.0 | 49.6 | 52.4 | 7 39.42 | - 0.62 | . . | -18.51 | 8 7 | 20.29 | + 1.82 | |
| | 20 | " Ursæ Majoris . . | F. | 44.5 | 48.5 | 50.7 | 59.9 | 3.0 | 6.0 | 15.3 | 17.5 | 21.4 | 51 2.98 | - 0.74 | . . | -18.51 | 8 50 | 43.73 | + 0.17 | |
| | 21 | Polaris, S. P. . . | F. | . . | . . | 57.0 | . . | 4.0 | 37.0 | . . | . . | . . | 13 4.33 | +10.75 | . . | -18.65 | 1 12 | 56.43 | - 0.43 | |
| | 22 | " Tauri | S. | 30.0 | 32.7 | 34.5 | 40.8 | 43.0 | 45.2 | 51.7 | 53.1 | 55.9 | 21 42.99 | - 0.57 | -19.25 | -19.25 | 4 21 | 23.17 | - 0.01 | |
| | 23 | " Tauri | S. | 55.9 | 58.8 | 0.1 | 6.7 | 8.8 | 10.8 | 17.2 | 18.7 | 21.4 | 29 8.68 | - 0.56 | -19.20 | -19.26 | 4 28 | 48.86 | - 0.08 | |
| | 24 | " Aurigæ | S. | 1.1 | 4.0 | 5.9 | 13.2 | 15.6 | 18.0 | 25.3 | 27.0 | 30.2 | 49 15.59 | - 0.62 | -19.32 | -19.26 | 4 48 | 55.71 | + 0.02 | |
| | 25 | Mercury II, N. . . | S. | 24.8 | 27.7 | 29.4 | 35.9 | 38.0 | 40.1 | 46.4 | 48.0 | 50.7 | 22 37.89 | - 0.56 | . . | -19.28 | 5 22 | 18.05 | - 0.37 | |
| 28 | 26 | Sun I, S. | S. | 34.9 | 37.7 | 39.4 | 46.2 | 48.3 | 50.5 | 57.2 | 58.9 | 1.7 | 30 48.31 | - 0.59 | . . | -19.31 | 6 30 | 28.41 | . . | |
| | 27 | Sun II, N. | S. | 52.5 | 55.4 | 56.8 | 3.8 | 6.0 | 8.1 | 14.7 | 16.4 | 19.3 | 33 5.89 | - 0.59 | . . | -19.31 | 6 32 | 45.99 | . . | |
| | 28 | " Canis Minoris . . | S. | 56.7 | 59.0 | 0.6 | 6.8 | 8.8 | 10.9 | 17.0 | 18.5 | 21.2 | 33 8.83 | - 0.55 | -19.34 | . . | . . | . . | . . | |
| | 29 | " Persei | P. | 9.5 | 13.3 | 15.4 | 24.5 | 27.6 | 30.5 | 39.6 | 41.8 | 45.5 | 34 27.52 | - 0.63 | . . | -20.32 | 3 34 | 6.57 | + 0.09 | |
| | 30 | " Tauri | P. | 14.8 | 17.8 | 19.5 | 26.3 | 28.5 | 30.7 | 38.3 | 39.0 | 41.8 | 40 28.41 | - 0.51 | -20.31 | -20.32 | 3 40 | 7.58 | - 0.01 | |
| | 31 | " Persei | P. | 27.5 | 30.5 | 32.3 | 39.5 | 41.9 | 44.3 | 51.5 | 53.2 | 56.2 | 46 41.88 | - 0.54 | -20.32 | -20.32 | 3 46 | 21.02 | - 0.01 | |
| | 32 | " Eridani | P. | . . | . . | 31.8 | 33.9 | 36.0 | 38.1 | 40.2 | . . | . . | 52 35.99 | - 0.46 | -20.34 | -20.32 | 3 52 | 15.21 | + 0.06 | |
| | 33 | " Tauri | P. | 52.9 | 55.8 | 57.3 | 3.6 | 5.6 | 7.7 | 14.2 | 15.7 | 18.3 | 13 5.64 | - 0.49 | -20.26 | -20.33 | 4 12 | 44.82 | - 0.06 | |
| | 34 | " Tauri | P. | 30.9 | 33.8 | 35.4 | 41.9 | 44.0 | 46.2 | 52.7 | 54.5 | 57.0 | 21 44.04 | - 0.50 | -20.34 | -20.34 | 4 21 | 23.20 | - 0.01 | |
| | 35 | " Aurigæ (R.) . . . | P. | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | |
| | 36 | " Aurigæ | P. | . . | . . | . . | . . | . . | . . | 4.9 | 7.6 | 10.9 | 7 53.20 | - 0.62 | . . | -20.36 | 5 7 | 32.22 | - 0.06 | |
| 29 | 37 | Sun I, N. | P. | 44.5 | 47.3 | 49.0 | 55.7 | 57.9 | 0.3 | 6.8 | 8.5 | 11.3 | 34 57.92 | - 0.54 | . . | -20.40 | 6 34 | 36.98 | . . | |
| | 38 | Sun II, S. | P. | 2.0 | 4.7 | 6.4 | 13.0 | 15.4 | 17.6 | 24.3 | 26.0 | 28.7 | 37 15.34 | - 0.54 | . . | -20.40 | 6 36 | 54.40 | . . | |
| | 39 | Venus I, N. | P. | 9.9 | 12.7 | 14.3 | 20.5 | 22.8 | 25.0 | 31.3 | 33.0 | 35.6 | 5 22.79 | - 0.53 | . . | -20.44 | 8 5 | 1.82 | + 1.87 | |
| | 40 | " Leonis | P. | 57.0 | 0.0 | 1.8 | 8.5 | 10.7 | 12.9 | 19.5 | 21.2 | 24.0 | 39 10.62 | - 0.54 | -20.46 | -20.45 | 9 38 | 49.60 | - 0.08 | |
| | 41 | " Leonis | P. | 50.9 | 53.6 | 55.5 | 2.3 | 4.7 | 6.9 | 13.8 | 15.4 | 18.4 | 45 4.61 | - 0.55 | -20.51 | -20.49 | 9 45 | 43.51 | + 0.01 | |
| | 42 | Polaris, S. P. . . | P. | . . | . . | 0.3 | 31.8 | 5.5 | 40.5 | 15.3 | 17.4 | 20.5 | 13 7.31 | +11.96 | . . | -20.60 | 1 12 | 58.67 | - 0.02 | |
| | 43 | " Virginis | P. | 50.3 | 52.8 | 54.5 | 0.7 | 2.8 | 4.7 | 11.0 | 12.5 | 1.0 | 19 2.70 | - 0.47 | -20.61 | -20.60 | 13 18 | 41.63 | - 0.01 | |
| | 44 | Moon I, N. | P. | 20.5 | 23.2 | 24.8 | 31.3 | 33.3 | 35.5 | 41.8 | 43.5 | 46.2 | 26 33.34 | - 0.46 | . . | -20.60 | 13 26 | 12.28 | +64.46 | |
| | 45 | " Ursæ Majoris (R.) | P. | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | |
| | 46 | " Ursæ Majoris . . | P. | . . | . . | . . | . . | . . | . . | . . | 18.0 | 22.0 | 43 2.98 | - 0.66 | . . | -20.61 | 13 42 | 41.71 | - 0.06 | |
| | 47 | " Bootis | P. | 57.2 | 59.9 | 1.6 | 8.0 | 10.2 | 12.3 | 18.7 | 20.3 | 23.0 | 49 10.13 | - 0.50 | -20.60 | -20.61 | 13 48 | 49.02 | - 0.06 | |
| | 48 | " Orionis | E. | 5.1 | 7.8 | 9.2 | 15.4 | 17.4 | 19.5 | 25.5 | 27.0 | 29.6 | 39 17.39 | - 0.51 | -21.24 | -21.22 | 5 29 | 55.66 | + 0.01 | |
| | 49 | " Orionis | E. | 37.2 | 39.8 | 41.6 | 47.6 | 49.6 | 51.6 | 58.0 | 59.4 | 2.0 | 48 49.64 | - 0.51 | -21.20 | -21.22 | 5 48 | 27.91 | - 0.05 | |

12. Bisections at threads C₁, C₃, C₅, and D₃.
 15, 32. Bisections at sets B and D.
 44. Bisections at threads II-V.
 45. Bisections at threads II and III.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom't. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | | | | | | |
| 1 | 332 2 | 10 7.3 | 4.8 | 6.8 | 8.6 | 32 | .. | 220 | .. | 140 | .. | 67.6 | 27 53 16.6 | .. | + | 29.0 | 79 0 6.8 | - 8.6 |
| 2 | 358 18 | 7.3 | 4.9 | 7.0 | 8.3 | 35 | 085 | .. | .. | .. | 055 | 67.6 | 1 38 1.4 | .. | + | 1.6 | 52 44 21.2 | - 6.4 |
| 3 | 358 18 | 7.3 | 4.9 | 7.0 | 8.3 | 35 | .. | 300 | .. | 270 | .. | 67.6 | 1 38 4.3 | .. | + | 1.6 | 52 44 27.1 | - 6.4 |
| 4 | 289 38 | 7.0 | 4.0 | 7.1 | 8.5 | 37 | .. | .. | .. | 085 | 020 | 67.6 | 70 18 31.4 | .. | + | 2 31.6 | 121 27 24.2 | -12.0 |
| 5 | 290 16 | 8.7 | 5.7 | 9.2 | 11.5 | 39 | .. | 665 | .. | 650 | .. | 67.6 | 69 41 12.8 | .. | + | 2 26.7 | 120 50 0.7 | -11.5 |
| 6 | 293 40 | 5.2 | 3.0 | 5.3 | 7.5 | 33 | .. | 840 | .. | 850 | .. | 67.6 | 66 15 40.2 | .. | + | 2 3.8 | 117 24 5.2 | -10.7 |
| 7 | 293 40 | 5.2 | 3.0 | 5.3 | 7.5 | 35 | .. | .. | .. | 020 | 990 | 67.6 | 66 15 58.7 | .. | + | 2 3.8 | 127 24 23.7 | -10.6 |
| 8 | 293 40 | 5.2 | 3.0 | 5.3 | 7.5 | 30 | .. | .. | .. | 920 | 890 | 67.6 | 66 14 55.9 | .. | + | 2 3.8 | 117 23 20.9 | -10.5 |
| 9 | 47 38 | 8.2 | 3.9 | 7.0 | 6.7 | 36 | 030 | .. | 160 | .. | .. | 67.6 | 312 18 16.1 | .. | - | 1 0.2 | 3 23 37.1 | - 1.5 |
| 10 | 312 44 | 5.3 | 3.0 | 5.6 | 8.1 | 37 | .. | 660 | .. | 030 | .. | 67.6 | 47 12 29.6 | .. | + | 59.2 | 98 19 50.0 | - 0.4 |
| 11 | 359 42 | 0.2 | 27.0 | 29.7 | 0.7 | 33 | .. | 885 | .. | 855 | .. | 67.6 | 0 13 35.2 | .. | + | 0.2 | 51 19 56.6 | - 0.4 |
| 12 | 53 48 | 10.5 | 7.8 | 9.0 | 7.9 | 39 | 030 | .. | 025 | 070 | 115 | 67.6 | 306 9 3.4 | .. | - | 1 15.0 | 357 14 9.6 | + 0.4 |
| 13 | 354 16 | 7.5 | 5.0 | 7.6 | 9.1 | 36 | .. | 870 | .. | 850 | .. | 67.6 | 5 40 28.8 | 78.0 | + | 5.5 | 56 46 55.5 | + 0.4 |
| 14 | 337 18 | 1.6 | 27.2 | 1.0 | 2.6 | 33 | .. | .. | .. | 888 | 800 | 67.6 | 22 37 36.7 | 88.0 | + | 22.5 | 73 44 20.4 | + 1.0 |
| 15 | 344 38 | 3.5 | 0.6 | 2.7 | 4.1 | 40 | 195 | .. | .. | .. | .. | 76.4 | 15 19 13.7 | .. | + | 14.7 | 66 25 49.6 | .. |
| 16 | 344 6 | 3.8 | 2.4 | 4.7 | 5.1 | 38 | .. | .. | .. | 122 | 082 | 76.4 | 15 50 41.1 | 90.7 | + | 15.2 | 66 57 20.5 | .. |
| 17 | 353 12 | 4.9 | 28.8 | 2.8 | 5.0 | 34 | .. | .. | .. | 960 | 940 | 76.4 | 6 43 54.9 | .. | + | 6.3 | 57 50 22.4 | + 0.5 |
| 18 | 326 36 | 1.4 | 28.0 | 0.7 | 2.8 | 37 | .. | .. | .. | 442 | 434 | 76.4 | 33 20 30.6 | .. | + | 35.2 | 84 27 27.0 | - 0.4 |
| 19 | 339 54 | 2.2 | 29.9 | 1.5 | 4.2 | 33 | .. | 676 | .. | 650 | .. | 76.4 | 20 1 33.3 | .. | + | 19.5 | 71 8 14.0 | .. |
| 20 | 9 34 | 3.0 | 29.5 | 3.9 | 4.5 | 35 | .. | .. | .. | 458 | 438 | 76.4 | 350 22 2.7 | 95.2 | - | 9.0 | 41 28 14.9 | + 0.1 |
| 21 | 52 22 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 22 | 339 56 | 3.7 | 2.0 | 3.8 | 5.0 | 31 | .. | 088 | .. | 072 | .. | 65.9 | 19 58 54.8 | .. | + | 19.8 | 71 5 35.8 | - 0.4 |
| 23 | 337 18 | 1.6 | 0.6 | 3.4 | 1.7 | 33 | .. | 862 | .. | 812 | .. | 65.9 | 22 37 35.2 | 86.2 | + | 22.7 | 73 44 19.1 | - 0.2 |
| 24 | 354 0 | 1.0 | 28.4 | 2.0 | 0.5 | 33 | .. | 044 | .. | 018 | .. | 65.9 | 5 55 21.6 | .. | + | 5.6 | 57 1 48.4 | + 0.3 |
| 25 | 339 46 | 2.5 | 0.0 | 3.5 | 3.8 | 35 | .. | .. | .. | 655 | 610 | 65.9 | 20 10 4.1 | 88.2 | + | 19.9 | 71 16 45.2 | .. |
| 26 | 344 2 | 4.7 | 2.3 | 4.2 | 4.3 | 34 | 120 | 066 | .. | .. | .. | 65.9 | 15 53 40.4 | .. | + | 15.4 | 67 0 17.0 | .. |
| 27 | 344 34 | 1.4 | 29.7 | 1.7 | 2.0 | 36 | .. | .. | .. | 054 | 210 | 65.9 | 15 22 10.7 | 90.5 | + | 14.8 | 66 28 46.7 | .. |
| 28 | 326 36 | 4.6 | 3.1 | 5.4 | 6.4 | 37 | 202 | 194 | .. | .. | .. | 65.9 | 33 20 28.9 | 90.0 | + | 35.5 | 84 27 25.6 | - 1.7 |
| 29 | 8 26 | 9 29.3 | 27.0 | 28.9 | 29.1 | 37 | .. | 050 | .. | 975 | .. | 67.1 | 351 30 22.1 | 78.7 | - | 8.2 | 42 36 35.1 | - 1.4 |
| 30 | 344 46 | 10 1.7 | 29.5 | 1.0 | 3.4 | 35 | .. | 565 | .. | 520 | .. | 67.1 | 15 10 2.2 | .. | + | 15.0 | 66 16 38.4 | - 0.5 |
| 31 | 352 34 | 4.3 | 2.1 | 4.1 | 5.5 | 37 | .. | 525 | .. | 465 | .. | 67.1 | 7 22 34.8 | .. | + | 7.1 | 58 29 3.1 | - 1.0 |
| 32 | 307 12 | 4.7 | 3.1 | 4.7 | 8.2 | 34 | .. | .. | .. | 790 | 765 | 67.1 | 52 43 54.4 | .. | + | 12.3 | 103 51 27.0 | + 0.9 |
| 33 | 336 22 | 10.3 | 7.8 | 9.4 | 10.2 | 32 | .. | 905 | .. | .. | 805 | 67.1 | 23 33 29.3 | .. | + | 24.0 | 74 40 14.5 | + 1.2 |
| 34 | 339 56 | 6.1 | 3.5 | 4.5 | 6.0 | 31 | .. | 050 | .. | 960 | .. | 67.1 | 19 58 50.4 | 80.5 | + | 20.0 | 71 5 37.6 | + 1.5 |
| 35 | 172 58 | 6.0 | 6.1 | 7.2 | 7.5 | 37 | 195 | 145 | .. | .. | .. | 67.1 | 186 58 31.0 | .. | + | 6.7 | 44 7 43.5 | - 0.4 |
| 36 | 6 54 | 4.0 | 1.8 | 3.7 | 4.9 | 33 | .. | .. | .. | 225 | 175 | 67.1 | 353 1 29.8 | 82.2 | - | 6.7 | 44 7 44.3 | + 0.4 |
| 37 | 344 30 | 0.5 | 27.0 | 0.0 | 0.7 | 33 | 655 | 705 | .. | .. | .. | 67.1 | 15 23 31.2 | .. | + | 15.0 | 66 32 7.4 | .. |
| 38 | 3 3 58 | 3.2 | 0.9 | 3.4 | 3.5 | 31 | .. | .. | .. | 455 | 315 | 67.1 | 15 57 0.7 | 86.0 | + | 15.6 | 67 3 37.5 | .. |
| 39 | 339 34 | 3.8 | 2.5 | 4.5 | 6.4 | 36 | 175 | 245 | .. | 240 | 215 | 67.1 | 20 22 15.5 | 88.1 | + | 20.1 | 71 28 56.8 | .. |
| 40 | 345 24 | 5.0 | 3.5 | 5.1 | 7.0 | 38 | .. | 000 | .. | 995 | .. | 67.1 | 14 32 43.6 | 89.2 | + | 14.0 | 65 39 18.8 | + 2.0 |
| 41 | 347 38 | 6.4 | 5.0 | 6.1 | 8.5 | 35 | .. | .. | .. | 040 | 975 | 67.1 | 12 18 0.1 | .. | + | 11.8 | 63 24 33.1 | + 1.2 |
| 42 | 52 22 | 9.5 | 6.5 | 9.8 | 8.0 | 33 | 405 | 360 | 370 | 400 | .. | 67.3 | 3 7 33 56.1 | 80.5 | - | 1 11.2 | 358 38 46.1 | + 0.3 |
| 43 | 310 32 | 8.0 | 6.0 | 8.0 | 10.2 | 33 | .. | 570 | .. | 540 | .. | 67.3 | 40 23 3.4 | .. | + | 1 4.0 | 100 31 3.6 | + 0.6 |
| 44 | 308 34 | 9.8 | 7.0 | 8.2 | 12.1 | 27 | 480 | 595 | 740 | 005 | .. | 67.3 | 51 20 26.6 | .. | + | 8.6 | 102 27 56.4 | .. |
| 45 | 168 54 | 8.7 | 8.1 | 10.5 | 10.5 | 35 | 670 | 690 | .. | .. | .. | 67.3 | 1 1 2 11.7 | .. | + | 10.7 | 40 3 58.8 | - 1.1 |
| 46 | 10 58 | 10.5 | 7.3 | 9.2 | 7.9 | 34 | .. | .. | .. | 070 | 010 | 67.3 | 348 57 48.0 | .. | - | 10.7 | 40 3 58.5 | - 1.4 |
| 47 | 340 4 | 8.6 | 5.7 | 7.3 | 8.6 | 35 | .. | 790 | .. | 750 | .. | 67.3 | 19 52 12.0 | 79.2 | + | 19.9 | 70 58 53.1 | + 0.2 |
| 48 | 319 46 | 5.0 | 1.0 | 4.1 | 5.6 | 33 | .. | 830 | .. | 810 | .. | 66.9 | 40 9 38.0 | .. | + | 46.4 | 91 16 45.6 | + 0.9 |
| 49 | 328 26 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| 13 | 29.87 | 79.0 | 15 | - 2.3 | + 15 45.4 | .. | + 15 43.4 |
| 14 | 29.96 | 84.5 | 16 | - 2.4 | + 15 45.4 | .. | + 15 47.8 |
| 16 | 29.95 | 87.6 | 19 | - 9.1 | + 25.9 | .. | + 16.8 |
| 20 | 29.96 | 93.0 | 25 | - 4.6 | + 5.0 | .. | + 0.4 |
| 23 | 30.10 | 85.5 | 26 | - 2.4 | + 15 45.1 | .. | + 15 47.5 |
| 25 | 30.10 | 87.2 | 27 | - 2.3 | + 15 45.1 | .. | + 15 42.8 |
| 27 | 30.09 | 89.5 | 37 | - 2.3 | + 15 45.0 | .. | + 15 42.7 |
| 28 | 30.07 | 90.0 | 38 | - 2.4 | + 15 45.0 | .. | + 15 47.4 |
| 29 | 30.07 | 78.8 | 39 | - 9.5 | + 20.6 | .. | + 15.1 |
| 34 | 30.07 | 80.8 | 44 | -43 28.7 | + 15 15.4 | .. | - 28 13.3 |
| 36 | 30.07 | 82.5 | | | | | |
| 38 | 30.07 | 85.2 | | | | | |
| 39 | 30.06 | 87.9 | | | | | |
| 40 | 30.04 | 88.2 | | | | | |
| 42 | 30.02 | 81.5 | | | | | |
| 47 | 30.03 | 80.8 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. | |
|---------|---------|------------------------|-----------|--------------------------------|--------|------|------|------|------|------|-------|------|------------|--------------|---------------|----------------|---------------------------|-------------|----------------------------|--------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't | Clock adopted. | h. m. s. | s. | | |
| | | | | | | | | | | | | | | | | | | | | |
| 1876. | | | | | | | | | | | | | m. | s. | s. | s. | s. | s. | s. | |
| June 30 | 1 | Sun I, S. | E. | 53.9 | 6.5 | 57.9 | 4.9 | 7.1 | 9.4 | 16.0 | 17.7 | 20.4 | 39 | 7.09 | - 0.60 | . | -21.23 | 6 38 45.20 | . | |
| | 2 | Sun II, N. | E. | . | . | 20.3 | 22.6 | 21.7 | 27.2 | 29.2 | . | . | 41 | 24.78 | - 0.60 | . | -21.23 | 6 41 2.89 | . | |
| | 3 | Leonis | E. | 58.6 | 0.9 | 2.6 | 9.4 | 11.6 | 13.7 | 20.4 | 22.0 | 24.9 | 39 | 11.50 | - 0.60 | -21.23 | -21.25 | 9 38 49.59 | - 0.08 | |
| | 4 | a Leonis | E. | 56.3 | 39.0 | 0.5 | 6.8 | 9.0 | 11.0 | 17.3 | 18.8 | 21.4 | 2 | 8.90 | - 0.63 | -21.27 | -21.25 | 10 1 47.02 | - 0.02 | |
| | 5 | γ ¹ Leonis | E. | 18.0 | 20.7 | 22.4 | . | . | . | . | 39.8 | 41.3 | 44.1 | 13 | 31.07 | - 0.65 | -21.26 | -21.26 | 10 13 9.16 | - 0.62 |
| | 6 | γ ² Leonis | E. | . | . | 27.0 | 29.2 | 31.4 | 33.5 | 35.7 | . | . | 13 | 31.34 | - 0.65 | . | -21.28 | 10 13 9.41 | - 1.14 | |
| | 7 | a Bootis | E. | 11.7 | 14.4 | 16.0 | 22.4 | 24.0 | 26.3 | 33.2 | 35.0 | 37.7 | 10 | 24.66 | - 0.52 | -21.55 | -21.56 | 14 10 2.58 | - 0.01 | |
| | 8 | Moon I, N | E. | 33.7 | 30.3 | 38.2 | 44.8 | 49.9 | 49.1 | 55.6 | 57.3 | 0.0 | 14 | 49.90 | - 0.50 | . | -21.56 | 14 14 24.84 | + 65.35 | |
| | 9 | ε ¹ Bootis | E. | 44.9 | 47.8 | 49.5 | . | . | . | 7.9 | 9.5 | 12.5 | 39 | 58.70 | - 0.54 | . | -21.60 | 14 39 36.50 | - 2.45 | |
| | 10 | ε ² Bootis | E. | . | . | 54.2 | 56.5 | 58.8 | 1.0 | 3.5 | . | . | 39 | 58.78 | - 0.54 | -21.48 | -21.60 | 14 39 36.64 | - 0.14 | |
| | 11 | α ² Librae | E. | 13 10.5 | 8 17.5 | 23.8 | 26.0 | 28.1 | 31.4 | 35.9 | 38.5 | 44 | 25.91 | - 0.50 | -21.73 | -21.60 | 14 44 3.80 | + 0.12 | | |
| | 12 | β Ursae Minoris (R.) | E. | . | . | . | . | . | . | . | . | . | 51 | 32.23 | - 1.05 | . | -21.61 | 14 51 9.57 | + 0.14 | |
| | 13 | β Ursae Minoris | E. | . | . | 16.9 | 24.0 | 32.4 | 39.6 | 47.6 | . | . | . | . | . | . | . | . | . | |
| | 14 | β Librae (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 15 | β Librae | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 16 | Jupiter I, N. | E. | 2.9 | 5.8 | 7.3 | . | . | . | 24.2 | 25.9 | 28.6 | 22 | 15.80 | - 0.51 | . | -21.65 | 15 21 53.64 | . | |
| | 17 | Jupiter II, S. | E. | . | . | 11.6 | 16.7 | 18.8 | 20.9 | 23.1 | . | . | 22 | 18.81 | - 0.51 | . | -21.65 | 15 21 56.65 | . | |
| | 18 | a Cor. Borealis (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 19 | a Cor. Borealis | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 20 | δ Orionis | F. | 45.2 | 47.9 | 49.3 | 55.5 | 57.7 | 59.8 | 6.0 | 7.6 | 10.0 | 8 | 57.67 | - 0.62 | -21.99 | -21.90 | 5 8 35.15 | + 0.09 | |
| | 21 | β Tauri | F. | 36.3 | 39.3 | 40.9 | 45.7 | 50.1 | 54.9 | 59.5 | 1.1 | 4.0 | 18 | 50.20 | - 0.60 | -21.82 | -21.90 | 5 18 27.70 | - 0.10 | |
| | 22 | δ Orionis | F. | 51.0 | 53.5 | 55.0 | 1.3 | 3.2 | 5.3 | 11.3 | 12.9 | 15.4 | 26 | 3.21 | - 0.61 | -21.90 | -21.90 | 5 25 40.70 | - 0.03 | |
| | 23 | ε Orionis | F. | 5.9 | 8.5 | 10.0 | 16.1 | 18.2 | 20.2 | 29.3 | 27.9 | 30.4 | 30 | 18.17 | - 0.61 | -21.90 | -21.91 | 5 29 55.65 | - 0.02 | |
| July 1 | 24 | Sun I, S. | F. | 2.7 | 5.6 | 7.1 | 13.9 | 15.9 | 18.3 | 23.0 | 26.6 | 29.5 | 43 | 16.07 | - 0.61 | . | -21.94 | 6 42 53.52 | . | |
| | 25 | Sun II, N. | F. | 20.2 | 22.7 | 24.5 | 31.3 | 33.6 | 35.8 | 42.5 | 44.0 | 49.7 | 45 | 33.48 | - 0.61 | . | -24.91 | 6 45 10.93 | . | |
| | 26 | δ Geminorum | F. | 52.8 | 58.8 | 57.6 | 4.5 | 6.8 | 9.2 | 16.0 | 17.7 | 20.7 | 38 | 6.79 | - 0.61 | -21.97 | . | . | . | |
| | 27 | Jupiter I, S. | S. | 39.0 | 41.6 | 43.2 | . | . | . | 0.3 | 1.9 | 4.6 | 21 | 51.79 | - 0.52 | . | -22.87 | 15 21 28.40 | . | |
| | 28 | Jupiter II, N. | S. | . | . | 50.5 | 52.7 | 54.9 | 57.0 | 59.1 | . | . | 21 | 54.83 | - 0.52 | . | -22.87 | 15 21 31.44 | . | |
| | 29 | a Corone Borealis | S. | 38.5 | 11.4 | 43.2 | 50.0 | 52.4 | 54.6 | 1.4 | 3.1 | 6.0 | 29 | 52.29 | - 0.52 | -22.88 | -22.88 | 15 29 28.89 | 0.00 | |
| | 30 | a Serpentis | S. | 23.3 | 25.9 | 27.5 | 33.7 | 35.7 | 37.7 | 44.0 | 45.1 | 48.1 | 38 | 35.70 | - 0.50 | -22.92 | -22.88 | 15 38 12.32 | + 0.06 | |
| | 31 | ε Serpentis | S. | 51.6 | 54.8 | 55.9 | 2.1 | 4.2 | 6.2 | 12.3 | 13.9 | 16.4 | 45 | 4.16 | - 0.50 | -22.84 | -22.89 | 15 44 40.77 | - 0.05 | |
| | 32 | Moon I, N. | S. | 37.6 | 40.6 | 42.3 | 49.3 | 51.6 | 54.0 | 0.9 | 2.6 | 5.5 | 56 | 51.60 | - 0.53 | . | -22.89 | 15 56 28.18 | + 68.10 | |
| | 33 | ε Persei | P. | 31.0 | 34.0 | 35.7 | 42.7 | 45.4 | 47.6 | 55.0 | 56.6 | 59.6 | 46 | 45.31 | - 0.61 | -23.55 | -23.53 | 3 46 21.17 | + 0.01 | |
| | 34 | γ Eridani | P. | 26.8 | 29.4 | 30.9 | 37.3 | 39.1 | 44.7 | 47.7 | 49.3 | 51.8 | 52 | 39.32 | - 0.55 | -23.47 | -23.53 | 3 52 45.24 | - 0.02 | |
| | 35 | ε Tauri | P. | 31.4 | 37.2 | 38.8 | 43.2 | 45.8 | 47.8 | 49.5 | . | . | 21 | 47.40 | - 0.57 | -23.59 | -23.55 | 4 21 23.34 | + 0.03 | |
| | 36 | ε Aurigae (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 37 | ε Aurigae | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 38 | ε Ursae Minoris, S. P. | P. | 24.0 | 12.7 | . | 12.0 | 57.7 | 42.8 | 11.9 | 1.3 | 42.3 | 59 | 12.39 | + 1.77 | . | -23.57 | 16 53 50.59 | - 0.52 | |
| | 39 | 22 Camelopardalis | P. | . | . | . | . | . | . | . | 3.0 | 10.5 | 5 | 35.71 | - 1.09 | . | -23.60 | 6 5 11.02 | + 0.58 | |
| | 40 | δ Ursae Minoris, S. P. | P. | 18.4 | 31.4 | 9.4 | 23.8 | . | . | . | . | . | 12 | 50.48 | + 4.45 | . | -23.61 | 18 12 31.32 | - 0.10 | |
| | 41 | Sun I, S. | P. | 10.6 | 22.5 | 24.1 | 30.7 | 33.1 | 35.3 | 41.8 | 43.5 | 46.4 | 51 | 33.09 | - 0.50 | . | -23.64 | 6 51 8.77 | . | |
| | 42 | Sun II, N. | P. | 36.8 | 39.8 | 41.3 | 47.6 | 50.2 | 52.3 | 59.0 | 0.7 | 3.5 | 53 | 59.17 | - 0.50 | . | -23.64 | 6 53 25.94 | . | |
| | 43 | ε Hydrae | P. | 27.6 | 29.3 | 33.2 | 35.3 | 37.4 | 39.4 | 41.5 | 45.6 | 47.1 | 40 | 37.38 | - 0.50 | -23.68 | -23.60 | 8 40 13.13 | - 0.05 | |
| | 44 | a Hydrae | P. | 42.6 | 44.6 | 46.0 | 52.4 | 54.5 | 56.5 | 2.6 | 4.2 | 6.9 | 21 | 51.41 | - 0.57 | -23.72 | -23.72 | 9 21 30.12 | - 0.03 | |
| | 45 | θ Ursae Majoris (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 46 | θ Ursae Majoris | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 47 | ε Leonis (R.) | P. | . | . | . | . | . | . | . | 22.9 | 24.6 | 27.4 | 39 | 13.96 | - 0.61 | -23.74 | -23.73 | 9 38 49.62 | - 0.05 |
| | 48 | ε Leonis | P. | . | . | . | . | . | . | . | 12.0 | 13.8 | 46.5 | 13 | 33.50 | - 0.60 | -23.75 | -23.75 | 10 13 9.15 | - 0.02 |
| | 49 | γ ¹ Leonis | P. | 20.8 | 23.2 | 24.8 | 31.4 | 33.6 | 33.7 | 42.0 | 43.8 | 46.5 | 13 | 33.50 | - 0.60 | -23.75 | -23.75 | 10 13 9.15 | - 0.02 | |
| | 50 | δ Ursae Minoris, S. P. | P. | . | . | 0.7 | 28.4 | . | . | 43.6 | 35.4 | 10.5 | 12 | 53.18 | + 3.65 | . | -25.45 | 18 12 31.38 | + 0.28 | |

32, 40, 45. Bisections at sets B and D.
32. Thread B used.
38. Bisections at set C.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | | r. " | " | " | " | | | | | | | | | | | | | |
| 1 | 343 56 | 10 0.4 | 25.1 | 27.3 | 1.6 | 38 | 500 | 495 | .. | .. | .. | 66.9 | 16 0 43.8 | 83.2 | + | 15.7 | 67 7 20.7 | .. |
| 2 | 344 28 | 0.0 | 23.6 | 27.4 | 27.4 | 40 | .. | .. | .. | 545 | 525 | 66.9 | 15 29 14.9 | .. | + | 15.2 | 66 35 51.3 | .. |
| 3 | 345 24 | 2.8 | 1.0 | 2.6 | 3.7 | 38 | .. | 145 | .. | 125 | .. | 66.9 | 14 32 42.8 | 86.7 | + | 14.1 | 65 39 18.1 | + 1.2 |
| 4 | 333 38 | 7.5 | 5.0 | 7.1 | 8.2 | 38 | .. | 465 | .. | 395 | .. | 66.9 | 26 18 51.7 | .. | + | 26.9 | 77 25 39.8 | + 1.4 |
| 5 | 341 30 | 1.5 | 29.5 | 0.8 | 3.7 | 32 | 520 | .. | .. | .. | 500 | 66.9 | 18 25 15.6 | 87.0 | + | 18.1 | 69 31 54.9 | + 2.1 |
| 6 | 341 30 | 1.5 | 29.5 | 0.8 | 3.7 | 32 | .. | 595 | .. | 535 | .. | 66.9 | 18 25 16.3 | 87.0 | + | 18.1 | 69 31 55.6 | + 1.2 |
| 7 | 340 52 | 4.7 | 2.0 | 6.0 | 3.1 | 34 | .. | 020 | .. | 000 | .. | 67.3 | 19 3 41.4 | .. | + | 19.1 | 70 10 21.7 | - 0.3 |
| 8 | 303 14 | 7.0 | 3.4 | 7.0 | 8.6 | 38 | 250 | 385 | 590 | 740 | 900 | 67.3 | 56 42 53.6 | 79.0 | + | 23.8 | 107 50 38.6 | .. |
| 9 | 348 38 | 6.5 | 4.0 | 6.1 | 6.0 | 33 | 530 | .. | .. | .. | 500 | 67.3 | 11 17 35.8 | .. | + | 11.0 | 62 24 8.0 | - 4.6 |
| 10 | 348 38 | 6.5 | 4.0 | 6.1 | 6.0 | 33 | .. | 700 | .. | 640 | .. | 67.3 | 11 17 38.0 | .. | + | 11.0 | 62 24 10.2 | - 0.9 |
| 11 | 305 32 | 4.3 | 1.2 | 4.0 | 5.6 | 35 | .. | 875 | .. | 805 | .. | 67.3 | 54 24 9.1 | .. | + | 17.2 | 105 31 47.5 | + 0.6 |
| 12 | 144 10 | 3.3 | 3.1 | 6.0 | 5.9 | 33 | 210 | 256 | .. | .. | .. | 67.3 | 215 45 27.3 | .. | + | 39.9 | 15 20 14.0 | - 0.5 |
| 13 | 35 42 | 4.3 | 0.5 | 3.3 | 2.3 | 37 | .. | .. | .. | 205 | 272 | 67.3 | 324 14 32.8 | .. | - | 39.9 | 15 20 14.1 | - 0.4 |
| 14 | 227 44 | 7.2 | 4.3 | 8.5 | 6.9 | 33 | 810 | 720 | .. | .. | .. | 67.3 | 132 11 39.6 | .. | - | 1.1 | 98 55 42.7 | + 2.8 |
| 15 | 312 8 | 5.0 | 2.5 | 5.5 | 7.8 | 36 | .. | .. | .. | 320 | 305 | 67.3 | 47 48 18.5 | .. | + | 1.1 | 98 55 40.8 | + 0.9 |
| 16 | 303 32 | 5.5 | 1.3 | 5.3 | 6.0 | 33 | 055 | .. | .. | .. | 930 | 67.3 | 56 23 26.1 | .. | + | 23.4 | 107 31 10.7 | .. |
| 17 | 303 32 | 5.5 | 1.3 | 5.3 | 6.0 | 35 | .. | 750 | .. | 650 | .. | 67.3 | 56 24 7.9 | .. | + | 23.4 | 107 31 52.5 | .. |
| 18 | 191 42 | 8.6 | 8.0 | 8.3 | 7.7 | 36 | .. | 520 | .. | .. | .. | 67.3 | 168 14 23.2 | .. | - | 11.6 | 62 52 9.6 | + 4.4 |
| 19 | 348 10 | 4.0 | 1.3 | 4.1 | 4.8 | 33 | .. | .. | .. | 435 | 395 | 67.3 | 11 45 32.9 | .. | + | 11.6 | 62 52 5.7 | + 0.5 |
| 20 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 85.9 | .. | .. | .. | .. |
| 21 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 22 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 23 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 24 | 343 52 | 9 29.8 | 28.0 | 1.0 | 0.0 | 39 | 024 | 020 | .. | .. | .. | 65.4 | 16 4 51.5 | .. | + | 15.6 | 67 11 28.3 | .. |
| 25 | 344 22 | 10 1.2 | 27.6 | 2.4 | 1.3 | 33 | .. | .. | .. | 110 | 096 | 65.4 | 15 33 23.2 | 89.1 | + | 15.1 | 66 39 59.5 | .. |
| 26 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 27 | 303 34 | 6.4 | 3.8 | 4.9 | 6.7 | 39 | .. | 380 | .. | 291 | .. | 66.2 | 56 23 3.2 | .. | + | 21.6 | 107 30 46.0 | .. |
| 28 | 303 34 | 6.4 | 3.8 | 4.9 | 6.7 | 36 | 620 | .. | .. | .. | 600 | 66.2 | 56 22 21.3 | .. | + | 21.6 | 107 30 4.1 | .. |
| 29 | 318 10 | 3.4 | 0.5 | 2.4 | 2.0 | 33 | .. | 600 | .. | 542 | .. | 66.2 | 11 45 31.8 | .. | + | 11.3 | 62 52 4.3 | - 0.6 |
| 30 | 327 52 | 9.8 | 7.0 | 7.4 | 9.2 | 35 | 732 | 700 | .. | .. | .. | 66.2 | 32 4 10.0 | 84.4 | + | 34.1 | 83 11 5.3 | - 2.2 |
| 31 | 325 54 | 9.0 | 6.0 | 7.0 | 8.1 | 35 | .. | 190 | .. | 150 | .. | 66.2 | 34 2 1.6 | .. | + | 36.8 | 85 8 59.6 | - 1.6 |
| 32 | 295 14 | 10.3 | 8.1 | 8.9 | 8.2 | 30 | 620 | .. | 720 | .. | 870 | 66.2 | 64 43 27.4 | 83.0 | + | 54.8 | 115 51 43.4 | .. |
| 33 | 352 34 | 6.0 | 3.3 | 4.4 | 5.8 | 37 | .. | 535 | .. | 525 | .. | 66.0 | 7 22 35.1 | 83.3 | + | 7.1 | 58 29 3.4 | - 0.5 |
| 34 | 307 12 | 7.0 | 5.0 | 6.5 | 8.7 | 34 | .. | 730 | .. | 700 | .. | 66.0 | 52 43 53.6 | .. | + | 11.7 | 103 51 26.5 | + 0.4 |
| 35 | 339 56 | 7.0 | 4.1 | 6.8 | 7.0 | 30 | .. | 990 | .. | 895 | .. | 66.0 | 19 58 55.5 | .. | + | 19.8 | 71 5 36.5 | + 0.7 |
| 36 | 185 52 | 9.5 | 9.5 | 11.1 | 9.0 | 37 | 390 | 345 | .. | .. | .. | 66.0 | 174 4 36.2 | .. | - | 5.7 | 57 1 50.7 | + 2.5 |
| 37 | 354 0 | 6.5 | 4.9 | 7.0 | 7.1 | 32 | .. | .. | .. | 645 | 565 | 66.0 | 5 55 22.1 | 85.0 | + | 5.7 | 57 1 49.0 | + 0.8 |
| 38 | 58 46 | 4.8 | 2.0 | 4.0 | 4.0 | 32 | 940 | .. | 980 | 875 | 955 | 66.0 | 301 9 23.4 | .. | - | 29.8 | 352 14 14.8 | - 0.7 |
| 39 | 30 24 | 6.4 | 3.5 | 5.0 | 6.0 | 37 | .. | .. | .. | 040 | 920 | 66.0 | 329 32 29.0 | .. | - | 31.9 | 20 38 18.3 | - 1.0 |
| 40 | 54 24 | 5.5 | 1.8 | 4.3 | 4.0 | 32 | 580 | 575 | .. | .. | .. | 66.0 | 305 31 16.6 | 87.7 | - | 15.9 | 356 36 21.9 | - 1.7 |
| 41 | 343 42 | 4.8 | 1.2 | 2.0 | 4.4 | 36 | 900 | 800 | .. | .. | .. | 66.0 | 16 14 22.2 | .. | + | 15.8 | 67 20 59.2 | .. |
| 42 | 344 14 | 6.5 | 2.5 | 4.2 | 6.2 | 38 | .. | .. | .. | 635 | 750 | 66.0 | 15 42 54.0 | 88.7 | + | 15.2 | 66 49 30.4 | .. |
| 43 | 327 56 | 7.5 | 7.0 | 7.1 | 9.0 | 37 | .. | 810 | .. | 710 | .. | 66.0 | 32 0 41.2 | 90.8 | + | 33.7 | 83 7 36.1 | + 0.3 |
| 44 | 312 56 | 7.0 | 5.5 | 7.0 | 9.9 | 35 | 365 | 350 | .. | .. | .. | 66.0 | 47 0 3.2 | .. | + | 57.7 | 98 7 22.1 | + 0.1 |
| 45 | 166 36 | 6.9 | 7.1 | 9.2 | 8.1 | 38 | 090 | 095 | .. | .. | .. | 66.0 | 193 20 46.1 | .. | + | 12.8 | 37 45 22.3 | - 1.7 |
| 46 | 13 16 | 7.5 | 6.0 | 9.2 | 8.4 | 32 | .. | .. | .. | 095 | 050 | 66.0 | 346 39 15.8 | 91.3 | - | 12.8 | 37 45 24.2 | + 0.2 |
| 47 | 194 25 | 9.4 | 10.1 | 11.0 | 8.5 | 32 | 130 | 120 | .. | .. | .. | 66.0 | 165 27 16.0 | .. | - | 14.0 | 65 39 19.2 | + 2.2 |
| 48 | 345 24 | 5.5 | 4.1 | 5.6 | 7.1 | 37 | .. | .. | .. | 845 | 810 | 66.0 | 14 32 41.2 | .. | + | 14.0 | 65 39 16.4 | - 0.6 |
| 49 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 92.8 | .. | .. | .. | .. |
| 50 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " | " | " | " |
| 1 | 30.13 | 82.5 | 1 | — | 2.4 | — 15 44.7 | — 15 47.1 |
| 5 | 30.09 | 86.0 | 2 | — | 2.3 | + 15 44.7 | + 15 42.4 |
| 6 | 30.09 | 86.0 | 8 | —46 | 2.1 | + 15 5.0 | — 30 57.1 |
| 8 | 30.10 | 80.0 | 16 | — | 1.6 | + 20.9 | + 19.3 |
| 21 | 30.12 | 83.2 | 17 | — | 1.6 | — 20.9 | — 22.5 |
| 25 | 30.11 | 86.1 | 24 | — | 2.1 | — 15 44.3 | — 15 46.7 |
| 30 | 30.00 | 85.6 | 25 | — | 2.3 | + 15 44.3 | + 15 42.0 |
| 32 | 30.00 | 84.3 | 28 | — | 1.6 | — 21.0 | — 22.6 |
| 33 | 30.06 | 82.7 | 27 | — | 1.6 | + 21.0 | + 19.4 |
| 37 | 30.06 | 84.3 | 32 | —49 | 2.1 | + 14 50.8 | — 34 11.3 |
| 40 | 30.09 | 86.6 | 41 | — | 2.4 | — 15 44.4 | — 15 46.8 |
| 42 | 30.09 | 88.0 | 42 | — | 2.4 | + 15 44.4 | + 15 42.0 |
| 43 | 30.07 | 90.4 | | | | | |
| 46 | 30.06 | 90.8 | | | | | |
| 49 | 30.06 | 90.3 | | | | | |

| DATE. | Number. | OBJECT | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|-----------------|----------------------------|------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|-----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar nt. | Clock adopted. | | |
| | | | | m. | s. | | | | | | | | | s. | s. | s. | h. m. s. | s. |
| 1876. July 4 | 1 | a Canis Majoris | P. | 54.1 | 56.9 | 58.4 | 4.7 | 6.8 | 9.0 | 15.1 | 17.0 | 19.5 | 40 6.87 | - 0.51 | -25.43 | -25.45 | 6 39 40.88 | - 0.10 |
| 5 | 2 | a Canis Minoris | P. | 5.2 | 6.8 | 10.8 | 13.0 | 15.0 | 17.0 | 19.0 | 23.1 | 24.7 | 33 14.96 | - 0.52 | -25.45 | -25.45 | 7 32 48.99 | - 0.16 |
| | 3 | β Geminorum | P. | 56.3 | 59.3 | 1.0 | 7.9 | 10.3 | 12.5 | 19.6 | 21.3 | 24.2 | 38 10.27 | - 0.55 | -25.47 | -25.45 | 7 37 44.27 | - 0.01 |
| | 4 | ζ Ursæ Minoris (R.) | P. | | | | | | | | | 42.8 | 50.0 | 2.8 | | -25.65 | 15 48 36.07 | - 0.37 |
| | 5 | ζ Ursæ Minoris | P. | | | | | | | | | 26.9 | 28.5 | 31.2 | | -25.66 | 16 21 51.52 | - 0.05 |
| | 6 | β ¹ Scorpii | P. | 29.8 | 32.6 | 34 2 | 40.8 | 42.9 | 45.0 | 51.4 | 53.0 | 55.8 | 58 42.83 | - 0.51 | -25.70 | -25.66 | 15 58 16.66 | + 0.07 |
| 7 | δ | Ophiuchi | P. | 7.4 | 10.1 | 11.7 | 17.9 | 19.9 | 21.9 | 28.0 | 29.6 | 32.0 | 8 19.83 | - 0.49 | -25.66 | -25.66 | 16 7 53.68 | + 0.02 |
| | 8 | Weisse 180 | P. | 33 6 | 36.1 | 37.8 | 44.0 | 46.2 | 48.3 | 54.6 | 56.0 | 58.7 | 11 46.14 | - 0.50 | | -25.66 | 16 11 19.98 | - 2.88 |
| | 9 | τ Herculis | P. | | | 23.7 | 26.9 | 29.9 | 32.9 | 35.8 | | | 16 29.82 | - 0.56 | | -25.66 | 16 16 3.60 | + 0.08 |
| | 10 | a Scorpii | P. | | | | | | | 26.9 | 28.5 | 31.2 | 22 17.70 | - 0.52 | -25.62 | -25.66 | 16 21 51.52 | - 0.05 |
| | 11 | δ Ursæ Minoris | P. | | | 11.2 | 50.6 | 25 8 | 2.4 | 35.0 | 9.3 | | 13 0.25 | - 3.50 | | -25.74 | 18 12 31.01 | - 0.01 |
| 12 | a | Lyre | P. | 57.8 | 1.0 | 3.0 | 11.0 | 13.5 | 16.0 | 24.0 | 25.9 | 29.2 | 33 13.49 | - 0.52 | -25.74 | -25.76 | 18 32 47.21 | 0.00 |
| | 13 | VIII, 18 | P. | 52.8 | 55.7 | 57.4 | 4.7 | 7.1 | 9.6 | 16.6 | 18.4 | 21.5 | 37 7.09 | - 0.54 | | -25.77 | 18 36 40.78 | - 3.83 |
| | 14 | Moon I, S. | P. | 58.1 | 1.2 | 2.9 | 10.1 | 12.4 | 14.9 | 22.0 | 23.8 | 26.7 | 42 12.16 | - 0.53 | | -25.78 | 18 41 46.15 | + 69.32 |
| | 15 | Moon II | P. | | | 25.9 | 28.4 | 30.8 | 33.2 | 35.6 | | | 44 30.76 | - 0.53 | | -25.78 | 18 44 4.45 | - 68.98 |
| | 16 | B. A. C. 6491 (R.) | P. | | | | | | | | | | | | | | | |
| 17 | B. A. C. 6491 | P. | | | | | | | | | | | | | | | | |
| | ζ Aquilæ | P. | | 59.1 | 1.9 | 3.5 | 9.9 | 11.9 | 14.0 | 20.2 | 21.7 | 24.4 | 0 11.84 | - 0.43 | -25.81 | -25.78 | 18 59 45.58 | + 0.11 |
| | δ Draconis (R.) | P. | | | | | | | | | | | | | | | | |
| | δ Draconis | P. | | 35.5 | 39.5 | 50.5 | 55.6 | 1.3 | 6.6 | 11.8 | | | 13 1.07 | - 0.78 | | -25.79 | 19 12 34.50 | + 0.08 |
| | δ Aquilæ | P. | | 31.8 | 34.3 | 35.9 | 42.0 | 44.1 | 46.2 | 52.2 | 53.7 | 56.3 | 19 44.06 | - 0.48 | -25.79 | -25.79 | 19 19 17.79 | + 0.05 |
| 23 | B. A. C. 6690 ¹ | P. | | | | | | | | | | | | | | | | |
| | B. A. C. 6799 (R.) | P. | | | | | | | | | | | | | | | | |
| | B. A. C. 6799 | P. | | | | | | | | | | | | | | | | |
| | γ Eridani | P. | | 29 4 | 31.9 | 33.6 | 40.0 | 42.0 | 44.0 | 50.4 | 52.0 | 54.6 | 52 41.99 | - 0.63 | -25.98 | -26.00 | 3 52 15.36 | + 0.02 |
| | γ Tauri | P. | | 58.9 | 1.6 | 3.2 | 9.6 | 11.7 | 13.8 | 20.2 | 21.7 | 24.2 | 13 11.66 | - 0.57 | -26.03 | -26.01 | 4 12 45.08 | + 0.03 |
| 28 | ε Tauri | P. | | 37.0 | 39.7 | 41.3 | 48.0 | 50.0 | 52.3 | 58.5 | 0.2 | 2.9 | 21 49.99 | - 0.58 | -26.03 | -26.02 | 4 21 23.39 | 0.00 |
| | a Tauri (R.) | P. | | | | | | | | | | | | | | | | |
| | a Tauri | P. | | | | | | | | | | | | | | | | |
| | γ Camelopardalis | P. | | 40 5 | 46.9 | 50.6 | 6.2 | 11.1 | 16.0 | 31.4 | 34.8 | 41.3 | 42 10.98 | - 0.70 | | -26.03 | 9 41 44.25 | + 0.22 |
| | ε Ursæ Minoris, S. P. | P. | | | | 47.3 | 30.9 | | 1.5 | 45.5 | | | 59 16.35 | + 0.52 | | -26.04 | 16 58 50.83 | + 0.01 |
| 33 | a Aurigæ (R.) | P. | | | | | | | | | | | | | | | | |
| | a Aurigæ | P. | | | | | | | | 10.8 | 13.0 | 16.6 | 7 59.06 | - 0.59 | | -26.05 | 5 7 32.42 | - 0.07 |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 6 | 35 | Sun I, N. | P. | | | | | | | 4.9 | 6.5 | 9.3 | 3 56.01 | - 0.59 | | -26.12 | 7 3 29.30 | |
| | 36 | Sun II, S. | P. | | | | 8.5 | 10.7 | 13.0 | 15.1 | 17.3 | | 6 12.90 | - 0.59 | | -26.12 | 7 5 46.19 | |
| | 37 | ι Ursæ Majoris (R.) | P. | | | | | | | | | | | | | | | |
| | 38 | ι Ursæ Majoris | P. | | | | | | | | | | | | | | | |
| | 39 | a Hydre | P. | 44.6 | 47.1 | 48.7 | 55.0 | 57.0 | 59.0 | 5.3 | 6.7 | 9.3 | 21 56.97 | - 0.63 | -26.22 | -26.20 | 9 21 30.14 | - 0.01 |
| 40 | θ Ursæ Majoris (R.) | P. | | | | | | | | | | | | | | | | |
| | θ Ursæ Majoris | P. | | | | | | | | | | | | | | | | |
| | ε Leonis | P. | | 5.8 | 7.4 | 11.9 | 14.0 | 16.3 | 18.7 | 20.9 | 25.4 | 27.0 | 39 16.38 | - 0.59 | -26.19 | -26.22 | 9 38 49.57 | - 0.09 |
| | μ Leonis | P. | | | | 5.8 | 8.0 | | 12.6 | 14.9 | | | 46 10.31 | - 0.60 | -26.19 | -26.22 | 9 45 43.49 | - 0.04 |
| | a Leonis (R.) | P. | | | | | | | | | | | | | | | | |
| 45 | a Leonis | P. | | | | | | | | | | | | | | | | |
| | γ ¹ Leonis | P. | | 22.8 | 25.6 | 27.3 | | | | 44.8 | 46.3 | 49.0 | 13 35.99 | - 0.69 | -26.25 | -26.24 | 10 13 9.15 | - 0.01 |
| | γ ² Leonis | P. | | | | 31.8 | 34.0 | 36.3 | 38.4 | 40.7 | | | 13 36.22 | - 0.60 | | -26.24 | 10 13 9.38 | - 1.11 |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| 7 | 48 | Anonymous | P. | 48.0 | 51.0 | 52.7 | 59.6 | 1.8 | 4.1 | 10.9 | 12.7 | 15.6 | 30 1.82 | - 0.80 | | -27.33 | 18 29 33.69 | - 3.69 |
| | 51 | Cephei, S. P. | P. | | | 27.5 | 44.8 | 1.8 | 19.4 | 38.5 | 13 0 | | 42 2.66 | + 0.63 | | -27.34 | 6 41 35.95 | - 0.19 |
| | 50 | β Lyre | P. | 46.2 | 49.2 | 51.0 | 58.5 | 0.9 | 3.4 | 10.7 | 12.3 | 15.4 | 46 0.84 | - 0.62 | -27.29 | -27.34 | 18 45 32.88 | - 0.02 |

4, 40. Bisections at set C.
5, 9, 13, 14, 20, 21, 29, 32, 43. Bisections at sets B and D.
16. Bisections at threads II and III.
25, 30, 41, 45. Bisections at threads VII and where VIII would be.
37. Bisections at threads I-III.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|------------|-------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | | |
| | ° ' " | r. " | " " | " " | " " | | | | | | | " | ° ' " | ° | ' " | ° ' " | ' | | |
| 1 | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | | . . | . . | | . . | | |
| 2 | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | | . . | . . | | . . | | |
| 3 | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | | . . | . . | | . . | | |
| 4 | 140 40 | 10 | 3.1 | 2.4 | 3.2 | 2.9 | 35 | 890 | 870 | . . | . . | 66.6 | 219 16 8.2 | 81.8 | + | 44.7 | 11 49 28.3 | - 0.3 | |
| 5 | 39 12 | | 6.6 | 2.0 | 4.5 | 4.0 | 34 | . . | . . | . . | 655 | 635 | 66.6 | 320 43 51.3 | . . | - | 44.7 | 11 49 27.8 | - 0.8 |
| 6 | 301 36 | | 8.3 | 5.0 | 7.6 | 8.3 | 36 | . . | 145 | . . | 055 | . . | 66.6 | 58 20 15.9 | . . | + | 1 28.5 | 109 28 5.6 | - 1.4 |
| 7 | 317 40 | | 5.0 | 2.5 | 3.5 | 5.7 | 32 | . . | 945 | . . | 870 | . . | 66.6 | 42 15 24.0 | . . | + | 49.7 | 93 22 34.9 | 0.0 |
| 8 | 308 26 | | 7.6 | 5.3 | 6.1 | 8.2 | 36 | . . | . . | . . | 210 | 205 | 66.6 | 51 30 17.9 | . . | + | 1 8.8 | 102 37 47.9 | - 13.7 |
| 9 | 7 35 | | 12.6 | 11.0 | 12.4 | 11.1 | 31 | . . | . . | . . | 610 | 605 | 66.6 | 352 17 12.0 | . . | - | 7.4 | 43 23 25.8 | - 1.7 |
| 10 | 294 54 | | 9.0 | 6.0 | 7.5 | 7.4 | 32 | 120 | . . | . . | . . | 030 | 66.6 | 65 1 14.2 | 79.0 | + | 1 57.0 | 116 9 32.4 | - 0.7 |
| 11 | 47 38 | | 11.5 | 8.4 | 10.0 | 8.0 | 35 | 830 | 845 | 845 | 825 | 845 | 66.6 | 312 18 14.3 | 75.8 | - | 1 0.8 | 3 23 34.7 | - 0.9 |
| 12 | 359 42 | | 5.8 | 4.3 | 5.4 | 4.6 | 33 | . . | 415 | . . | 350 | . . | 66.6 | 0 13 32.4 | . . | + | 0.2 | 51 19 53.8 | - 0.5 |
| 13 | 289 34 | | 6.1 | 3.3 | 6.0 | 6.5 | 37 | . . | . . | . . | 015 | 990 | 66.6 | 70 22 28.2 | . . | + | 2 33.9 | 121 31 23.3 | - 4.2 |
| 14 | 292 6 | | 8.8 | 7.5 | 8.8 | 9.3 | 36 | 680 | . . | 540 | . . | 490 | 66.6 | 67 50 24.5 | . . | + | 2 15.1 | 118 59 0.8 | . . |
| 15 | . . | | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . |
| 16 | 186 18 | | 10.0 | 9.8 | 11.5 | 8.5 | 33 | 485 | 430 | . . | . . | . . | 66.6 | 173 37 37.6 | . . | - | 6.2 | 57 28 49.8 | - 4.1 |
| 17 | 353 34 | | 6.0 | 3.1 | 3.4 | 4.1 | 36 | . . | . . | . . | 620 | 630 | 66.6 | 6 22 22.0 | . . | + | 6.2 | 57 28 49.4 | - 4.1 |
| 18 | 334 44 | | 5.9 | 4.1 | 4.3 | 6.0 | 36 | . . | 845 | . . | 790 | . . | 66.6 | 25 12 24.9 | . . | + | 26.1 | 76 19 12.2 | - 0.2 |
| 19 | 151 24 | | 5.8 | 5.0 | 6.9 | 6.7 | 36 | 790 | 700 | . . | . . | . . | 66.6 | 208 32 22.6 | . . | + | 30.2 | 32 33 28.4 | - 1.3 |
| 20 | 28 28 | | 7.5 | 4.1 | 6.3 | 5.3 | 33 | . . | . . | . . | 625 | 615 | 66.6 | 331 27 37.0 | . . | - | 30.2 | 22 33 28.0 | - 1.7 |
| 21 | 323 56 | | 5.7 | 3.6 | 5.1 | 7.1 | 38 | . . | . . | . . | 490 | 445 | 66.6 | 36 0 50.6 | . . | + | 40.3 | 87 7 52.1 | - 0.4 |
| 22 | 191 8 | | 10.0 | 9.5 | 9.9 | 7.4 | 37 | 020 | 980 | . . | . . | . . | 66.6 | 168 48 30.6 | . . | - | 11.0 | 62 18 1.6 | - 3.4 |
| 23 | 348 44 | | 7.6 | 4.5 | 4.5 | 5.9 | 33 | . . | . . | . . | 135 | 020 | 66.6 | 11 11 29.2 | . . | + | 11.0 | 62 18 1.4 | - 3.4 |
| 24 | 171 14 | | 7.0 | 6.6 | 7.3 | 7.2 | 36 | 125 | 060 | . . | . . | . . | 66.6 | 188 42 14.2 | . . | + | 8.5 | 42 23 58.5 | - 4.7 |
| 25 | 8 38 | | 11.5 | 8.4 | 10.0 | 10.0 | 34 | . . | . . | . . | 880 | 830 | 66.6 | 351 17 46.6 | 74.1 | - | 8.5 | 42 23 59.3 | - 4.7 |
| 26 | 307 12 | | 3.8 | 2.5 | 4.0 | 5.6 | 34 | . . | 665 | . . | 695 | . . | 66.7 | 52 43 50.9 | 78.5 | + | 1 12.5 | 103 51 24.6 | - 0.8 |
| 27 | 336 22 | | 4.1 | 1.3 | 3.0 | 3.3 | 33 | . . | 195 | . . | 130 | . . | 66.7 | 23 33 26.8 | . . | + | 24.1 | 74 40 12.1 | - 0.4 |
| 28 | 339 56 | | 5.6 | 3.3 | 3.5 | 5.1 | 30 | . . | 970 | . . | 925 | . . | 66.7 | 19 58 54.4 | . . | + | 20.1 | 71 5 35.7 | + 0.1 |
| 29 | 202 34 | | 6.8 | 6.1 | 7.5 | 3.7 | 36 | 572 | 570 | . . | . . | . . | 66.7 | 157 22 21.7 | . . | - | 23.0 | 73 44 22.5 | + 3.9 |
| 30 | 337 18 | | 4.0 | 1.9 | 3.7 | 4.0 | 33 | . . | . . | . . | 572 | 560 | 66.7 | 22 37 34.8 | 79.9 | + | 23.0 | 73 44 19.0 | + 0.4 |
| 31 | 27 10 | | 3.6 | 0.5 | 3.7 | 3.2 | 36 | . . | 590 | . . | 592 | . . | 66.7 | 332 46 19.8 | . . | - | 28.4 | 23 52 12.6 | - 0.8 |
| 32 | 58 46 | | 4.5 | 2.5 | 4.5 | 4.1 | 33 | 030 | 010 | . . | . . | . . | 66.7 | 301 9 24.8 | . . | - | 1 30.8 | 352 14 15.2 | - 1.1 |
| 33 | 172 58 | | 5.0 | 5.0 | 6.8 | 4.9 | 37 | 265 | 235 | . . | . . | . . | 66.7 | 186 58 30.4 | . . | + | 6.7 | 44 7 44.1 | - 0.4 |
| 34 | 6 54 | | 5.2 | 2.9 | 5.3 | 4.9 | 33 | . . | . . | . . | 235 | 245 | 66.7 | 353 1 30.9 | . . | - | 6.7 | 44 7 45.4 | + 0.9 |
| 35 | 343 56 | | 3.0 | 0.0 | 1.4 | 2.3 | 35 | 830 | 945 | . . | . . | . . | 66.7 | 16 0 6.7 | . . | + | 15.7 | 67 6 43.6 | . . |
| 36 | 343 24 | | 3.1 | 0.1 | 1.0 | 1.3 | 33 | . . | . . | . . | . . | 830 | 66.7 | 16 31 36.4 | 84.2 | + | 16.2 | 67 38 13.8 | . . |
| 37 | 170 18 | | 7.2 | 6.7 | 9.4 | 8.5 | 34 | 875 | 900 | 950 | . . | . . | 66.7 | 189 37 57.4 | 87.8 | + | 9.2 | 41 28 11.6 | - 1.7 |
| 38 | 9 34 | | 3.9 | 1.7 | 5.4 | 5.0 | 35 | . . | . . | . . | 540 | 405 | 66.7 | 350 22 4.5 | . . | - | 9.2 | 41 28 16.5 | + 0.2 |
| 39 | 312 56 | | 7.5 | 6.0 | 7.5 | 9.9 | 35 | 260 | 250 | . . | . . | . . | 66.7 | 47 0 2.7 | . . | + | 58.0 | 98 7 21.9 | + 0.2 |
| 40 | 166 36 | | 6.9 | 6.5 | 8.5 | 7.1 | 37 | 975 | . . | 010 | . . | 895 | 66.7 | 193 20 44.5 | . . | + | 12.8 | 37 45 23.9 | - 0.6 |
| 41 | 13 16 | | 6.9 | 5.3 | 8.0 | 7.9 | 32 | . . | . . | . . | 120 | 090 | 66.7 | 346 39 17.0 | 89.1 | - | 12.8 | 37 45 25.4 | + 0.9 |
| 42 | 345 24 | | 3.9 | 1.8 | 4.0 | 5.3 | 38 | . . | 000 | . . | 980 | . . | 66.7 | 14 32 41.6 | . . | + | 14.1 | 65 39 10.9 | - 0.2 |
| 43 | 347 38 | | 6.8 | 4.5 | 6.5 | 8.6 | 35 | . . | . . | . . | 105 | 080 | 66.7 | 12 18 0.2 | . . | + | 11.8 | 63 24 33.2 | + 1.0 |
| 44 | 206 14 | | 7.4 | 7.0 | 8.5 | 7.5 | 31 | 595 | 635 | . . | . . | . . | 66.7 | 153 41 6.8 | . . | - | 26.8 | 77 25 41.2 | + 2.9 |
| 45 | 333 38 | | 5.5 | 3.9 | 5.5 | 7.2 | 38 | . . | . . | . . | 335 | 355 | 66.7 | 26 18 50.0 | . . | + | 26.8 | 77 25 38.0 | - 0.3 |
| 46 | 341 30 | | 4.5 | 2.5 | 3.7 | 6.0 | 32 | 350 | . . | . . | . . | 280 | 66.7 | 18 25 15.3 | . . | + | 18.0 | 69 31 54.5 | + 1.6 |
| 47 | 341 30 | | 4.5 | 2.5 | 3.7 | 6.0 | 32 | . . | 425 | . . | 370 | . . | 66.7 | 18 25 16.4 | 89.0 | + | 18.0 | 69 31 55.6 | + 1.1 |
| 48 | 293 40 | | 4.7 | 2.4 | 3.8 | 5.6 | 31 | . . | 480 | . . | 500 | . . | 66.8 | 66 15 2.2 | . . | + | 2 4.7 | 117 23 28.1 | - 6.3 |
| 49 | 53 46 | | 7.6 | 4.3 | 7.0 | 5.1 | 31 | 180 | . . | 155 | . . | 210 | 66.8 | 306 8 59.4 | 78.5 | - | 1 15.5 | 357 14 5.1 | - 0.5 |
| 50 | 354 16 | | 8.5 | 7.0 | 7.3 | 8.9 | 36 | . . | 725 | . . | 650 | . . | 66.8 | 5 40 26.0 | . . | + | 5.5 | 56 46 52.7 | + 0.8 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|------------|
| | in. | ° | | " " | " " | " " | " " |
| 4 | 29.96 | 83.0 | 14 | -49 51.4 | - 14 44.0 | . | - 1 4 35.4 |
| 10 | 30.01 | 82.0 | 35 | 2.4 | + 15 45.1 | . | + 15 42.7 |
| 11 | 30.00 | 77.5 | 36 | 2.5 | - 15 45.1 | . | - 15 47.5 |
| 25 | 30.02 | 76.4 | | | | | |
| 26 | 30.13 | 78.3 | | | | | |
| 30 | 30.14 | 79.8 | | | | | |
| 36 | 30.15 | 83.7 | | | | | |
| 37 | 30.13 | 86.6 | | | | | |
| 41 | 30.12 | 89.3 | | | | | |
| 47 | 30.10 | 87.5 | | | | | |
| 49 | 30.11 | 79.6 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. |
|--------|---------|----------------------------------|-----------|--------------------------------|------|------|-----------|-----------|-----------|-----------|-----------|----------|------------|--------------|-----------------|----------------|---------------------------|--------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar'nt. | Clock adopted. | h. m. s. | s. | |
| 1876. | | | | | | | | | | | | m. s. | s. | s. | | | | | |
| July 7 | 1 | B. A. C. 6491 . . . | P. | | 14.2 | 40.8 | 49.1 | 51.5 | 54.0 | | 54 | 49.10 | - 0.62 | . . . | -27.34 | 18 54 21.14 | - 2.80 | | |
| | 2 | Aquila | P. | 1.0 | 3.7 | 5.3 | 11.5 | 13.6 | 15.6 | 22.0 | 23.5 | 26.1 | 0 13.59 | - 0.65 | -27.37 | -27.34 | 18 59 45.60 | + 0.11 | |
| | 3 | Draconis (R.) . . . | P. | | | | | | | | | | | | | | | | |
| | 4 | Draconis | P. | | 51.8 | 57.2 | 2.8 | 7.9 | 13.3 | | 13 | 2.56 | - 0.65 | . . . | -27.34 | 19 12 34.57 | + 0.15 | | |
| | 5 | Aquila | P. | 33.6 | 39.2 | 37.6 | 43.0 | 46.0 | 47.9 | 54.0 | 55.5 | 58.0 | 19 45.86 | - 0.68 | -27.36 | -27.34 | 19 19 17.84 | + 0.07 | |
| | 6 | B. A. C. 6690 ¹ . . . | P. | 0.1 | 3.0 | 4.7 | | | 23.2 | 24.9 | 27.7 | 26 13.95 | - 0.63 | . . . | -27.35 | 19 25 45.97 | - 2.79 | | |
| | 7 | B. A. C. 6690 ² . . . | P. | | 11.5 | 13.0 | 16.3 | 18.4 | 20.8 | | 26 | 16.16 | - 0.63 | . . . | -27.35 | 19 25 48.18 | - 2.79 | | |
| | 8 | Aquila (R.) | P. | | | | | | | | | | | | | | | | |
| | 9 | Aquila | P. | | | | | | | | | | | | | | | | |
| | 10 | Ursae Minoris . . . | P. | | | | | | 48.0 | 26.0 | 46.0 | 6.0 | 49 8.70 | - 3.28 | . . . | -27.35 | 19 48 38.07 | - 1.06 | |
| | 11 | Capricorni. | P. | 31.9 | 34.7 | 36.2 | 42.7 | 45.0 | 47.1 | 53.5 | 55.0 | 57.8 | 20 44.85 | - 0.75 | -27.38 | -27.36 | 20 20 16.77 | + 0.05 | |
| | 12 | Moon II, N. | P. | | 5.4 | 7.7 | 9.0 | 12.1 | 10.8 | 18.4 | 21.3 | 31 7.56 | - 0.78 | . . . | -27.36 | 20 30 39.42 | -66.50 | | |
| | 13 | Cygni | P. | 25.7 | 20.2 | 31.5 | 40.3 | 43.0 | 45.0 | 54.4 | 56.6 | 0.3 | 37 42.99 | - 0.61 | -27.54 | -27.36 | 20 37 15.02 | + 0.20 | |
| | 14 | Aquarii. | P. | 16.8 | 19.3 | 20.6 | 27.0 | 29.1 | 31.2 | 37.3 | 38.9 | 41.5 | 46 29.11 | - 0.72 | -27.30 | -27.36 | 20 46 1.03 | + 0.07 | |
| | 15 | B. A. C. 7260 . . . | P. | 58.9 | 2.4 | 4.3 | 12.4 | 15.0 | 17.6 | 25.6 | 27.6 | 30.9 | 59 14.97 | - 0.61 | . . . | -27.37 | 20 49 46.99 | - 2.52 | |
| | 16 | 12 Year Cat, 1879 . | P. | 44.0 | 53.1 | 16.6 | 28.5 | 49.1 | 52.2 | 4.1 | 28.1 | 36.3 | 53 49.33 | - 0.79 | . . . | -27.37 | 20 53 12.17 | - 0.14 | |
| | 17 | Ursae Majoris, S. P. | P. | 28.3 | 21.6 | 17.5 | 1.3 | 55.8 | 59.5 | 34.4 | 3.6 | 23.6 | 59 55.96 | - 0.39 | . . . | -27.37 | 8 59 28.29 | - 0.09 | |
| | 18 | Cygni | P. | 59.0 | 58.0 | 0.7 | 7.0 | 10.2 | 12.5 | 19.5 | 21.2 | 24.2 | 8 10.12 | - 0.62 | -27.42 | -27.37 | 21 7 42.13 | + 0.06 | |
| | 19 | Pegasi (R.) | P. | | | | | | | | | | | | | | | | |
| | 20 | Pegasi | P. | | | | | | | 0.5 | 2.0 | 4.7 | 16 51.78 | - 0.64 | -27.38 | -27.37 | 21 16 23.77 | - 0.04 | |
| | 21 | Draconis, S. P. . . . | P. | | 11.4 | 56.5 | 42.3 | | | | | 19 42.42 | - 0.93 | . . . | -27.37 | 9 19 15.02 | - 0.45 | | |
| | 22 | Ursae Majoris, S. P. | P. | 36.6 | 32.0 | 9.6 | 3.5 | 57.9 | 51.4 | 45.6 | 33.4 | 23.0 | 23 57.67 | - 0.28 | . . . | -27.38 | 9 23 30.01 | - 0.03 | |
| | 23 | Aquarii | P. | 27.7 | 30.2 | 31.8 | 38.0 | 40.1 | 42.2 | 48.3 | 49.9 | 52.4 | 31 49.07 | - 0.71 | -27.40 | -27.38 | 21 31 11.98 | + 0.01 | |
| | 24 | B. A. C. 7589 (R.) . | P. | | | | | | | | | | | | | | | | |
| | 25 | B. A. C. 7589 | P. | | 18.6 | 21.2 | 24.4 | 27.7 | 34.3 | 36.7 | 40.9 | 41 21.13 | - 0.61 | . . . | -27.38 | 21 40 53.14 | - 2.28 | | |
| | 26 | Capricorni | P. | 54.5 | 53.0 | 54.8 | 1.1 | 3.3 | 5.3 | 11.6 | 13.2 | 15.8 | 47 3.18 | - 0.73 | -27.33 | -27.38 | 21 46 35.07 | - 0.02 | |
| | 27 | 79 Draconis | P. | 7.6 | 16.3 | 21.0 | 43.0 | 50.5 | 57.0 | 17.7 | 23.0 | 31.9 | 51 49.79 | - 0.67 | . . . | -27.38 | 21 51 21.74 | + 0.11 | |
| | 28 | Aquarii | P. | 43.5 | 40.0 | 47.5 | 53.7 | 55.8 | 57.8 | 3.8 | 5.4 | 7.9 | 59 55.71 | - 0.68 | -27.41 | -27.38 | 21 59 27.65 | + 0.06 | |
| | 29 | B. A. C. 7743 | P. | 8.1 | 11.5 | 13.7 | 22.0 | 24.7 | 27.4 | 35.7 | 37.8 | 41.3 | 6 24.99 | - 0.61 | . . . | -27.39 | 22 5 56.69 | - 2.23 | |
| | 30 | B. A. C. 7770 | P. | 45.7 | 49.2 | 51.2 | 53.5 | 2.3 | 5.0 | 13.3 | 15.3 | 18.9 | 10 2.27 | - 0.61 | . . . | -27.39 | 22 9 34.27 | - 2.53 | |
| | 31 | Tr. Zones, 205, 49. | P. | 59.4 | 1.7 | 3.3 | 9.8 | 11.9 | 14.0 | 20.4 | 21.8 | 24.5 | 17 11.83 | - 0.73 | . . . | -27.39 | 22 16 43.71 | - 2.91 | |
| | 32 | Tr. Zones, 204, 17. | P. | 38.5 | 41.2 | 42.8 | 49.0 | 51.2 | 53.4 | 59.7 | 1.2 | 3.9 | 19 51.21 | - 0.73 | . . . | -27.39 | 22 19 23.09 | - 2.90 | |
| 9 | 33 | Tauri | S. | | | | | | | | | | | | | | | | |
| | 34 | Orionis. | S. | | | | | | | | | | | | | | | | |
| 10 | 35 | Sun I, S. | S. | | | | | | | | | | | | | | | | |
| | 36 | Sun II, N. | S. | | | | | | | | | | | | | | | | |
| | 37 | Tauri | P. | 41.5 | 44.3 | 45.9 | 52.4 | 54.6 | 56.7 | 3.3 | 4.7 | 7.5 | 21 54.54 | - 0.70 | -30.32 | -30.33 | 4 21 23.51 | - 0.02 | |
| | 38 | Tauri (R.) | P. | | | | | | | | | | | | | | | | |
| | 39 | Tauri | P. | | | | | | | 28.8 | 30.4 | 32.9 | 29 20.26 | - 0.71 | -30.29 | -30.33 | 4 28 49.22 | - 0.06 | |
| | 40 | Aurige (R.) | P. | | | | | | | | | | | | | | | | |
| | 41 | Aurige. | P. | | | | | | | 15.5 | 17.5 | 21.2 | 8 3.79 | - 0.65 | . . . | -30.35 | 5 7 32.70 | + 0.05 | |
| | 42 | Tauri | P. | 45.0 | 48.1 | 49.0 | 57.0 | 59.3 | 1.4 | 8.4 | 10.0 | 13.0 | 18 59.12 | - 0.68 | -30.42 | -30.36 | 5 18 28.08 | + 0.04 | |
| | 43 | Orionis | P. | 59.8 | 2.4 | 3.8 | 7.0 | 12.0 | 16.0 | 20.3 | 21.6 | 24.1 | 26 11.99 | - 0.70 | -30.33 | -30.36 | 5 25 40.87 | - 0.06 | |
| | 44 | Orionis. | P. | 14.7 | 17.3 | 18.0 | 25.0 | 27.0 | 29.0 | 35.0 | 36.5 | 39.2 | 30 26.94 | - 0.70 | -30.33 | -30.37 | 5 29 55.81 | - 0.05 | |
| | 45 | Orionis. | P. | 46.9 | 49.5 | 51.1 | 57.3 | 59.4 | 1.4 | 7.5 | 9.0 | 11.6 | 48 59.39 | - 0.73 | -30.43 | -30.38 | 5 48 28.19 | + 0.02 | |
| | 46 | Mercury II, N. . . . | P. | 53.4 | 56.2 | 57.9 | 4.5 | 6.6 | 8.9 | 15.4 | 17.0 | 19.7 | 56 6.62 | - 0.70 | . . . | -30.39 | 5 55 35.53 | - 0.27 | |
| | 47 | Mercury S. | P. | | | | | | | | | | | | | | | | |
| 11 | 48 | Sun I, S. | P. | 14.2 | 17.0 | 18.5 | 25.2 | 27.4 | 29.6 | 36.2 | 37.0 | 40.6 | 24 27.40 | - 0.73 | . . . | -30.46 | 7 23 56.21 | . . . | |
| | 49 | Sun II, N. | P. | 39.2 | 33.3 | 34.9 | 41.4 | 43.7 | 46.0 | 53.5 | 54.2 | 57.0 | 26 43.69 | - 0.73 | . . . | -30.46 | 7 26 12.50 | . . . | |
| | 50 | Hydra | P. | 51.6 | 53.2 | 57.3 | 59.4 | 1.5 | 3.6 | 5.6 | 9.6 | 11.2 | 22 1.44 | - 0.82 | -30.50 | -30.54 | 9 21 30.08 | - 0.07 | |

1, 4, 17, 27. Bisections at sets B and D.
 10. Bisections at threads D₁, D₂, and D₃.
 12. Bisections at threads II-VI.
 16, 21, 22. Bisections at set C.
 29. Thread A used.
 30. Thread B used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom. t. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|----------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | I. | 2. | 3. | 4. | 5. | | | | | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " |
| 1 | 353 34 | 10 9.5 | 6.5 | 6.9 | 8.5 | 36 | .. | .. | .. | 400 | 385 | 66.8 | 6 22 21.5 | .. + | 6.2 | 57 28 45.9 |
| 2 | 334 44 | 8.0 | 5.0 | 5.3 | 7.9 | 36 | 765 | 750 | .. | 725 | 680 | 66.8 | 25 12 25.2 | .. + | 26.0 | 76 19 12.4 |
| 3 | 151 24 | 3.0 | 1.2 | 3.2 | 3.8 | 37 | 950 | 005 | .. | .. | .. | 66.8 | 208 32 23.8 | .. + | 30.1 | 22 33 27.3 |
| 4 | 25 28 | 8.5 | 4.6 | 7.6 | 6.9 | 33 | .. | .. | .. | 485 | 445 | 66.8 | 331 27 35.8 | .. - | 30.1 | 22 33 26.9 |
| 5 | 323 56 | 10.4 | 7.3 | 8.5 | 10.9 | 38 | .. | .. | .. | 200 | 175 | 66.8 | 36 0 50.9 | .. + | 49.2 | 87 7 52.3 |
| 6 | 345 44 | 8.1 | 5.3 | 5.2 | 6.3 | 32 | 990 | .. | .. | .. | 005 | 66.8 | 11 11 28.0 | .. + | 11.0 | 62 18 0.2 |
| 7 | 345 44 | 8.1 | 5.3 | 5.2 | 6.3 | 31 | .. | 720 | .. | 745 | .. | 66.8 | 11 11 8.4 | .. + | 11.0 | 62 17 40.6 |
| 8 | 210 16 | 10.4 | 10.4 | 11.2 | 6.6 | 32 | 600 | 590 | .. | .. | .. | 66.8 | 149 39 24.0 | .. - | 32.4 | 81 27 29.6 |
| 9 | 329 36 | 6.5 | 4.4 | 4.5 | 6.6 | 37 | .. | .. | .. | 295 | 310 | 66.8 | 30 20 33.6 | .. + | 32.4 | 81 27 27.2 |
| 10 | 49 58 | 8.9 | 4.5 | 6.9 | 5.9 | 38 | .. | .. | 260 | 200 | 105 | 66.8 | 309 58 50.6 | 77.0 - | 6.0 | 1 4 5.8 |
| 11 | 302 26 | 6.5 | 3.1 | 4.9 | 6.0 | 31 | .. | 740 | .. | 730 | .. | 66.8 | 57 29 7.0 | .. + | 1 26.7 | 108 36 54.9 |
| 12 | 297 38 | 6.7 | 4.5 | 5.5 | 6.6 | 34 | 920 | 845 | 800 | 520 | 400 | 66.8 | 62 17 53.1 | .. + | 1 45.2 | 113 25 59.5 |
| 13 | 5 52 | 6.3 | 3.9 | 5.9 | 4.7 | 33 | 255 | 270 | .. | 255 | 195 | 66.8 | 354 3 30.9 | .. - | 5.8 | 45 9 46.3 |
| 14 | 311 36 | 9.3 | 7.5 | 8.4 | 10.4 | 32 | .. | 390 | .. | 345 | .. | 66.8 | 48 19 20.6 | .. + | 1 2.2 | 99 26 44.0 |
| 15 | 1 16 | 7.6 | 5.4 | 8.0 | 7.1 | 34 | .. | 280 | .. | 205 | .. | 66.8 | 358 39 47.7 | .. - | 1 3 | 49 46 7.6 |
| 16 | 41 6 | 6.2 | 2.3 | 4.0 | 4.0 | 32 | 960 | .. | 930 | .. | 955 | 66.8 | 318 49 24.8 | .. - | 48.5 | 9 54 57.5 |
| 17 | 73 20 | 9.5 | 4.8 | 6.5 | 5.9 | 31 | 125 | 110 | .. | 130 | 150 | 66.8 | 286 34 59.3 | .. - | 3 3.8 | 337 38 16.7 |
| 18 | 350 46 | 7.3 | 3.3 | 4.5 | 5.9 | 36 | 520 | 535 | .. | 475 | 465 | 66.8 | 9 10 20.5 | .. + | 9.9 | 60 16 50.7 |
| 19 | 199 32 | 9.8 | 8.3 | 9.2 | 7.2 | 31 | 880 | 910 | .. | .. | .. | 66.8 | 160 23 12.1 | .. - | 19.8 | 73 43 28.9 |
| 20 | 340 20 | 8.1 | 5.7 | 5.8 | 8.2 | 38 | .. | .. | .. | 135 | 100 | 66.8 | 19 36 47.7 | .. + | 19.8 | 70 43 28.7 |
| 21 | 59 8 | 5.7 | 1.8 | 4.3 | 4.9 | 33 | 710 | 740 | 735 | .. | .. | 66.8 | 300 47 36.8 | .. - | 1 32.8 | 351 52 25.2 |
| 22 | 70 38 | 5.8 | 1.5 | 3.0 | 3.1 | 35 | 465 | .. | 455 | .. | 465 | 66.8 | 289 18 48.4 | .. - | 2 36.9 | 340 22 32.7 |
| 23 | 312 38 | 9.9 | 7.2 | 8.8 | 10.9 | 31 | .. | 220 | .. | 150 | .. | 66.8 | 47 17 2.8 | .. + | 1 0.0 | 98 24 24.0 |
| 24 | 167 8 | 8.0 | 6.6 | 8.5 | 7.8 | 34 | 670 | 660 | .. | .. | .. | 66.8 | 192 47 53.2 | .. + | 12.6 | 38 18 15.4 |
| 25 | 12 44 | 8.4 | 6.3 | 8.0 | 7.7 | 35 | .. | .. | .. | 418 | 415 | 66.8 | 347 12 7.5 | .. - | 12.6 | 38 18 16.1 |
| 26 | 306 56 | 5.7 | 2.8 | 4.5 | 5.9 | 36 | .. | 385 | .. | 290 | .. | 66.8 | 53 0 17.1 | .. + | 1 13.6 | 104 7 51.9 |
| 27 | 34 8 | 7.6 | 3.1 | 4.9 | 5.2 | 32 | 960 | 940 | .. | 945 | 945 | 66.8 | 325 47 26.0 | .. - | 37.7 | 16 53 9.5 |
| 28 | 320 8 | 7.4 | 4.3 | 6.0 | 8.4 | 35 | .. | 200 | .. | 115 | .. | 66.8 | 39 43 1.0 | 75.4 - | 40.2 | 90 55 8.4 |
| 29 | 3 24 | 6.1 | 2.9 | 5.9 | 5.4 | 31 | .. | 395 | .. | 280 | .. | 66.8 | 356 28 27.8 | .. - | 3 4 | 47 34 45.6 |
| 30 | 3 24 | 6.1 | 2.9 | 5.9 | 5.4 | 30 | .. | 635 | .. | 620 | .. | 66.8 | 356 33 22.8 | .. - | 3.3 | 47 39 40.7 |
| 31 | 305 28 | 8.8 | 5.0 | 8.0 | 8.8 | 28 | .. | .. | .. | 680 | 710 | 66.8 | 51 26 23.8 | .. + | 1 17.5 | 105 34 2.5 |
| 32 | 305 28 | 8.8 | 5.0 | 8.0 | 8.8 | 31 | 015 | 950 | .. | .. | .. | 66.8 | 54 26 57.2 | 75.4 + | 1 17.6 | 105 34 36.0 |
| 33 | 349 32 | 6.1 | 0.7 | 4.4 | 4.0 | 32 | 650 | 700 | .. | .. | .. | 64.3 | 10 23 17.2 | 91.5 + | 0.9 | 61 29 48.3 |
| 34 | 319 46 | 6.6 | 3.6 | 5.4 | 6.6 | 33 | .. | .. | .. | 795 | 810 | 64.3 | 40 9 37.5 | .. + | 45.4 | 91 16 44.1 |
| 35 | 342 56 | 8.8 | 6.0 | 7.8 | 9.1 | 35 | 400 | 160 | .. | .. | .. | 64.3 | 17 0 1.4 | .. + | 16.3 | 68 6 38.9 |
| 36 | 343 28 | 9.2 | 5.6 | 6.8 | 8.1 | 37 | .. | .. | .. | 310 | 220 | 64.3 | 16 28 32.5 | 97.0 + | 15.8 | 67 35 9.5 |
| 37 | 339 56 | 8.0 | 7.1 | 6.6 | 8.5 | 30 | .. | 835 | .. | 800 | .. | 64.9 | 19 58 53.8 | 85.2 + | 19.8 | 71 5 31.8 |
| 38 | 202 34 | 8.6 | 8.0 | 8.5 | 5.0 | 36 | 680 | 700 | .. | .. | .. | 64.9 | 157 22 22.6 | .. - | 22.7 | 73 4 21.3 |
| 39 | 337 18 | 8.0 | 6.5 | 7.3 | 8.1 | 33 | .. | .. | .. | 310 | 350 | 64.9 | 22 37 33.0 | .. + | 22.7 | 73 44 16.9 |
| 40 | 172 58 | 12.0 | 12.0 | 12.4 | 11.6 | 36 | 950 | 860 | .. | .. | .. | 64.9 | 186 58 30.0 | .. + | 6.6 | 44 7 44.6 |
| 41 | 6 54 | 9.1 | 7.5 | 8.5 | 8.5 | 33 | .. | .. | .. | 015 | 035 | 64.9 | 353 1 20.6 | 88.3 - | 6.6 | 44 7 44.2 |
| 42 | 349 32 | 7.4 | 4.4 | 6.5 | 7.1 | 32 | .. | 435 | .. | 450 | .. | 64.9 | 10 23 18.0 | .. + | 9.9 | 61 29 49.1 |
| 43 | 320 40 | 7.0 | 6.2 | 7.5 | 9.9 | 36 | .. | 125 | .. | 030 | .. | 64.9 | 39 16 14.3 | .. + | 44.3 | 90 23 49.8 |
| 44 | 319 46 | 9.3 | 7.8 | 9.3 | 10.7 | 33 | .. | 575 | .. | 485 | .. | 64.9 | 40 9 30.9 | 89.3 + | 45.7 | 91 16 43.8 |
| 45 | 328 26 | 8.2 | 7.0 | 8.0 | 9.1 | 35 | .. | 060 | .. | 975 | .. | 64.9 | 31 29 58.6 | .. + | 33.2 | 82 36 53.0 |
| 46 | 342 14 | 6.2 | 5.6 | 6.3 | 7.2 | 38 | 030 | .. | .. | .. | 885 | 64.9 | 17 42 42.0 | 90.3 + | 17.3 | 68 49 20.5 |
| 47 | 342 14 | 6.2 | 5.6 | 6.3 | 7.2 | 38 | .. | 505 | .. | 405 | .. | 64.9 | 17 42 49.5 | .. + | 17.3 | 68 49 28.0 |
| 48 | 342 48 | 9.3 | 6.4 | 7.9 | 10.7 | 35 | 530 | 520 | .. | .. | .. | 64.9 | 17 8 6.4 | .. + | 16.6 | 68 14 44.2 |
| 49 | 343 20 | 0.5 | 27.7 | 28.4 | 1.6 | 38 | .. | .. | .. | 110 | 035 | 64.9 | 16 36 37.6 | 93.6 + | 15 7 | 67 43 14.5 |
| 50 | 312 56 | 7.6 | 7.3 | 8.0 | 9.5 | 35 | 400 | 395 | .. | .. | .. | 64.9 | 47 0 3.5 | 96.7 + | 57.2 | 98 7 21.9 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " " | " " | " " | " " |
| 10 | 30.10 | 78.4 | 12 | - 47 50.5 | + 14 47.7 | .. | - 33 2.8 |
| 28 | 30.09 | 78.0 | 35 | - 2.5 | + 15 44.7 | .. | - 15 47.2 |
| 32 | 30.09 | 78.0 | 36 | - 2.5 | + 15 44.7 | .. | + 15 42.2 |
| 33 | 30.06 | 90.6 | 46 | - 3.0 | + 3.8 | .. | + 0.8 |
| 36 | 30.07 | 94.2 | 47 | - 3.0 | - 3.8 | + 0.1 | - 6.7 |
| 37 | 30.09 | 84.4 | 48 | - 2.6 | - 15 44.8 | .. | - 15 47.4 |
| 41 | 30.10 | 87.2 | 49 | - 2.5 | + 15 44.8 | .. | + 15 42.3 |
| 44 | 30.11 | 88.3 | | | | | |
| 46 | 30.12 | 88.9 | | | | | |
| 49 | 30.11 | 91.6 | | | | | |
| 50 | 30.08 | 95.1 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. |
|------------------|---------|---------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|--------|----|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | m. | s. | |
| | | | | | | | | | | | | | | | | | | | | |
| 1876. July 11 | 1 | ϵ Leonis | P. | 7.4 | 10.3 | 12.0 | 18.5 | 20.9 | 23.2 | 29.7 | 31.4 | 34.4 | 39 20.87 | — 0.72 | —30.55 | —30.56 | 9 38 49.59 | — 0.07 | | |
| | 2 | α Leonis (R.) . . | P. | | | | | | | | | | | | | | | | | |
| | 3 | α Leonis | P. | | | | | | | | | | | | | | | | | |
| | 4 | γ^1 Leonis | P. | | | | | 42.6 | 44.9 | 49.2 | 50.8 | 53.6 | 13 40.49 | — 0.73 | —30.64 | —30.59 | 10 13 9.17 | + 0.03 | | |
| | 5 | α Aurigæ (R.) . . | F. | | | | | | | | | | | | | | | | | |
| | 6 | α Aurigæ | F. | | | | | | | | | | | | | | | | | |
| | 7 | α Orionis | F. | 47.9 | 50.5 | 52.0 | 58.2 | 0.4 | 2.2 | 8.6 | 9.9 | 12.6 | 49 0.26 | — 0.90 | —31.20 | —31.20 | 5 48 28.16 | — 0.03 | | |
| | 8 | Mercury II, N. . . | F. | 54.9 | 57.7 | 59.3 | 6.0 | 8.2 | 10.4 | 16.8 | 18.6 | 21.2 | 1 8.12 | — 0.82 | | —31.21 | 6 0 36.09 | — 0.26 | | |
| | 9 | Mercury, S. . . . | F. | | | | | | | | | | | | | | | | | |
| | 10 | μ Geminorum . . | F. | 47.0 | 49.9 | 51.6 | 58.0 | 0.3 | 2.5 | 9.0 | 10.6 | 13.6 | 16 0.28 | — 0.81 | —31.21 | —31.22 | 6 15 28.25 | — 0.05 | | |
| | 11 | γ Geminorum . . | F. | 52.9 | 55.6 | 57.3 | 1.5 | 3.7 | 5.6 | 7.7 | 9.7 | | 31 5.68 | — 0.85 | —31.25 | —31.22 | 6 30 33.61 | 0.00 | | |
| | 12 | α Canis Majoris . | F. | 0.5 | 3.2 | 4.8 | 11.3 | 13.3 | 15.4 | 21.8 | 23.3 | 26.1 | 40 13.30 | — 1.08 | —31.22 | —31.23 | 6 39 40.99 | — 0.09 | | |
| | 13 | Sun I, S. | F. | | | 27.9 | 30.2 | 32.3 | 34.6 | 36.8 | | | 28 32.31 | — 0.81 | | —31.24 | 7 28 0.29 | | | |
| | 14 | Sun II, N. | F. | | | 44.3 | 46.6 | 48.8 | 51.0 | 53.2 | | | 30 48.76 | — 0.81 | | —31.24 | 7 30 16.71 | | | |
| | 15 | O. Arg. S. 15981 . | F. | 10.8 | 13.8 | 15.3 | 22.2 | 24.3 | 26.6 | 33.4 | 35.2 | 37.9 | 42 24.39 | — 1.02 | | —36.59 | 16 51 46.78 | — 3.27 | | |
| | 16 | α Ophiuchi | F. | 38.4 | 41.0 | 42.6 | 48.9 | 50.9 | 53.0 | 59.3 | 0.9 | 3.6 | 29 50.96 | — 0.76 | —36.60 | —36.60 | 17 20 13.60 | + 0.03 | | |
| | 17 | O. Arg. S. 17137 . | F. | | | 36.5 | 38.6 | 41.0 | 43.3 | 45.5 | | | 37 40.96 | — 1.03 | | —36.60 | 17 37 3.33 | — 3.56 | | |
| | 18 | O. Arg. S. 17166 . | F. | | | | 48.7 | 48.0 | 50.2 | 54.9 | 56.6 | 59.5 | 38 45.68 | — 1.03 | | —36.60 | 17 38 8.05 | — 3.56 | | |
| | 19 | Anonymous | F. | 40.9 | 43.9 | 45.5 | 50.2 | 52.7 | 55.0 | | | | 45 54.93 | — 1.05 | | —36.60 | 17 45 17.28 | — 3.64 | | |
| | 20 | Anonymous | F. | | | | 59.7 | 2.1 | 4.4 | 9.1 | 10.9 | 13.7 | 45 59.75 | — 1.05 | | —36.60 | 17 45 22.10 | — 3.65 | | |
| | 21 | O. Arg. S. 17313 . | F. | 15.4 | 18.4 | 20.3 | 27.5 | 29.5 | 31.7 | 38.7 | 40.6 | 43.6 | 46 29.52 | — 1.05 | | —36.60 | 17 45 51.87 | — 3.65 | | |
| | 22 | Lalande 32974 . . | F. | 33.2 | 36.0 | 37.8 | 44.7 | 47.0 | 49.2 | 56.3 | 57.9 | 0.9 | 55 47.00 | — 1.04 | | —36.60 | 17 55 9.36 | — 3.66 | | |
| | 23 | XVIII, 4 | F. | 28.5 | 31.6 | 33.4 | 40.5 | 42.7 | 45.0 | 52.1 | 53.8 | 56.8 | 6 42.71 | — 1.06 | | —36.62 | 18 6 5.03 | — 3.76 | | |
| | 24 | δ Ursæ Minoris . . | F. | | | 55.0 | 28.5 | 4.0 | 38.0 | 12.5 | | | 13 3.36 | + 1.47 | | —36.62 | 18 12 28.21 | — 0.66 | | |
| | 25 | O. Arg. S. 18436 . | F. | | | | | | | | | | | | | | | | | |
| | 26 | 51 Cephei, S. P. . . | F. | | | | | | | 52.0 | 28.0 | 57.0 | 42 17.18 | — 3.17 | | —36.62 | 6 41 37.39 | — 0.65 | | |
| | 27 | Mural Zones 47, 23 | F. | | | 3.3 | 5.6 | 8.0 | 10.1 | 15.6 | 16.6 | 19.8 | 51 5.60 | — 1.05 | | —36.62 | 18 50 27.93 | — 3.87 | | |
| | 28 | δ Sagittarii . . . | F. | 51.0 | 53.7 | 55.3 | 1.8 | 3.9 | 6.2 | 12.7 | 14.2 | 16.7 | 11 3.94 | — 0.96 | —36.64 | —36.63 | 19 10 26.35 | + 0.03 | | |
| | 29 | δ Aquilæ | F. | | | | | | | | | | | | | | | | | |
| | 30 | Anonymous | F. | 20.0 | 23.2 | 24.8 | 31.6 | 33.9 | 36.3 | 42.9 | 44.6 | 47.6 | 28 33.88 | — 1.03 | | —36.63 | 19 27 56.22 | — 3.85 | | |
| | 31 | Mural Zones 176, 77 | F. | | | 53.4 | 55.7 | 58.0 | 0.3 | 2.5 | | | 28 57.96 | — 1.03 | | —36.63 | 19 28 20.30 | — 3.85 | | |
| | 32 | Mural Zones 176, 78 | F. | | | | 36.5 | 38.9 | 41.0 | 45.8 | 47.3 | 50.1 | 29 36.46 | — 1.03 | | —36.63 | 19 28 58.80 | — 3.85 | | |
| | 33 | α Aquilæ | F. | 12.2 | 14.7 | 16.3 | 22.4 | 24.5 | 26.6 | 32.8 | 34.3 | 36.9 | 45 24.52 | — 0.79 | —36.64 | —36.63 | 19 44 47.10 | + 0.05 | | |
| | 34 | ϵ Delphini | F. | 45.0 | 47.9 | 49.4 | 55.7 | 57.8 | 59.9 | 6.0 | 7.6 | 10.3 | 27 57.73 | — 0.78 | —36.61 | —36.63 | 20 27 20.32 | + 0.03 | | |
| | 35 | μ Aquarii | F. | 26.4 | 29.0 | 30.5 | 36.7 | 38.8 | 40.8 | 47.0 | 48.6 | 51.2 | 46 38.78 | — 0.90 | —36.67 | —36.63 | 20 46 1.25 | + 0.11 | | |
| | 36 | ν Cygni | F. | 56.9 | 0.2 | 2.6 | 10.4 | 13.0 | 15.7 | 23.8 | 25.8 | 29.2 | 53 13.00 | — 0.62 | —36.61 | —36.63 | 20 52 35.75 | + 0.04 | | |
| | 37 | 61 ¹ Cygni | F. | 45.0 | 48.1 | 50.2 | | | | 11.0 | 13.0 | 16.2 | 2 0.61 | — 0.64 | —36.64 | —36.64 | 21 1 23.33 | + 0.04 | | |
| | 38 | 61 ² Cygni | F. | | | 57.0 | 59.6 | 2.0 | 4.8 | 7.2 | | | 2 2.10 | — 0.64 | | —36.64 | 21 1 24.80 | — 2.87 | | |
| | 39 | α Canis Majoris . . | S. | 6.3 | 8.9 | 16.8 | 17.0 | 19.2 | 21.4 | 27.0 | 29.1 | 31.8 | 40 19.12 | — 0.74 | —37.30 | | | | | |
| | 40 | Sun I, S. | S. | 39.7 | 42.3 | 43.9 | 50.4 | 52.8 | 54.8 | 1.6 | 3.3 | 6.0 | 52 52.76 | — 0.63 | | —37.33 | 7 52 14.80 | | | |
| | 41 | Sun II, N. | S. | 55.0 | 57.5 | 59.4 | 5.9 | 8.1 | 10.5 | 16.9 | 18.4 | 21.2 | 55 8.13 | — 0.63 | | —37.33 | 7 54 30.17 | | | |
| | 42 | O. Arg. N. 15653 . | S. | | | | | 21.8 | 25.2 | 32.3 | 33.5 | 39.7 | 44 17.96 | — 0.61 | | —37.49 | 15 43 39.86 | — 2.60 | | |
| | 43 | B. A. C. 5248 . . . | S. | | | 11.8 | 15.5 | 18.9 | 22.8 | 29.3 | | | 48 19.03 | — 0.61 | | —37.50 | 15 47 40.92 | — 2.61 | | |
| | 44 | δ Scorpii | S. | 28.2 | 30.9 | 32.5 | 39.2 | 41.4 | 43.7 | 50.3 | 51.9 | 54.7 | 53 41.42 | — 0.77 | —37.60 | —37.50 | 15 53 3.15 | + 0.11 | | |
| | 45 | β^1 Scorpii | S. | 42.0 | 44.6 | 46.2 | 52.6 | 54.8 | 57.0 | 3.5 | 5.0 | 7.8 | 58 51.83 | — 0.76 | —37.52 | —37.50 | 15 58 16.57 | + 0.05 | | |
| | 46 | δ Ophiuchi | S. | 19.0 | 22.0 | 23.6 | 29.7 | 31.7 | 33.8 | 39.9 | 41.5 | 44.0 | 8 31.69 | — 0.69 | —37.38 | —37.51 | 16 7 53.49 | — 0.11 | | |
| | 47 | O. Arg. N. 16196 . | S. | 33.2 | 11.5 | 16.3 | 6.0 | 12.6 | 20.0 | 39.0 | 44.2 | 52.2 | 21 12.78 | — 0.68 | | —37.51 | 16 20 34.59 | — 2.63 | | |
| | 48 | B. A. C. 5523 . . . | S. | 58.4 | 1.8 | 3.8 | 12.2 | 14.9 | 17.6 | 25.9 | 27.9 | 31.4 | 25 14.88 | — 0.60 | | —37.51 | 16 24 36.77 | — 2.61 | | |
| | 49 | B. A. C. 5559 . . . | S. | 18.3 | 22.3 | 24.6 | 35.0 | 38.0 | 41.7 | 51.8 | 54.3 | 58.5 | 31 38.28 | — 0.73 | | —37.51 | 16 30 0.04 | — 2.68 | | |
| | 50 | B. A. C. 5599 . . . | S. | 19.0 | 53.5 | 56.3 | 7.4 | 11.6 | 14.7 | 25.9 | 28.6 | 33.0 | 36 11.04 | — 0.63 | | —37.51 | 16 35 32.90 | — 2.73 | | |

17, 18, 22, 27, 31, 32, 42. Thread A used.

30, 40, 41, 43. Thread B used.

42. Bisections at threads VII and where VIII would be.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellan'us Corrections. | | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|---------------------------|-------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | |
| 1 | 345 24 | 10 5.5 | 4.2 | 5.1 | 6.4 | 38 | .. | 135 | .. | 005 | .. | 64.9 | 14 32 42.6 | .. | + | 13.8 | 65 39 17.6 | + 0.3 |
| 2 | 206 14 | 9.4 | 10.1 | 9.7 | 8.0 | 31 | 655 | 635 | .. | .. | .. | 64.9 | 153 41 7.2 | .. | - | 26.3 | 77 25 40.3 | + 2.1 |
| 3 | 333 38 | 7.1 | 6.5 | 7.3 | 9.0 | 38 | .. | .. | .. | 590 | 445 | 64.9 | 26 18 52.4 | .. | + | 26.3 | 77 25 39.9 | + 1.7 |
| 4 | 341 30 | 2.0 | 0.8 | 1.3 | 3.4 | 32 | .. | .. | .. | 620 | 595 | 64.9 | 18 25 16.4 | 97.6 | + | 17.7 | 69 31 55.3 | + 2.3 |
| 5 | 172 58 | 5.7 | 5.9 | 5.8 | 6.7 | 37 | 418 | 316 | .. | .. | .. | 64.7 | 186 58 31.1 | .. | + | 6.7 | 44 7 43.4 | - 1.6 |
| 6 | 6 54 | 6.9 | 3.1 | 5.0 | 6.5 | 33 | .. | .. | .. | 236 | 194 | 64.7 | 153 1 29.4 | 86.5 | - | 6.7 | 44 7 43.9 | - 1.1 |
| 7 | 328 26 | 5.8 | 1.6 | 2.7 | 5.7 | 35 | .. | 308 | .. | 296 | .. | 64.7 | 31 29 58.6 | .. | + | 33.2 | 82 36 53.0 | + 0.1 |
| 8 | 342 26 | 5.6 | 1.9 | 3.1 | 5.4 | 31 | .. | 626 | .. | 568 | .. | 64.7 | 17 29 1.9 | .. | + | 17.1 | 68 35 40.2 | .. |
| 9 | 342 26 | 5.6 | 1.9 | 3.1 | 5.4 | 32 | 070 | .. | .. | .. | 970 | 64.7 | 17 29 8.6 | .. | + | 17.1 | 68 35 46.9 | .. |
| 10 | 343 38 | 6.8 | 1.5 | 2.9 | 5.7 | 38 | .. | 114 | .. | 066 | .. | 64.7 | 16 18 41.6 | .. | + | 15.8 | 67 25 18.6 | - 1.7 |
| 11 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 12 | 304 30 | 2.2 | 28.3 | 1.1 | 4.5 | 31 | 924 | 916 | .. | .. | .. | 64.7 | 55 25 3.4 | 92.4 | + | 18.0 | 106 32 42.6 | - 0.1 |
| 13 | 342 38 | 7.8 | 5.4 | 5.5 | 7.8 | 29 | 650 | 646 | .. | .. | .. | 64.7 | 17 16 34.3 | .. | + | 16.7 | 68 23 12.2 | .. |
| 14 | 343 10 | 7.8 | 5.4 | 5.6 | 7.5 | 31 | .. | .. | .. | 500 | 536 | 64.7 | 16 45 4.1 | 93.5 | + | 16.2 | 67 51 41.5 | .. |
| 15 | 295 44 | 7.6 | 3.0 | 5.3 | 6.1 | 36 | .. | .. | .. | 192 | 128 | 64.8 | 64 12 13.9 | 80.7 | + | 1 53.7 | 115 20 28.8 | - 14.4 |
| 16 | 333 42 | 5.2 | 1.6 | 2.8 | 5.1 | 35 | .. | .. | .. | 974 | 882 | 64.8 | 26 14 8.9 | .. | + | 27.3 | 77 20 57.4 | + 0.4 |
| 17 | 293 52 | 5.7 | 1.3 | 3.0 | 5.3 | 37 | 835 | 825 | .. | .. | .. | 64.8 | 66 2 2.6 | .. | + | 2 3.9 | 117 10 27.7 | - 11.3 |
| 18 | 293 52 | 5.7 | 1.3 | 3.0 | 5.3 | 35 | .. | .. | .. | 556 | 546 | 64.8 | 66 1 29.5 | .. | + | 2 3.8 | 117 9 54.5 | - 11.2 |
| 19 | 292 16 | 10.0 | 5.9 | 8.1 | 10.7 | 41 | 450 | 434 | .. | .. | .. | 64.8 | 67 41 36.3 | .. | + | 2 14.4 | 118 50 11.9 | - 10.9 |
| 20 | 292 16 | 10.0 | 5.9 | 8.1 | 10.7 | 41 | .. | .. | .. | 950 | 958 | 64.8 | 67 41 45.7 | .. | + | 2 14.2 | 118 50 21.1 | - 10.9 |
| 21 | 292 16 | 10.0 | 5.9 | 8.1 | 10.7 | 38 | .. | .. | .. | 620 | 610 | 64.8 | 67 40 54.6 | .. | + | 2 14.1 | 118 49 29.9 | - 10.8 |
| 22 | 293 14 | 7.4 | 2.1 | 3.8 | 6.7 | 41 | 882 | 748 | .. | .. | .. | 64.8 | 66 41 4.8 | .. | + | 2 7.8 | 117 49 33.8 | - 9.9 |
| 23 | 291 30 | 1.4 | 27.3 | 29.1 | 0.4 | 33 | .. | 360 | .. | 280 | .. | 64.8 | 68 25 23.7 | .. | + | 2 19.3 | 119 34 4.2 | - 9.1 |
| 24 | 47 38 | 4.4 | 28.8 | 1.1 | 1.2 | 36 | 300 | 276 | .. | 242 | 230 | 64.8 | 312 18 10.9 | .. | - | 1 0.9 | 3 23 31.2 | - 0.9 |
| 25 | 293 14 | 6.6 | 1.5 | 3.5 | 5.9 | 32 | .. | .. | .. | 764 | 746 | 64.8 | 66 41 20.6 | .. | + | 2 8.1 | 117 49 49.9 | - 6.7 |
| 26 | 53 46 | 7.3 | 0.8 | 3.5 | 2.8 | 31 | .. | .. | .. | 286 | 286 | 64.8 | 306 8 56.8 | .. | - | 1 16.0 | 357 14 2.0 | - 0.5 |
| 27 | 292 6 | 6.2 | 2.8 | 3.9 | 5.6 | 30 | .. | .. | .. | .. | 980 | 64.8 | 67 46 20.3 | 77.0 | + | 2 15.2 | 118 54 56.7 | - 4.7 |
| 28 | 301 54 | 4.1 | 28.9 | 0.9 | 2.0 | 37 | .. | 468 | .. | 382 | .. | 64.8 | 58 2 28.6 | .. | + | 1 28.9 | 109 10 18.7 | + 2.2 |
| 29 | 323 56 | 3.6 | 29.4 | 0.6 | 3.8 | 38 | 748 | 718 | .. | .. | .. | 64.8 | 36 0 48.3 | .. | + | 40.4 | 87 7 49.9 | - 0.7 |
| 30 | 294 28 | 7.6 | 2.4 | 5.1 | 5.7 | 39 | .. | 648 | .. | .. | .. | 64.8 | 65 31 38.0 | .. | + | 2 1.6 | 116 40 0.8 | - 0.7 |
| 31 | 294 28 | 7.6 | 2.4 | 5.1 | 5.7 | 36 | .. | .. | .. | 804 | .. | 64.8 | 65 25 50.0 | .. | + | 2 1.1 | 116 34 12.3 | - 0.7 |
| 32 | 294 28 | 7.6 | 2.4 | 5.1 | 5.7 | 42 | .. | .. | .. | .. | 010 | 64.8 | 65 27 9.9 | .. | + | 2 1.3 | 116 35 32.4 | - 0.6 |
| 33 | 329 36 | 6.2 | 1.6 | 2.4 | 5.5 | 36 | .. | 530 | .. | 480 | .. | 64.8 | 30 20 32.4 | .. | + | 32.6 | 81 27 26.2 | 0.0 |
| 34 | 331 56 | 6.8 | 2.2 | 3.5 | 4.4 | 32 | .. | .. | .. | 686 | 680 | 64.8 | 28 0 5.6 | .. | + | 29.6 | 79 6 56.4 | - 1.0 |
| 35 | 311 36 | 8.4 | 3.5 | 6.5 | 7.6 | 32 | .. | 594 | .. | 576 | .. | 64.8 | 48 19 19.5 | .. | + | 1 2.6 | 99 26 43.3 | + 0.5 |
| 36 | 1 44 | 7.1 | 3.1 | 5.8 | 6.8 | 36 | .. | 200 | .. | 124 | .. | 64.8 | 358 12 13.8 | .. | - | 1.8 | 49 15 33.2 | + 1.1 |
| 37 | 359 10 | 3.1 | 28.1 | 29.3 | 0.8 | 32 | 258 | 250 | .. | .. | .. | 64.8 | 0 45 8.0 | 75.3 | + | 0.7 | 51 51 29.9 | - 0.8 |
| 38 | 359 10 | 3.1 | 28.1 | 29.3 | 0.8 | 32 | .. | .. | .. | 816 | 804 | 64.8 | 0 45 18.1 | .. | + | 0.7 | 51 51 40.0 | - 2.5 |
| 39 | 304 30 | 0.9 | 28.5 | 0.6 | 2.4 | 31 | .. | 920 | .. | 840 | .. | 64.3 | 55 25 2.3 | 87.4 | + | 1 18.8 | 106 32 42.3 | + 0.8 |
| 40 | 341 42 | 3.0 | 29.3 | 1.4 | 1.6 | 29 | 620 | 580 | .. | .. | .. | 64.3 | 18 15 0.1 | 91.3 | + | 17.8 | 69 21 39.1 | .. |
| 41 | 342 14 | 5.0 | 2.7 | 4.6 | 4.6 | 31 | .. | .. | .. | 190 | 150 | 64.3 | 17 43 28.3 | .. | + | 17.3 | 68 50 6.8 | .. |
| 42 | 16 50 | 3.8 | 0.4 | 3.3 | 2.0 | 31 | .. | .. | .. | 910 | 730 | 64.4 | 343 2 32.6 | .. | - | 16.6 | 34 8 37.2 | + 2.2 |
| 43 | 16 50 | 3.8 | 0.4 | 3.3 | 2.0 | 45 | .. | .. | .. | 060 | 990 | 64.4 | 343 8 26.4 | .. | - | 16.5 | 34 14 31.1 | + 2.1 |
| 44 | 298 48 | 10.0 | 6.8 | 8.6 | 9.8 | 36 | .. | .. | .. | 180 | 180 | 64.4 | 61 8 17.1 | .. | + | 1 38.6 | 112 16 16.9 | + 0.8 |
| 45 | 301 36 | 6.6 | 2.5 | 4.5 | 6.0 | 36 | .. | 430 | .. | 440 | .. | 64.4 | 58 20 16.4 | 85.1 | + | 1 28.2 | 109 28 5.8 | - 1.1 |
| 46 | 317 40 | 3.3 | 0.0 | 0.5 | 2.3 | 33 | 180 | 155 | .. | .. | .. | 64.4 | 42 15 22.3 | .. | + | 49.6 | 93 22 33.1 | - 0.9 |
| 47 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 48 | 3 12 | 8.4 | 6.2 | 7.5 | 7.6 | 36 | .. | 680 | .. | 620 | .. | 64.4 | 356 44 22.6 | .. | - | 3.1 | 47 50 40.7 | - 0.1 |
| 49 | 13 32 | 9.1 | 6.1 | 7.5 | 7.7 | 35 | .. | .. | .. | 720 | 650 | 64.4 | 346 24 9.2 | .. | - | 13.2 | 37 30 17.2 | + 1.2 |
| 50 | 17 18 | 10.8 | 7.5 | 9.0 | 9.5 | 36 | .. | 510 | .. | 500 | .. | 64.4 | 342 38 22.4 | .. | - | 17.1 | 33 44 26.5 | + 1.5 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| 4 | 30.06 | 95.4 | 9 | - 2.8 | + 3.4 | .. | + 0.6 |
| 6 | 30.15 | 85.6 | 8 | - 2.8 | - 3.4 | + 0.1 | - 6.1 |
| 12 | 30.16 | 90.4 | 13 | - 2.6 | - 15 45.3 | .. | - 15 47.9 |
| 14 | 30.15 | 91.1 | 14 | - 2.5 | + 15 45.3 | .. | + 15 42.8 |
| 15 | 30.22 | 82.0 | 40 | - 2.7 | - 15 46.1 | .. | - 15 48.8 |
| 27 | 30.23 | 79.3 | 41 | - 2.6 | + 15 46.1 | .. | + 15 43.5 |
| 37 | 30.20 | 77.5 | | | | | |
| 39 | 30.19 | 86.0 | | | | | |
| 40 | 30.19 | 88.8 | | | | | |
| 45 | 30.10 | 86.5 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. |
|---------|---------|---------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|----------|------------|--------------|----------------|----------------|---------------------------|--------|----|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | m. | s. | |
| 1876. | | | | | | | | | | | | | m. | s. | s. | s. | s. | s. | | |
| July 18 | 1 | O. Arg. S. 15973 . | S. | 45.8 | 48.7 | 50.4 | 57.0 | 59.2 | 1.6 | 8.4 | 10.0 | 12.7 | 41 59.31 | — 0.79 | . | —37.52 | 16 41 21.00 | — 3.20 | | |
| | 2 | O. Arg. S. 15981 . | S. | . | . | 23.0 | 25.3 | 27.5 | 29.8 | 34.4 | 36.2 | 38.9 | 42 25.31 | — 0.79 | . | —37.52 | 16 41 47.00 | — 3.20 | | |
| | 3 | Anonymous . | S. | 16.6 | 19.0 | 20.8 | 27.2 | 29.3 | 31.8 | 38.4 | 40.2 | 42.8 | 51 20.50 | — 0.78 | . | —37.52 | 16 50 51.20 | — 3.23 | | |
| | 4 | B. A. C. 5785 ¹ , N. | S. | 5.5 | 10.1 | 12.4 | . | . | . | 40.8 | 43.4 | 47.9 | 3 26.71 | — 0.60 | . | —37.53 | 17 2 48.58 | — 2.76 | | |
| | 5 | B. A. C. 5785 ² , S. | S. | . | . | 19.7 | 23.2 | 26.8 | 30.4 | 33.9 | . | . | 3 26.78 | — 0.60 | . | —37.53 | 17 2 48.65 | — 2.76 | | |
| | 6 | B. A. C. 5686 ¹ . | S. | 49.3 | 52.5 | 54.6 | . | . | . | 15.0 | 17.0 | 20.0 | 20 4.75 | — 0.60 | . | —37.53 | 17 19 26.62 | — 2.72 | | |
| | 7 | B. A. C. 5686 ² . | S. | . | . | 0.0 | 2.5 | 5.0 | 7.6 | 10.2 | . | . | 20 5.04 | — 0.60 | . | —37.53 | 17 19 26.91 | — 2.72 | | |
| | 8 | β Draconis . | S. | 58.8 | 2.9 | 5.3 | 15.5 | 18.7 | 22.0 | 32.2 | 34.7 | 39.0 | 28 18.79 | — 0.60 | . | —37.54 | 17 27 40.65 | + 0.04 | | |
| | 9 | O. Arg. S. 17123 . | S. | 55.4 | 58.3 | 0.1 | 7.0 | 9.3 | 11.8 | 18.7 | 20.3 | 23.2 | 37 9.34 | — 0.80 | . | —37.54 | 17 36 31.00 | — 3.56 | | |
| | 10 | Tran. Zones 36, 67 | S. | 48.7 | 51.5 | 53.4 | 0.2 | 2.6 | 5.0 | 11.8 | 13.5 | 16.4 | 38 2.57 | — 0.80 | . | —37.54 | 17 37 24.23 | — 3.56 | | |
| | 11 | O. Arg. S. 17177 . | S. | 12.6 | 15.0 | 17.0 | 24.0 | 26.1 | 28.3 | 35.1 | 37.1 | 39.9 | 39 26.12 | — 0.80 | . | —37.54 | 17 38 47.78 | — 3.57 | | |
| | 12 | γ ² Sagittarii . | S. | 18.5 | 21.4 | 23.3 | 30.4 | 32.7 | 35.0 | 42.0 | 43.9 | 46.9 | 58 32.68 | — 0.82 | —37.52 | —37.55 | 17 57 54.31 | — 0.02 | | |
| | 13 | η Serpentis . | S. | 22.8 | 25.4 | 26.8 | 33.0 | 35.0 | 37.0 | 43.2 | 44.7 | 47.3 | 15 35.02 | — 0.69 | —37.58 | —37.55 | 18 14 56.78 | + 0.09 | | |
| | 14 | β Tauri (R.) . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | | |
| | 15 | β Tauri . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | | |
| | 16 | δ Orionis . | P. | 7.4 | 10.0 | 11.6 | 17.7 | 19.9 | 22.0 | 28.0 | 29.4 | 32.0 | 26 19.78 | — 0.74 | —37.95 | —37.98 | 5 25 41.06 | — 0.06 | | |
| | 17 | ε Orionis . | P. | 22.4 | 25.0 | 26.7 | 30.8 | 34.9 | 38.9 | 43.0 | 44.4 | 47.0 | 30 34.79 | — 0.75 | —38.01 | —37.98 | 5 29 56.06 | + 0.02 | | |
| | 18 | B. A. C. 1794 . | P. | 57.2 | 59.8 | 1.3 | 7.5 | 9.6 | 11.6 | 17.7 | 19.3 | 21.8 | 35 9.53 | — 0.75 | . | —37.98 | 5 34 30.80 | — 0.71 | | |
| | 19 | α Orionis . | P. | 54.7 | 57.3 | 58.9 | 5.0 | 7.1 | 9.1 | 15.3 | 16.7 | 19.3 | 49 7.04 | — 0.71 | —37.99 | —37.99 | 5 48 28.31 | — 0.03 | | |
| | 20 | B. A. C. 1900 . | P. | 40.2 | 43.4 | 45.2 | 53.0 | 55.6 | 58.3 | 5.9 | 7.7 | 11.0 | 51 55.59 | — 0.72 | . | —38.00 | 5 51 16.87 | — 0.09 | | |
| | 21 | Mercury II, C. | P. | 17.2 | 20.0 | 21.6 | 28.3 | 30.4 | 32.7 | 39.4 | 41.0 | 43.7 | 45 30.48 | — 0.72 | . | —38.04 | 6 44 51.72 | — 0.22 | | |
| | 22 | Sun I, N. | P. | 41.3 | 44.0 | 45.6 | 52.3 | 54.5 | 56.8 | 3.3 | 4.9 | 7.6 | 56 54.48 | — 0.72 | . | —38.09 | 7 56 15.67 | . | | |
| | 23 | Sun II, S. | P. | 56.4 | 59.3 | 0.9 | 7.4 | 9.6 | 11.7 | 18.3 | 19.9 | 22.6 | 59 9.57 | — 0.72 | . | —38.09 | 7 58 30.76 | . | | |
| | 24 | α Leonis . | P. | 13.4 | 15.9 | 17.4 | 23.8 | 25.9 | 28.4 | 34.3 | 35.8 | 38.4 | 2 25.89 | — 0.74 | —38.19 | —38.18 | 10 1 46.97 | — 0.03 | | |
| | 25 | γ ¹ Leonis . | P. | 35.0 | 37.6 | 39.2 | 45.7 | 48.0 | 50.2 | 56.8 | 58.4 | 1.1 | 13 48.00 | — 0.73 | —38.17 | —38.18 | 10 13 9.09 | — 0.03 | | |
| | 26 | δ Orionis . | E. | 8.5 | 11.3 | 12.8 | 18.8 | 20.8 | 22.9 | 28.9 | 30.5 | 33.0 | 26 20.83 | — 0.75 | —38.96 | —38.96 | 5 25 41.12 | — 0.03 | | |
| | 27 | ε Orionis . | E. | 23.5 | 26.0 | 27.6 | 33.7 | 35.8 | 37.8 | 43.9 | 45.6 | 48.0 | 30 35.77 | — 0.76 | —38.95 | —38.96 | 5 29 56.05 | — 0.02 | | |
| | 28 | α Orionis . | E. | 55.7 | 58.3 | 59.8 | 6.0 | 8.0 | 10.0 | 16.3 | 17.9 | 20.4 | 49 8.04 | — 0.74 | —38.97 | —38.97 | 5 48 28.33 | — 0.03 | | |
| | 29 | Mercury II, C. | E. | 49.7 | 52.5 | 54.2 | 0.9 | 3.0 | 5.3 | 11.9 | 13.6 | 16.6 | 53 3.08 | — 0.72 | . | —39.00 | 6 52 23.36 | — 0.42 | | |
| | 30 | Venus II, N. | E. | 1.0 | 3.8 | 5.3 | 11.6 | 13.8 | 16.0 | 22.4 | 24.0 | 26.6 | 17 13.83 | — 0.72 | . | —39.01 | 7 16 34.10 | — 2.00 | | |
| | 31 | Sun I, N. | E. | 42.4 | 45.1 | 46.9 | 53.4 | 55.5 | 57.5 | 4.3 | 6.0 | 8.7 | 0 55.53 | — 0.72 | . | —39.04 | 8 0 15.77 | . | | |
| | 32 | Sun II, S. | E. | 57.4 | 0.1 | 2.0 | 8.6 | 10.6 | 13.0 | 19.5 | 21.1 | 23.8 | 3 10.68 | — 0.72 | . | —39.04 | 8 2 30.92 | . | | |
| | 33 | α ² Geminorum . | F. | 8.2 | 11.3 | 13.0 | 20.4 | 22.8 | 25.5 | 32.6 | 34.3 | 37.3 | 27 22.82 | — 0.68 | —40.08 | —40.05 | 7 26 42.09 | + 0.27 | | |
| | 34 | α Canis Minoris | F. | 17.5 | 20.0 | 21.7 | 27.8 | 29.8 | 31.9 | 38.0 | 39.6 | 42.0 | 33 29.81 | — 0.62 | —40.01 | —40.05 | 7 32 49.14 | — 0.20 | | |
| | 35 | Sun I, S. | F. | 43.0 | 45.8 | 47.5 | 53.9 | 56.1 | 58.3 | 5.0 | 6.6 | 9.2 | 4 56.16 | — 0.65 | . | —40.11 | 8 4 15.40 | . | | |
| | 36 | Sun II, N. | F. | 58.0 | 0.8 | 2.3 | 8.9 | 11.0 | 13.3 | 19.9 | 21.5 | 24.3 | 7 11.11 | — 0.65 | . | —40.11 | 8 6 30.35 | . | | |
| | 37 | α Hydrae . | F. | . | . | . | 13.0 | 15.2 | 10.3 | 21.0 | 23.5 | 22 11.08 | — 0.61 | —40.33 | —40.28 | 9 21 39.19 | + 0.02 | | | |
| | 38 | α Leonis . | F. | . | . | 23.8 | 25.9 | 27.9 | 30.0 | 32.0 | . | . | 2 27.91 | — 0.63 | —40.32 | —40.30 | 10 1 46.98 | — 0.02 | | |
| | 39 | γ ¹ Leonis . | F. | . | 45.5 | 47.7 | 49.9 | 52.2 | 54.5 | 58.8 | 0.4 | 3.2 | 13 50.00 | — 0.65 | —40.25 | —40.31 | 10 13 9.04 | — 0.08 | | |
| | 40 | δ Leonis . | F. | 59.6 | 2.5 | 4.0 | 10.6 | 12.8 | 15.0 | 21.6 | 23.2 | 26.0 | 8 12.81 | — 0.65 | —40.19 | —40.35 | 11 7 31.81 | — 0.22 | | |
| | 41 | B. A. C. 5686 . | F. | 14.9 | 17.6 | 19.2 | 25.5 | 27.7 | 29.8 | 36.1 | 37.7 | 40.4 | 48 27.66 | — 0.57 | . | —40.53 | 16 47 46.56 | — 2.71 | | |
| | 42 | Anonymous . | F. | 18.6 | 21.5 | 23.3 | 27.8 | 30.0 | . | . | . | . | 51 32.20 | — 0.74 | . | —40.53 | 16 50 50.93 | — 3.22 | | |
| | 43 | B. A. C. 5753 . | F. | 28.8 | 31.4 | 33.0 | 37.0 | 39.2 | 41.3 | 43.5 | 45.6 | . | 58 41.33 | — 0.57 | . | —40.53 | 16 58 0.23 | — 2.75 | | |
| | 44 | B. A. C. 5757 . | F. | 46.8 | 49.5 | 51.2 | 57.5 | 59.5 | 1.6 | 8.0 | 9.6 | 12.3 | 58 59.56 | — 0.57 | . | —40.53 | 16 58 18.46 | — 2.75 | | |
| | 45 | B. A. C. 5785, S. | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | | |
| | 46 | B. A. C. 5785, N. | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | | |
| | 47 | B. A. C. 5886 ¹ . | F. | 52.3 | 55.5 | 57.6 | . | . | . | 17.9 | 19.8 | 23.1 | 20 7.72 | — 0.50 | . | —40.55 | 17 19 26.67 | — 2.69 | | |
| | 48 | B. A. C. 5886 ² . | F. | . | . | 2.9 | 5.6 | 8.0 | 10.7 | 13.2 | . | . | 20 8.06 | — 0.50 | . | —40.55 | 17 19 27.01 | — 2.69 | | |
| | 49 | O. Arg. S. 17123 . | F. | 58.4 | 1.5 | 3.3 | 10.2 | 12.4 | 14.7 | 21.6 | 23.4 | 26.2 | 37 12.41 | — 0.76 | . | —40.56 | 17 36 31.09 | — 3.56 | | |
| | 50 | Tran. Zones 36, 67 | F. | 52.0 | 54.7 | 56.3 | 3.2 | 5.4 | 7.8 | 14.6 | 16.7 | 19.4 | 38 5.57 | — 0.76 | . | —40.56 | 17 37 24.25 | — 3.56 | | |

1. Thread A used.
43. Telescope micrometer decreased five revolutions in reduction.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | |
| 1 | 295 44 | 10 9.8 | 6.5 | 7.1 | 7.8 | 34 | 110 | 100 | .. | .. | .. | 64.4 | 64 9 9.1 | .. | + 1 52.3 | 115 17 22.6 | -15.1 |
| 2 | 295 44 | 9.8 | 6.5 | 7.1 | 7.8 | 36 | .. | .. | .. | 135 | 090 | 64.4 | 64 12 15.0 | .. | + 1 52.6 | 115 20 28.8 | -15.1 |
| 3 | 296 54 | 9.0 | 5.9 | 5.9 | 8.2 | 33 | 525 | 410 | .. | .. | .. | 64.4 | 63 1 32.4 | .. | + 1 47.0 | 114 9 40.6 | -14.2 |
| 4 | 15 40 | 2.5 | 0.0 | 2.6 | 2.4 | 34 | 772 | 802 | .. | .. | .. | 64.4 | 344 15 48.2 | .. | - 15.4 | 35 21 54.0 | + 1.0 |
| 5 | 15 40 | 2.5 | 0.0 | 2.6 | 2.4 | 34 | .. | .. | .. | 900 | 730 | 64.4 | 344 15 50.2 | .. | - 15.4 | 35 21 56.0 | + 1.0 |
| 6 | 358 18 | 12.7 | 10 0 | 9.6 | 10.6 | 34 | 602 | 610 | .. | .. | .. | 64.4 | 1 37 53.9 | .. | + 1.6 | 52 44 16.7 | - 0.9 |
| 7 | 358 18 | 12.7 | 10.0 | 9.6 | 10.6 | 35 | .. | .. | .. | 790 | 760 | 64.4 | 1 37 58.1 | .. | + 1.6 | 52 44 20.9 | - 0.9 |
| 8 | 13 26 | 9.5 | 8.0 | 8.8 | 8.2 | 36 | 865 | 820 | .. | .. | .. | 64.4 | 346 30 26.4 | .. | - 13.2 | 37 36 34.4 | +12.4 |
| 9 | 293 40 | 3.8 | 1.5 | 1.7 | 4.1 | 34 | 095 | 090 | .. | .. | .. | 64.4 | 66 15 37.5 | .. | + 2 3.9 | 117 24 2.6 | -11.4 |
| 10 | 293 40 | 3.8 | 1.5 | 1.7 | 4.1 | 35 | .. | .. | .. | 270 | 200 | 64.4 | 66 15 56.5 | .. | + 2 3.9 | 117 24 21.6 | -11.4 |
| 11 | 293 40 | 3.8 | 1.5 | 1.7 | 4.1 | 31 | .. | .. | .. | 210 | .. | 64.4 | 66 14 54.8 | .. | + 2 3.8 | 117 23 19.8 | -11.2 |
| 12 | 290 40 | 3.8 | 1.0 | 1.7 | 4.0 | 38 | .. | .. | .. | 690 | .. | 64.4 | 69 16 49.2 | .. | + 2 23.8 | 120 25 34.2 | - 0.1 |
| 13 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 81.8 | .. | .. | .. |
| 14 | 190 20 | 8.8 | 9.1 | 9.0 | 7.1 | 37 | 885 | 910 | .. | .. | .. | 63.6 | 169 36 40.6 | .. | - 10.0 | 61 29 50.6 | + 1.2 |
| 15 | 349 32 | 4.5 | 0.9 | 2.0 | 3.7 | 32 | .. | .. | .. | 735 | 655 | 63.6 | 10 23 17.4 | 86 3 | + 10.0 | 61 29 48.6 | - 0.8 |
| 16 | 320 40 | 4.1 | 2.3 | 2.5 | 5.7 | 36 | .. | 360 | .. | 190 | .. | 63.6 | 39 16 12.0 | .. | + 44.5 | 90 23 17.7 | - 1.7 |
| 17 | 319 46 | 6.8 | 4.8 | 5.7 | 7.9 | 33 | .. | 790 | .. | 720 | .. | 63.6 | 40 9 36.1 | .. | + 45.9 | 91 16 43.2 | - 0.5 |
| 18 | 319 2 | 7.0 | 5.4 | 6.4 | 8.1 | 32 | .. | 160 | .. | 100 | .. | 63.6 | 40 53 11.6 | 86.8 | + 47.1 | 92 0 19.9 | +14.2 |
| 19 | 328 26 | 5.6 | 3.2 | 3.4 | 5.1 | 35 | .. | 355 | .. | 200 | .. | 63.6 | 31 29 57.4 | .. | + 33.3 | 82 36 51.9 | - 0.3 |
| 20 | 358 14 | 4.1 | 2.9 | 3.5 | 5.0 | 33 | .. | 325 | .. | 190 | .. | 63.6 | 1 41 26.3 | .. | + 1.6 | 52 47 49.1 | + 6.6 |
| 21 | 343 38 | 7.7 | 5.0 | 5.5 | 8.0 | 36 | 655 | 555 | .. | 485 | 425 | 63.6 | 16 18 19.0 | 92.0 | + 15.8 | 67 24 56.1 | .. |
| 22 | 342 2 | 6.7 | 3.5 | 5.2 | 6.3 | 37 | 315 | 340 | .. | .. | .. | 63.6 | 17 54 29.5 | 93.0 | + 17.4 | 69 1 8.1 | .. |
| 23 | 341 30 | 2.1 | 29.8 | 0.7 | 1.8 | 35 | .. | .. | .. | 660 | 610 | 63.6 | 18 26 0.1 | .. | + 17.9 | 69 32 39.5 | .. |
| 24 | 333 38 | 7.6 | 6.3 | 6.3 | 8.7 | 38 | .. | 640 | .. | 630 | .. | 63.6 | 26 18 51.8 | 95.9 | + 26.4 | 77 25 39.4 | + 1.2 |
| 25 | 341 30 | 6.0 | 4.4 | 4.1 | 7.2 | 32 | .. | 595 | .. | 490 | .. | 63.6 | 18 25 16.8 | 95.6 | + 17.9 | 69 31 55.9 | + 2.7 |
| 26 | 320 40 | 5.6 | 2.7 | 4.8 | 7.7 | 36 | .. | 230 | .. | 135 | .. | 63.0 | 39 16 11.6 | 87.7 | + 44.2 | 90 23 17.0 | - 2.2 |
| 27 | 319 46 | 7.0 | 4.2 | 5.8 | 8.0 | 33 | .. | 835 | .. | 735 | .. | 63.0 | 40 9 35.9 | .. | + 45.6 | 91 16 42.7 | - 0.8 |
| 28 | 328 26 | 10.0 | 8.2 | 9.0 | 10.2 | 35 | 935 | 990 | .. | 945 | 920 | 63.0 | 31 29 57.3 | .. | + 33.1 | 82 36 51.6 | - 0.5 |
| 29 | 343 42 | 5.3 | 2.3 | 3.2 | 4.1 | 36 | .. | 020 | .. | 970 | .. | 63.0 | 16 14 7.3 | .. | + 15.6 | 67 20 44.1 | .. |
| 30 | 337 12 | 7.2 | 4.5 | 6.0 | 7.2 | 31 | .. | 520 | .. | 430 | .. | 63.0 | 22 43 0.6 | .. | + 22.4 | 73 49 44.2 | .. |
| 31 | 341 50 | 5.2 | 1.0 | 1.7 | 4.7 | 34 | 955 | 935 | .. | .. | .. | 63.0 | 18 5 50.2 | 95.0 | + 17.4 | 69 12 28.8 | .. |
| 32 | 341 18 | 10.0 | 7.9 | 7.7 | 10.2 | 32 | .. | .. | .. | 685 | 675 | 63.0 | 18 37 22.4 | .. | + 18.0 | 69 44 1.6 | .. |
| 33 | 353 12 | 8.0 | 2.9 | 4.4 | 8.2 | 34 | .. | 960 | .. | 928 | .. | 62.0 | 6 43 52.5 | .. | + 6.4 | 57 50 20.1 | - 3.6 |
| 34 | 326 36 | 0.5 | 26.3 | 26.6 | 2.5 | 37 | .. | 580 | .. | 494 | .. | 62.0 | 33 20 25.1 | 86.8 | + 35.8 | 84 27 22.1 | - 3.5 |
| 35 | 341 6 | 4.1 | 1.4 | 0.3 | 4.3 | 31 | 790 | 790 | .. | .. | .. | 62.0 | 18 49 0.3 | .. | + 18.5 | 69 55 40.0 | .. |
| 36 | 341 38 | 6.2 | 3.2 | 2.4 | 4.6 | 33 | .. | .. | .. | 466 | 476 | 62.0 | 18 17 28.7 | 87.6 | + 18.0 | 69 24 7.9 | .. |
| 37 | 312 56 | 6.3 | 2.9 | 3.8 | 8.4 | 35 | .. | .. | .. | 420 | .. | 62.0 | 46 59 59.6 | .. | + 58.1 | 98 7 18.9 | - 1.0 |
| 38 | 333 38 | 6.5 | 3.4 | 3.5 | 7.1 | 38 | .. | 884 | .. | 744 | .. | 62.0 | 26 18 50.8 | .. | + 26.8 | 77 25 38.8 | + 0.6 |
| 39 | 341 30 | 3.1 | 29.0 | 28.5 | 2.9 | 32 | .. | .. | .. | 810 | 814 | 62.0 | 18 25 15.6 | 88.0 | + 18.1 | 69 31 54.9 | + 1.6 |
| 40 | 342 14 | 6.8 | 4.5 | 4.6 | 6.9 | 32 | .. | .. | .. | 304 | 156 | 62.0 | 17 41 11.5 | 88.2 | + 17.3 | 68 47 50.0 | 0.0 |
| 41 | 336 40 | 6.1 | 1.5 | 3.0 | 5.1 | 37 | 280 | 274 | .. | .. | .. | 93.3 | 23 16 26.7 | .. | + 23.9 | 74 23 11.8 | - 5.5 |
| 42 | 296 54 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 43 | 334 48 | 2.3 | 27.1 | 27.4 | 0.8 | 34 | 190 | 148 | .. | .. | .. | 63.3 | 25 6 18.8 | .. | + 26.0 | 76 13 6.0 | - 4.7 |
| 44 | 334 48 | 2.3 | 27.1 | 27.4 | 0.8 | 37 | .. | .. | .. | 446 | 448 | 63.3 | 25 8 26.4 | .. | + 26.1 | 76 15 13.7 | - 4.6 |
| 45 | 15 40 | 6.8 | 2.2 | 5.1 | 6.2 | 34 | .. | .. | .. | 732 | .. | 63.3 | 344 15 50.6 | .. | - 15.7 | 35 21 56.1 | + 1.6 |
| 46 | 15 40 | 6.8 | 2.2 | 5.1 | 6.2 | 34 | .. | .. | .. | 512 | .. | 63.3 | 344 15 47.2 | .. | - 15.7 | 35 21 52.7 | + 1.6 |
| 47 | 358 18 | 11.6 | 7.9 | 7.5 | 10.3 | 34 | .. | .. | .. | 688 | 652 | 63.3 | 1 37 54.0 | .. | + 1.6 | 52 44 16.8 | - 0.2 |
| 48 | 358 18 | 11.6 | 7.9 | 7.5 | 10.3 | 34 | .. | .. | 936 | .. | .. | 63.3 | 1 37 56.9 | .. | + 1.6 | 52 44 19.7 | - 0.2 |
| 49 | 293 40 | 4.4 | 0.2 | 0.6 | 4.5 | 34 | .. | .. | .. | 213 | 202 | 63.3 | 66 15 37.8 | 75.2 | + 2 5.8 | 117 24 4.8 | -11.5 |
| 50 | 293 40 | 4.4 | 0.2 | 0.6 | 4.5 | 35 | .. | 534 | .. | 506 | .. | 63.3 | 66 15 58.7 | .. | + 2 5.9 | 117 24 25.8 | -11.4 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " | " | " | " |
| 13 | 30.12 | 84.0 | 21 | - 2.2 | .. | 0.0 | - 2.2 |
| 15 | 30.11 | 84.9 | 22 | - 2.7 | + 15 45.6 | .. | + 15 42.9 |
| 18 | 30.12 | 85.5 | 23 | - 2.7 | - 15 45.6 | .. | - 15 48.5 |
| 21 | 30.13 | 90.1 | 29 | - 2.1 | .. | 0.1 | - 2.2 |
| 22 | 30.12 | 90.2 | 30 | - 11.4 | + 28.8 | .. | + 17.4 |
| 24 | 30.10 | 95.2 | 31 | - 2.7 | + 15 46.4 | .. | + 15 43.7 |
| 25 | 30.10 | 94.5 | 32 | - 2.8 | - 15 46.4 | .. | - 15 49.2 |
| 26 | 30.02 | 87.0 | 35 | - 2.8 | - 15 46.0 | .. | - 15 48.8 |
| 31 | 30.00 | 93.1 | 36 | - 2.7 | + 15 46.0 | .. | + 15 43.3 |
| 34 | 30.10 | 85.5 | | | | | |
| 36 | 30.09 | 86.2 | | | | | |
| 39 | 30.08 | 88.6 | | | | | |
| 40 | 30.08 | 88.6 | | | | | |
| 49 | 30.14 | 77.5 | | | | | |

For summary of the elements of reduction see page 3.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|------------------|---------|-------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|---------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't | Clock adopted. | | |
| | | | | m. | s. | | | | | | | | | s. | s. | s. | h. m. s. | s. |
| 1876. July 21 | 1 | O. Arg. S. 17177 | F. | 15.5 | 18.3 | 20.0 | 27.0 | 29.2 | 31.6 | 38.4 | 40.1 | 42.9 | 39 29.22 | - 0.76 | . | -40.56 | 17 38 47.90 | - 3.57 |
| | 2 | Lalande 32974 | F. | 36.9 | 39.7 | 41.5 | 48.4 | 50.7 | 53.0 | 0.0 | 1.7 | 4.6 | 55 50.72 | - 0.76 | . | -40.57 | 17 55 9.39 | - 3.66 |
| | 3 | XVIII. 4 | F. | 32.5 | 35.5 | 37.2 | 44.3 | 46.6 | 48.5 | 55.9 | 57.7 | 0.7 | 6 46.58 | - 0.78 | . | -40.57 | 18 6 5.23 | - 3.77 |
| | 4 | δ Ursæ Minoris | F. | . | . | 58.0 | 34.5 | 9.0 | 43.5 | 18.0 | . | . | 13 8.36 | - 0.08 | . | -40.58 | 18 12 27.70 | - 0.11 |
| | 5 | ι Aquilæ | F. | . | . | 7.9 | 10.0 | 12.1 | 14.1 | 16.2 | . | . | 29 12.05 | - 0.66 | -40.53 | -40.58 | 18 28 30.81 | + 0.02 |
| | 6 | α Lyre | F. | 12.5 | 15.7 | 17.9 | 25.7 | 28.3 | 30.9 | 38.6 | 40.7 | 43.8 | 33 28.23 | - 0.50 | -40.50 | -40.59 | 18 32 47.14 | - 0.07 |
| | 7 | β Lyre | F. | 59.4 | 2.5 | 4.3 | 11.8 | 14.2 | 16.6 | 23.9 | 25.6 | 28.7 | 46 14.11 | - 0.52 | -40.63 | -40.59 | 18 45 33.00 | + 0.07 |
| | 8 | B. A. C. 6477 | F. | 58.3 | 3.3 | 6.0 | 17.3 | 21.2 | 24.9 | 30.3 | 39.2 | 43.9 | 52 21.16 | - 0.45 | . | -40.60 | 18 51 40.11 | - 2.84 |
| | 9 | B. A. C. 5616 | F. | 8.8 | 12.5 | 14.7 | 24.0 | 26.9 | 30.1 | 39.2 | 41.1 | 45.2 | 58 26.98 | - 0.48 | . | -40.60 | 18 57 45.90 | - 2.80 |
| | 10 | ζ Aquilæ | F. | 14.2 | 16.9 | 18.5 | 24.8 | 26.9 | 29.0 | 35.3 | 36.8 | 39.5 | 0 26.88 | - 0.58 | -40.65 | -40.60 | 18 59 45.70 | + 0.13 |
| | 11 | δ Sagittarii | F. | 54.8 | 57.5 | 59.2 | 5.5 | 7.7 | 9.9 | 16.5 | 18.0 | 20.8 | 11 7.77 | - 0.71 | -40.69 | -40.61 | 19 10 26.45 | + 0.10 |
| | 12 | Aglaia | F. | 9.7 | 12.7 | 14.6 | 19.2 | 23.8 | 28.7 | 33.7 | 35.4 | 38.2 | 16 24.00 | - 0.78 | . | -40.61 | 19 15 42.61 | . |
| | 13 | ε Delphini | F. | 49.4 | 51.8 | 53.3 | 59.5 | 1.6 | 3.7 | 9.9 | 11.6 | 14.0 | 28 1.64 | - 0.58 | -40.67 | -40.66 | 20 27 20.40 | + 0.06 |
| | 14 | Helena | F. | 12.0 | 16.0 | 17.9 | 24.9 | 27.4 | 29.7 | 36.7 | 38.7 | 41.7 | 31 27.32 | - 0.79 | . | -40.66 | 20 30 45.87 | . |
| | 15 | ν Cygni | F. | 0.8 | 4.2 | 6.2 | 14.3 | 17.0 | 19.5 | 27.7 | 29.7 | 33.0 | 53 16.93 | - 0.50 | -40.61 | -40.67 | 20 52 35.76 | 0.00 |
| | 16 | ζ Cygni (R.) | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 17 | ζ Cygni | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 18 | β Orionis | S. | 4.7 | 7.3 | 8.9 | 15.6 | 17.0 | 19.2 | 25.3 | 26.9 | 29.5 | 9 17.09 | - 0.89 | -40.67 | -40.71 | 5 8 35.49 | - 0.04 |
| | 19 | β Tauri | S. | 55.7 | 58.7 | 0.2 | 5.6 | . | 14.5 | 19.0 | 20.7 | 23.7 | 19 9.71 | - 0.69 | -40.69 | -40.71 | 5 18 28.31 | - 0.04 |
| | 20 | β Orionis | S. | 10.5 | 12.9 | 14.7 | 20.8 | 22.8 | 24.8 | 31.0 | 32.5 | 35.0 | 26 22.78 | - 0.84 | -40.77 | -40.71 | 5 25 41.23 | + 0.03 |
| | 21 | ε Orionis | S. | 25.4 | 27.9 | 29.1 | 35.5 | 37.6 | 39.5 | 45.8 | 47.3 | 49.8 | 30 37.58 | - 0.85 | -40.63 | -40.71 | 5 29 56.02 | - 0.09 |
| | 22 | α Orionis | S. | 57.6 | 0.1 | 1.1 | 7.9 | 9.9 | 11.9 | 18.0 | 19.6 | 22.3 | 49 9.88 | - 0.80 | -40.70 | -40.72 | 5 48 28.36 | - 0.05 |
| | 23 | Mercury, C. | S. | 39.2 | 42.0 | 43.5 | 50.2 | 52.5 | 54.7 | 1.6 | 3.0 | 5.8 | 8 52.50 | - 0.72 | . | -40.74 | 7 8 11.04 | - 0.04 |
| | 24 | Venus II, N. | S. | 39.0 | 41.5 | 43.0 | 49.4 | 51.5 | 53.7 | 0.1 | 1.5 | 4.3 | 12 51.56 | - 0.75 | . | -40.74 | 7 12 10.07 | - 1.97 |
| | 25 | Sun I, S. | S. | 42.9 | 45.5 | 47.3 | 53.7 | 55.8 | 58.0 | 4.6 | 6.5 | 9.0 | 8 55.92 | - 0.73 | . | -40.76 | 8 8 14.43 | . |
| | 26 | Sun II, N. | S. | 57.5 | 0.5 | 2.0 | 8.5 | 10.7 | 12.8 | 19.4 | 21.0 | 23.6 | 11 10.67 | - 0.73 | . | -40.76 | 8 10 29.18 | . |
| | 27 | Jupiter I, S. | S. | 20.7 | 23.3 | 25.0 | . | . | . | 42.1 | 43.8 | 46.4 | 20 33.57 | - 0.99 | . | -40.87 | 15 19 51.71 | . |
| | 28 | Jupiter II, N. | S. | . | . | 32.0 | 34.2 | 36.5 | 38.5 | 40.8 | . | . | 20 36.39 | - 0.99 | . | -40.87 | 15 19 54.53 | . |
| | 29 | α Coronæ Borealis | S. | 56.5 | 59.4 | 1.0 | 8.0 | 10.2 | 12.5 | 19.4 | 21.2 | 24.0 | 30 10.24 | - 0.73 | -40.84 | -40.88 | 15 29 28.63 | - 0.04 |
| | 30 | α Serpentis | S. | 41.5 | 44.0 | 45.6 | 51.9 | 53.9 | 56.0 | 2.1 | 3.6 | 6.2 | 38 53.87 | - 0.83 | -40.91 | -40.89 | 15 38 12.15 | + 0.04 |
| | 31 | ε Serpentis | S. | 10.2 | 12.7 | 14.2 | 20.3 | 22.4 | 24.6 | 30.6 | 32.1 | 34.7 | 45 22.42 | - 0.84 | -40.90 | -40.89 | 15 44 40.69 | + 0.01 |
| | 32 | XV, 25 | S. | . | . | . | . | . | . | 30.3 | 32.0 | 35.0 | 50 20.89 | - 1.10 | . | -40.90 | 15 49 38.80 | - 2.88 |
| | 33 | Anonymous | S. | 2.3 | 5.3 | 7.0 | 13.9 | 16.3 | 18.7 | 25.7 | 27.4 | 30.5 | 52 16.34 | - 1.10 | . | -40.90 | 15 51 34.34 | - 2.90 |
| | 34 | B. A. C. 5399 | S. | 52.1 | 55.1 | 56.6 | 3.3 | 5.5 | 7.8 | 14.5 | 16.2 | 18.9 | 7 5.56 | - 0.74 | . | -40.90 | 16 6 23.92 | - 2.51 |
| | 35 | δ Ursæ Minoris | S. | . | . | 58.0 | 33.0 | 7.5 | 40.5 | 16.5 | . | . | 13 6.86 | + 1.31 | . | -41.00 | 18 12 27.17 | - 0.39 |
| | 36 | B. A. C. 6288 | S. | 7.8 | 15.0 | 20.6 | 39.5 | 46.4 | 52.5 | 12.0 | 16.5 | 24.8 | 21 46.16 | - 0.34 | . | -41.01 | 18 21 4.81 | - 3.14 |
| | 37 | α Lyre | S. | 13.2 | 16.3 | 18.5 | 26.3 | 28.7 | 31.5 | 39.3 | 41.2 | 44.5 | 33 28.83 | - 0.64 | -40.97 | -41.01 | 18 32 47.18 | - 0.02 |
| | 38 | 51 Cephei, S. P. | S. | . | . | 48.5 | 3.5 | 25.0 | 41.0 | 57.0 | . | . | 42 23.29 | - 3.01 | . | -41.02 | 6 41 39.26 | - 0.38 |
| | 39 | β Lyre | S. | . | 9.8 | 12.3 | 14.7 | 17.2 | 19.6 | 24.5 | 26.4 | 29.3 | 46 14.72 | - 0.67 | -41.09 | -41.02 | 18 45 33.03 | + 0.01 |
| | 40 | B. A. C. 6495 | S. | 30.7 | 34.0 | 36.0 | 43.8 | 46.3 | 49.0 | 56.8 | 58.8 | 2.3 | 55 46.41 | - 0.64 | . | -41.03 | 18 55 4.74 | - 2.81 |
| | 41 | Anonymous | S. | . | . | 39.5 | 12.0 | 44.2 | 46.3 | 48.8 | . | . | 30 44.14 | - 1.04 | . | -41.06 | 19 30 2.04 | - 3.90 |
| | 42 | Anonymous | S. | . | . | 30.0 | 32.5 | 34.9 | 37.5 | 39.7 | . | . | 31 34.90 | - 1.04 | . | -41.06 | 19 30 52.80 | - 3.90 |
| | 43 | Thetis | S. | 4.2 | 6.9 | 8.8 | 15.2 | 17.4 | 19.6 | 26.0 | 27.9 | 30.4 | 38 17.38 | - 0.99 | . | -41.07 | 19 37 35.32 | . |
| | 44 | O. Arg. S. 2573 | S. | 28.4 | 31.4 | 32.9 | 39.6 | 41.9 | 44.1 | 51.0 | 52.7 | 55.5 | 25 41.94 | - 1.03 | . | -41.10 | 20 24 59.81 | - 3.86 |
| | 45 | B. A. C. 7237 | S. | 17.0 | 19.9 | 21.7 | 28.5 | 30.6 | 32.8 | 39.3 | 41.1 | 44.0 | 46 30.54 | - 1.02 | . | -41.12 | 20 45 48.40 | - 3.80 |
| | 46 | Fides | S. | 43.0 | 45.9 | 47.6 | 54.9 | 56.5 | 58.5 | 5.0 | 6.7 | 9.6 | 56 56.31 | - 1.00 | . | -41.13 | 20 56 14.18 | . |
| | 47 | ζ Cygni | S. | 10.2 | 13.0 | 14.9 | 21.8 | 24.1 | 26.5 | 33.4 | 35.2 | 38.2 | 8 24.14 | - 0.68 | -41.12 | -41.14 | 21 7 42.32 | - 0.01 |
| 24 | 48 | α Orionis | F. | . | 7.9 | 9.9 | 12.0 | 14.0 | 16.1 | 20.2 | 21.7 | 24.3 | 49 11.96 | - 0.83 | -42.68 | -42.68 | 5 48 28.45 | - 0.03 |
| | 49 | μ Geminorum | F. | . | 7.4 | 9.7 | 12.0 | 14.2 | 16.4 | . | . | . | 16 11.92 | - 0.68 | -42.70 | -42.69 | 6 15 28.55 | - 0.04 |

1, 12, 14, 41, 43, 46. Thread A used.

17. Telescope micrometer reading increased one revolution in reduction.

41. Bisections at threads II and V.

42. Thread B used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|----|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | | | | | | |
| 1 | 293 40 | 10 4.4 | 0.2 | 0 6 | 4.5 | 41 | .. | 370 | .. | 360 | .. | 63.3 | 66 14 54.8 | .. | + 2 5.8 | 117 23 21.8 | -11.3 | |
| 2 | 293 14 | 8.1 | 3.0 | 4.8 | 7.1 | 31 | .. | 820 | .. | 710 | .. | 63.3 | 66 41 4.6 | .. | + 2 8.5 | 117 49 34.3 | -10.0 | |
| 3 | 291 30 | 5.4 | 0.5 | 1.7 | 2.6 | 33 | .. | 170 | .. | 140 | .. | 63.3 | 68 25 22.6 | .. | + 2 20.0 | 119 34 3.8 | -9.3 | |
| 4 | 47 38 | 6.6 | 1.7 | 4.0 | 4.0 | 36 | .. | 142 | 150 | 130 | .. | 63.3 | 312 18 10.2 | .. | - 1 1.3 | 3 23 30.1 | -0.9 | |
| 5 | 312 44 | 7.0 | 2.1 | 3.0 | 5.8 | 37 | .. | .. | .. | 132 | 108 | 63.3 | 47 12 24.6 | .. | + 1 0.3 | 98 19 46.1 | -1.4 | |
| 6 | 359 42 | 11.0 | 6.8 | 7.7 | 9.0 | 33 | .. | 150 | .. | 135 | .. | 63.3 | 0 13 28.9 | 73.1 | + 0.2 | 51 19 50.3 | +0.6 | |
| 7 | 354 16 | 8.6 | 4.1 | 6.2 | 7.4 | 36 | .. | 686 | .. | 660 | .. | 63.3 | 5 40 20.9 | .. | + 5.6 | 56 46 47.7 | -0.3 | |
| 8 | 18 22 | 8.6 | 3.6 | 6.2 | 6.8 | 35 | .. | 940 | .. | 862 | .. | 63.3 | 341 34 9.1 | .. | - 18.6 | 32 40 11.7 | +0.6 | |
| 9 | 8 54 | 4.7 | 29.4 | 1.7 | 0.5 | 36 | 422 | 422 | .. | .. | .. | 63.3 | 351 2 11.7 | 73.0 | - 8.8 | 42 8 24.1 | +0.7 | |
| 10 | 334 44 | 4.8 | 29.3 | 0.2 | 4.0 | 37 | .. | .. | .. | 974 | 950 | 63.3 | 25 12 21.6 | 73.0 | + 26.3 | 76 19 9.1 | -0.1 | |
| 11 | 301 54 | 3.6 | 28.1 | 29.8 | 1.2 | 37 | 600 | 576 | .. | .. | .. | 63.3 | 58 2 27.8 | .. | + 1 29.4 | 109 10 18.4 | +2.0 | |
| 12 | 290 46 | 8.5 | 3.5 | 5.1 | 7.7 | 34 | .. | .. | .. | 866 | 916 | 63.3 | 69 7 20.2 | .. | + 2 25.5 | 120 16 6.9 | -4.3 | |
| 13 | 331 56 | 4.4 | 29.8 | 0.3 | 3.4 | 35 | 994 | 984 | .. | .. | .. | 63.3 | 23 0 5.0 | .. | + 20.8 | 79 6 56.0 | -0.6 | |
| 14 | 289 10 | 5.8 | 29.8 | 2.7 | 5.7 | 36 | .. | 784 | .. | 790 | .. | 63.3 | 70 43 45.7 | .. | + 2 38.8 | 121 52 45.7 | -6.6 | |
| 15 | 1 44 | 9.8 | 3.5 | 5.5 | 6.9 | 36 | .. | 124 | .. | 034 | .. | 63.3 | 358 12 11.7 | .. | - 1.8 | 49 18 31.1 | +0.3 | |
| 16 | 189 6 | 8.7 | 5.5 | 6.3 | 7.2 | 34 | 300 | 312 | .. | .. | .. | 63.3 | 170 49 43.7 | .. | - 9.1 | 60 16 46.6 | -0.5 | |
| 17 | 350 46 | 2.8 | 25.8 | 27.6 | 29.0 | 35 | .. | .. | .. | .. | 774 | 63.3 | 9 10 15.8 | 71.0 | + 9.1 | 60 16 46.1 | -1.0 | |
| 18 | 312 42 | 4.0 | 2.2 | 2.7 | 5.9 | 32 | .. | 080 | .. | 070 | .. | 63.9 | 47 13 8.0 | 77.6 | + 59.8 | 98 20 29.0 | -0.8 | |
| 19 | 349 32 | 2.5 | 28.9 | 2.0 | 2.2 | 32 | .. | .. | .. | 720 | 760 | 63.9 | 10 23 17.0 | .. | + 10.2 | 61 29 48.4 | -1.0 | |
| 20 | 320 40 | 0.2 | 27.9 | 27.8 | 0.0 | 36 | .. | 580 | .. | 420 | .. | 63.9 | 39 16 11.0 | .. | + 45.2 | 90 23 17.4 | -1.5 | |
| 21 | 319 46 | 3.9 | 0.0 | 2.0 | 2.6 | 33 | .. | 870 | .. | 860 | .. | 63.9 | 40 9 33.8 | .. | + 46.7 | 91 16 41.7 | -1.5 | |
| 22 | 328 26 | 3.5 | 0.7 | 1.1 | 2.0 | 35 | .. | 280 | .. | 260 | .. | 63.9 | 31 29 55.1 | .. | + 33.9 | 82 36 50.2 | -1.7 | |
| 23 | 343 44 | 1.9 | 28.9 | 29.5 | 0.2 | 36 | .. | 400 | .. | 360 | .. | 63.9 | 16 12 10.5 | .. | + 15.9 | 67 18 47.6 | .. | |
| 24 | 337 8 | 4.8 | 3.0 | 3.3 | 4.8 | 35 | .. | 120 | .. | 020 | .. | 63.9 | 22 47 54.2 | .. | + 23.0 | 73 54 38.4 | .. | |
| 25 | 340 54 | 4.8 | 2.0 | 3.5 | 4.5 | 31 | .. | 870 | .. | .. | .. | 63.9 | 19 1 4.7 | .. | + 18.8 | 70 7 44.7 | .. | |
| 26 | 341 26 | 4.3 | 0.3 | 1.8 | 3.9 | 33 | .. | .. | .. | 770 | 800 | 63.9 | 18 29 33.8 | 87.3 | + 18.1 | 69 36 13.1 | .. | |
| 27 | 303 34 | 5.8 | 3.0 | 4.7 | 6.9 | 35 | .. | 420 | .. | 320 | .. | 63.8 | 56 21 59.7 | .. | + 1 22.1 | 107 29 43.0 | .. | |
| 28 | 303 34 | 5.8 | 3.0 | 4.7 | 6.9 | 32 | 895 | .. | .. | .. | 755 | 63.8 | 56 21 20.6 | .. | + 1 22.1 | 107 29 3.9 | .. | |
| 29 | 348 10 | 4.3 | 29.8 | 0.4 | 2.5 | 33 | .. | 560 | .. | 570 | .. | 63.8 | 11 45 29.0 | 81.8 | + 11.4 | 62 52 1.6 | -0.7 | |
| 30 | 327 52 | 5.0 | 0.6 | 1.8 | 4.9 | 36 | .. | 100 | .. | 015 | .. | 63.8 | 32 4 8.4 | .. | + 34.4 | 83 11 4.0 | -1.6 | |
| 31 | 325 54 | 7.0 | 3.2 | 3.5 | 5.4 | 35 | .. | 470 | .. | 400 | .. | 63.8 | 34 2 0.5 | .. | + 37.0 | 85 8 58.7 | -0.7 | |
| 32 | 291 26 | 6.8 | 3.9 | 5.9 | 7.2 | 33 | .. | .. | .. | 530 | 520 | 63.8 | 68 29 32.9 | .. | + 2 18.1 | 119 38 12.2 | -19.2 | |
| 33 | 291 26 | 6.8 | 3.9 | 5.9 | 7.2 | 30 | .. | 770 | .. | 730 | .. | 63.8 | 68 28 49.7 | .. | + 2 18.1 | 119 37 29.0 | -19.1 | |
| 34 | 344 52 | 7.9 | 5.8 | 5.9 | 6.7 | 36 | 980 | 980 | .. | .. | .. | 63.8 | 15 4 25.4 | .. | + 14.8 | 66 11 1.4 | -3.1 | |
| 35 | 47 38 | 7.8 | 2.8 | 5.4 | 4.2 | 36 | .. | 600 | 930 | 000 | .. | 63.8 | 312 8 9.1 | .. | - 1 0.7 | 3 23 29.6 | -1.2 | |
| 36 | 32 28 | 6.5 | 1.6 | 2.7 | 2.3 | 30 | .. | 840 | .. | 870 | .. | 63.8 | 327 26 49.8 | .. | - 35.3 | 18 32 35.7 | +1.2 | |
| 37 | 359 42 | 8.4 | 4.6 | 5.9 | 6.4 | 33 | .. | 170 | .. | 130 | .. | 63.8 | 0 13 27.3 | .. | + 0.2 | 51 19 48.7 | -0.7 | |
| 38 | 53 46 | 7.2 | 2.3 | 4.8 | 3.8 | 31 | 290 | .. | 130 | .. | 240 | 63.8 | 306 8 55.6 | .. | - 1 15.6 | 357 14 1.2 | 0.0 | |
| 39 | 354 16 | 7.8 | 4.7 | 6.1 | 5.7 | 36 | .. | .. | .. | 630 | 610 | 63.8 | 5 40 21.0 | .. | + 5.5 | 56 46 47.7 | 0.0 | |
| 40 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 41 | 294 30 | .. | 1.2 | 1.8 | 3.3 | 33 | .. | 610 | .. | 330 | .. | 63.8 | 65 22 54.0 | 75.0 | + 2 0.3 | 116 31 15.5 | -0.6 | |
| 42 | 294 30 | .. | 1.2 | 1.8 | 3.3 | 41 | .. | .. | .. | 390 | 380 | 63.8 | 65 30 1.9 | .. | + 2 1.0 | 116 38 24.1 | -0.5 | |
| 43 | 301 6 | 6.3 | 1.3 | 3.6 | 5.0 | 38 | .. | 090 | .. | 130 | .. | 63.8 | 58 48 7.1 | .. | + 1 31.3 | 109 55 59.6 | -6.3 | |
| 44 | 295 48 | 8.3 | 4.4 | 6.4 | 8.0 | 38 | 790 | 790 | .. | .. | .. | 63.8 | 64 8 52.8 | .. | + 1 54.0 | 115 17 8.0 | +5.2 | |
| 45 | 296 50 | 2.5 | 29.6 | 0.0 | 1.0 | 37 | .. | 540 | .. | 620 | .. | 63.8 | 63 6 29.2 | 74.0 | + 1 49.0 | 114 14 39.4 | +7.3 | |
| 46 | 299 16 | 4.0 | 29.9 | 3.0 | 3.2 | 35 | .. | 220 | .. | 220 | .. | 63.8 | 60 37 21.3 | .. | + 1 38.2 | 111 45 20.7 | -4.3 | |
| 47 | 350 46 | 5.6 | 0.7 | 2.0 | 3.2 | 36 | 590 | 610 | .. | .. | .. | 63.8 | 9 10 15.9 | .. | + 9.0 | 60 16 46.1 | -0.7 | |
| 48 | 328 26 | 9 25.7 | 18.3 | 22.0 | 24.7 | 35 | .. | .. | .. | 678 | 658 | 65.0 | 31 29 54.0 | 73.4 | + 34.2 | 82 36 49.4 | -2.2 | |
| 49 | 343 38 | 28.0 | 19.8 | 24.1 | 27.2 | 38 | .. | .. | .. | 606 | 526 | 65.0 | 16 18 40.6 | .. | + 16.3 | 67 25 18.1 | -2.0 | |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | ' " | ' " | ' " | ' " |
| 6 | 30.14 | 76.0 | 23 | - 2.1 | .. | - 0.1 | - 2.2 |
| 9 | 30.15 | 75.0 | 24 | - 11.3 | + 28.4 | .. | + 17.1 |
| 10 | 30.15 | 75.0 | 25 | - 2.8 | - 15 45.8 | .. | - 15 48.6 |
| 17 | 30.13 | 73.0 | 26 | - 2.8 | + 15 45.8 | .. | + 15 43.0 |
| 18 | 30.15 | 77.0 | 27 | - 1.5 | - 19.6 | .. | - 21.1 |
| 26 | 30.14 | 85.1 | 28 | - 1.5 | + 19.6 | .. | + 18.1 |
| 29 | 30.04 | 83.0 | | | | | |
| 41 | 29.99 | 77.0 | | | | | |
| 45 | 29.97 | 76.0 | | | | | |
| 48 | 30.12 | 71.2 | | | | | |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. | | |
|---------|---------|----------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|--------------|---------|----------------|---------------------------|-------------|--------|----------------------------|------|--|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | m. | | s. | |
| 1876. | | | | | | | | | | | m. | s. | s. | s. | s. | | | | | | |
| July 24 | 1 | Geminorum . . . | F. | 4.5 | 7.0 | 8.6 | 15.1 | 17.1 | 19.4 | 25.7 | 27.3 | 30.0 | 31 17.19 | - 0.74 | -42.62 | -42.69 | 6 30 33.76 | - 0.10 | | | |
| | 2 | Canis Majoris . . | F. | 12.3 | 14.0 | 16.5 | 22.9 | 25.0 | 27.2 | 33.6 | 35.1 | 37.8 | 40 25.03 | - 1.08 | -42.75 | -42.70 | 6 39 41.25 | - 0.03 | | | |
| | 3 | Canis Majoris . . | F. | .. | .. | .. | 26.8 | 29.2 | 31.5 | 35.5 | .. | 43.0 | 54 29.12 | - 1.24 | -42.72 | -42.70 | 6 53 45.18 | - 0.03 | | | |
| | 4 | Venus II, N. . . | F. | 3.8 | 5.4 | 9.6 | 11.7 | 13.8 | 16.0 | 18.1 | 22.2 | 23.7 | 7 13.81 | - 0.74 | .. | -42.71 | 7 6 30.36 | - 1.92 | | | |
| | 5 | Venus S. | F. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | | | |
| | 6 | β Geminorum (R.) . | F. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | | | |
| | 7 | β Geminorum . . . | F. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | | | |
| 25 | 8 | Sun I, N. | F. | 38.2 | 41.0 | 42.6 | 49.0 | 51.3 | 53.6 | 50.0 | 1.5 | 4.3 | 20 51.28 | - 0.71 | .. | -42.73 | 8 20 7.84 | .. | | | |
| | 9 | Sun II, S. | F. | 52.6 | 55.3 | 57.0 | 3.6 | 5.7 | 7.7 | 14.4 | 16.0 | 18.7 | 23 5.67 | - 0.71 | .. | -42.73 | 8 22 22.23 | .. | | | |
| | 10 | γ Geminorum . . . | S. | 4.8 | 7.5 | 9.0 | 15.4 | 17.4 | 19.8 | 26.2 | 27.8 | 30.3 | 31 17.58 | - 0.73 | -43.00 | -43.07 | 6 30 33.78 | - 0.10 | | | |
| | 11 | α Canis Majoris . . | S. | 12.5 | 15.3 | 17.0 | 23.3 | 25.3 | 27.5 | 33.9 | 35.6 | 38.3 | 40 25.41 | - 1.05 | -43.14 | -43.07 | 6 39 41.29 | - 0.01 | | | |
| | 12 | Venus II, N. . . . | S. | 25.0 | 27.0 | 29.3 | 35.9 | 37.8 | 40.1 | 46.5 | 48.0 | 50.6 | 5 37.90 | - 0.73 | .. | -43.07 | 7 4 54.10 | - 1.89 | | | |
| 26 | 13 | Sun I, S. | S. | 35.3 | 38.0 | 39.7 | 46.2 | 48.3 | 50.5 | 57.0 | 58.6 | 1.5 | 24 48.34 | - 0.70 | .. | -43.03 | 8 24 4.56 | .. | | | |
| | 14 | Sun II, N. | S. | 49.4 | 52.3 | 53.8 | 0.2 | 2.4 | 4.8 | 11.0 | 12.6 | 15.5 | 27 2.44 | - 0.70 | .. | -43.08 | 8 26 18.66 | .. | | | |
| | 15 | Moon I, N. | S. | 31.7 | 34.0 | 35.9 | 42.0 | 44.2 | 46.2 | 52.7 | 54.3 | 56.9 | 8 44.17 | - 1.07 | .. | -43.09 | 13 8 0.01 | +65.12 | | | |
| | 16 | Polaris, S. P. . . | S. | 55.5 | 8.0 | 3.0 | 11.0 | .. | .. | .. | .. | .. | 14 14.50 | - 11.73 | .. | -43.09 | 1 13 19.68 | - 3.99 | | | |
| | 17 | ζ Virginis | S. | 50.0 | 58.7 | 0.2 | 6.3 | 8.3 | 10.4 | 16.5 | 18.0 | 20.6 | 29 8.33 | - 0.90 | -43.10 | -43.09 | 13 28 24.28 | - 0.01 | | | |
| | 18 | η Ursæ Majoris . . | S. | 5.7 | 9.8 | 12.0 | 21.6 | 24.9 | 28.0 | 37.5 | 40.0 | 43.7 | 43 24.80 | - 0.52 | .. | -43.09 | 13 42 41.19 | + 0.04 | | | |
| | 19 | η Bootis | S. | 19.7 | 22.4 | 24.0 | 30.4 | 32.6 | 34.8 | 41.3 | 42.8 | 45.5 | 49 32.61 | - 0.51 | -43.03 | -43.09 | 13 48 48.71 | - 0.06 | | | |
| | 20 | Jupiter I, S. . . . | S. | 38.9 | 41.5 | 43.3 | .. | .. | .. | 0.2 | 1.9 | 4.0 | 20 51.75 | - 1.12 | .. | -43.09 | 15 20 7.54 | .. | | | |
| | 21 | Jupiter II, N. . . . | S. | .. | .. | .. | 50.2 | 52.3 | 54.5 | 56.6 | 58.8 | .. | 20 54.47 | - 1.12 | .. | -43.09 | 15 20 10.26 | .. | | | |
| | 22 | α Coronæ Borealis . | S. | 58.7 | 1.6 | 3.3 | 10.1 | 12.4 | 14.7 | 21.6 | 23.4 | 26.2 | 30 12.44 | - 0.74 | -43.09 | -43.10 | 15 29 28.60 | + 0.01 | | | |
| | 23 | α Serpentis | S. | 43.8 | 46.3 | 48.0 | 54.0 | 56.1 | 58.1 | 4.3 | 5.8 | 8.5 | 38 56.10 | - 0.9 | -43.11 | -43.10 | 15 38 12.10 | + 0.03 | | | |
| | 24 | ε Serpentis | S. | 12.4 | 14.0 | 16.4 | 22.6 | 24.7 | 26.8 | 32.8 | 34.3 | 37.0 | 45 21.66 | - 0.92 | -43.10 | -43.10 | 15 44 40.64 | 0.00 | | | |
| | 25 | B. A. C. 5395 . . . | S. | 57.3 | 0.1 | 1.7 | 8.2 | 10.4 | 12.7 | 19.0 | 20.8 | 23.5 | 7 10.41 | - 1.15 | .. | -43.10 | 16 6 20.16 | - 2.84 | | | |
| | 26 | δ Ursæ Minoris . . | S. | .. | .. | .. | 55.5 | 30.0 | 3 | 39.5 | 15.0 | .. | 13 4.36 | + 4.03 | .. | -43.18 | 18 12 25.21 | - 1.41 | | | |
| | 27 | XVIII, 18 | S. | 10.7 | 11.0 | 15.9 | 22.9 | 25.5 | 27.9 | 35.0 | 36.8 | 39.8 | 37 25.39 | - 1.27 | .. | -43.19 | 18 36 40.93 | - 3.96 | | | |
| | 28 | B. A. C. 6422 . . . | S. | 55.6 | 58.6 | 0.2 | 7.0 | 9.3 | 11.8 | 18.5 | 20.5 | 23.2 | 46 9.41 | - 1.21 | .. | -43.19 | 18 45 25.01 | - 3.86 | | | |
| | 29 | Aglaia | S. | 57.2 | 59.9 | 2.0 | 8.9 | 11.4 | 13.7 | 20.8 | 22.8 | 25.3 | 12 11.33 | - 1.24 | .. | -43.20 | 19 11 26.89 | .. | | | |
| | 30 | γ Aquilæ | S. | 50.7 | 59.2 | 0.8 | 7.0 | 9.1 | 11.2 | 17.5 | 18.9 | 21.5 | 41 9.10 | - 0.85 | -43.26 | -43.20 | 19 10 25.05 | + 0.09 | | | |
| | 31 | α Aquilæ | S. | 18.8 | 21.4 | 22.9 | 29.2 | 31.2 | 33.3 | 39.5 | 40.9 | 43.4 | 45 31.18 | - 0.87 | -43.15 | -43.21 | 19 44 47.10 | - 0.02 | | | |
| | 32 | μ Geminorum . . . | P. | 59.7 | 2.3 | 4.0 | 10.7 | 12.9 | 15.0 | 21.7 | 23.4 | 26.0 | 16 12.86 | - 0.73 | -43.53 | -43.64 | 6 15 28.49 | - 0.15 | | | |
| | 33 | γ Geminorum . . . | P. | 5.5 | 9.8 | 14.0 | 16.2 | 18.3 | 20.5 | 22.5 | 26.9 | 31.2 | 31 18.32 | - 0.79 | -43.65 | -43.65 | 6 30 33.88 | - 0.03 | | | |
| | 34 | B. A. C. 2194 . . . | P. | 49.9 | 52.9 | 54.5 | 59.0 | 3.7 | 8.0 | 12.5 | 14.2 | 17.0 | 37 3.52 | - 0.71 | .. | -43.65 | 6 36 19.16 | - 1.06 | | | |
| | 35 | α Canis Majoris . . | P. | .. | 16.0 | 21.8 | .. | .. | .. | 34.6 | 36.2 | 38.9 | 40 26.12 | - 1.12 | -43.76 | -43.65 | 6 39 41.35 | + 0.03 | | | |
| | 36 | α Canis Minoris . . | P. | .. | .. | .. | 34.0 | 36.0 | 38.0 | 42.0 | 43.6 | 46.0 | 33 33.86 | - 0.90 | -43.70 | -43.66 | 7 32 49.30 | - 0.12 | | | |
| | 37 | Mercury II, C. . . | P. | 20.0 | 22.9 | 29.0 | .. | .. | 33.5 | 35.7 | 38.0 | .. | 46.8 | - 0.74 | .. | -43.67 | 7 50 49.05 | - 0.20 | | | |
| 27 | 38 | Sun I, S. | P. | 31.9 | 34.8 | 36.3 | 43.0 | 45.0 | 47.1 | 53.7 | 55.2 | 58.0 | 28 45.00 | - 0.78 | .. | -43.68 | 8 28 0.54 | .. | | | |
| | 39 | Sun II | P. | .. | .. | .. | .. | .. | .. | 0.8 | 3.0 | 7.4 | 9.0 | 11.6 | 30 58.63 | - 0.78 | .. | -43.68 | 8 30 14.22 | .. | |
| | 40 | γ Leonis | P. | 40.6 | 45.0 | 49.3 | 51.6 | 54.0 | 55.8 | 2.2 | 3.8 | .. | 13 53.66 | - 0.77 | -43.78 | -43.71 | 10 13 9.18 | + 0.05 | | | |
| | 41 | δ Leonis | P. | 3.3 | 6.0 | 7.8 | 14.2 | 16.4 | 18.6 | 25.2 | 26.9 | 29.6 | 8 16.44 | - 0.77 | -43.72 | -43.73 | 11 7 31.91 | - 0.07 | | | |
| | 42 | Moon I, N. | P. | 20.6 | 23.3 | 24.9 | 31.5 | 33.6 | 35.8 | 42.4 | 44.0 | 46.7 | 57 33.64 | - 1.11 | .. | -43.78 | 13 56 48.75 | +65.66 | | | |
| | 43 | α Bootis (R.) . . . | P. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 57.0 | 59.9 | 10 46.81 | - 0.76 | -43.78 | -43.78 | 14 10 2.27 | 0.00 | |
| | 44 | α Bootis | P. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | | | |
| | 45 | θ Bootis | P. | 24.7 | 28.9 | 31.4 | 41.5 | 44.7 | 48.1 | 58.2 | 0.6 | 4.9 | 21 44.78 | - 0.36 | .. | -43.78 | 14 21 0.64 | + 0.12 | | | |
| | 46 | 5 Ursæ Minoris . . | P. | 42.5 | 53.9 | 59.4 | 25.0 | 33.8 | 42.3 | 8.0 | 14.5 | 25.3 | 28 33.76 | + 0.64 | .. | -43.78 | 14 27 50.62 | - 0.15 | | | |
| | 47 | ε Bootis | P. | 6.9 | 9.8 | 11.6 | .. | .. | .. | 29.9 | 31.7 | 34.6 | 40 20.77 | - 0.68 | .. | -43.79 | 14 39 36.30 | - 2.10 | | | |
| | 48 | ε Bootis | P. | .. | .. | .. | 16.5 | 18.6 | 20.9 | 23.2 | 25.5 | .. | 40 20.86 | - 0.68 | -43.78 | -43.79 | 14 39 36.39 | - 0.03 | | | |
| | 49 | α Libra | P. | 35.6 | 38.3 | 39.8 | 46.3 | 48.3 | 50.4 | 56.8 | 58.4 | 1.0 | 44 48.32 | - 1.11 | -43.79 | -43.79 | 14 44 3.42 | - 0.01 | | | |
| | 50 | β Bootis | P. | 46.9 | 50.2 | 52.3 | 0.3 | 3.0 | 5.7 | 13.9 | 15.9 | 19.3 | 58 3.06 | - 0.53 | .. | -43.79 | 14 57 18.74 | + 0.07 | | | |

15, 16, 46. Bisections at sets B and D.

15, 19, 25. Thread B used.

29. Bisections at threads V and VI.

29. Thread A used.

42. Bisections at threads II-VI; setting reduced for 304° 50'.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | ° ' " | ° ' " | " " | " " | " " | | | | | | | " | ° ' " | ° | ' " | ° ' " | " | |
| 1 | 337 34 | 10 1.4 | 21.3 | 27.3 | 29.2 | 39 | .. | .. | .. | 402 | 326 | 65.0 | 22 22 55.3 | .. | + | 22.9 | 73 29 39.4 | + 0.9 |
| 2 | 304 30 | 1.7 | 24.4 | 29.7 | 4.2 | 31 | .. | .. | .. | 554 | 584 | 65.0 | 55 24 58.4 | .. | + | 1 20.3 | 106 32 39.9 | - 0.3 |
| 3 | 292 16 | 9 28.6 | 22.0 | 27.1 | 0.1 | 33 | .. | 738 | .. | 760 | .. | 65.0 | 67 39 27.9 | 77.5 | + | 2 13.9 | 118 48 3.0 | - 0.9 |
| 4 | 337 4 | 10 4.4 | 28.2 | 1.1 | 3.7 | 36 | 615 | .. | .. | .. | 575 | 65.0 | 22 52 16.7 | .. | + | 23.4 | 73 59 1.3 | .. |
| 5 | 337 4 | 4.4 | 28.2 | 1.1 | 3.7 | 40 | .. | 108 | .. | 072 | .. | 65.0 | 22 53 10.1 | .. | + | 23.4 | 73 59 54.7 | .. |
| 6 | 190 30 | 2.5 | 28.6 | 1.7 | 1.3 | 35 | 910 | 888 | .. | .. | .. | 65.0 | 169 26 4.0 | .. | - | 10.3 | 61 40 27.5 | - 0.2 |
| 7 | 349 22 | 3.0 | 22 5 | 27.6 | 0.3 | 35 | .. | .. | .. | 382 | 358 | 65.0 | 10 33 55.3 | .. | + | 10.3 | 61 40 26.8 | - 0.9 |
| 8 | 340 48 | 9 26.1 | 22.0 | 28.2 | 0.0 | 34 | 530 | 500 | .. | .. | .. | 65.0 | 19 7 39.1 | .. | + | 19.1 | 70 14 19.4 | .. |
| 9 | 340 16 | 29.6 | 24.6 | 28.2 | 29.8 | 32 | .. | .. | .. | 602 | 576 | 65.0 | 19 39 12.1 | 81.0 | + | 19.6 | 70 45 52.9 | .. |
| 10 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 11 | 304 30 | 26.4 | 22.9 | 25 4 | 24.1 | 31 | .. | 810 | .. | 910 | .. | 65.0 | 55 24 56.7 | 74.2 | + | 1 20.9 | 106 32 38.8 | - 1.2 |
| 12 | 337 2 | 29.6 | 26.3 | 26.8 | 26.2 | 31 | .. | 830 | .. | 920 | .. | 65.0 | 22 52 59.7 | .. | + | 23.6 | 73 59 44.5 | .. |
| 13 | 340 4 | 10 2.4 | 27.2 | 28.4 | 2.0 | 37 | 880 | 860 | .. | .. | .. | 65.0 | 19 52 33.8 | .. | + | 20.1 | 70 59 15.1 | .. |
| 14 | 340 36 | 3.0 | 27.0 | 29.0 | 0.9 | 39 | .. | .. | .. | 690 | 600 | 65.0 | 19 21 2.0 | 78.3 | + | 19.5 | 70 27 42.7 | .. |
| 15 | 310 36 | 4.1 | 0.6 | 2.3 | 6.0 | 31 | 960 | .. | 020 | .. | 260 | 64.1 | 49 21 40.3 | .. | + | 1 4.3 | 100 29 5.8 | .. |
| 16 | 52 22 | 4.1 | 29.5 | 3.6 | 2.6 | 34 | 300 | 180 | .. | .. | .. | 64.1 | 307 33 37.5 | 80.0 | - | 1 11.8 | 358 38 46.9 | - 1.7 |
| 17 | 321 *6 | 8.2 | 4.5 | 6.6 | 9.6 | 38 | .. | 150 | .. | 085 | .. | 64.1 | 38 50 44.3 | .. | + | 44.5 | 89 57 50.0 | + 0.2 |
| 18 | 10 58 | 5.7 | 2.4 | 5.5 | 7.5 | 34 | .. | 660 | .. | 575 | .. | 64.1 | 348 57 49.2 | .. | - | 10.8 | 40 3 59.6 | + 0.2 |
| 19 | 340 6 | 3.0 | 0.3 | 2.1 | 5.1 | 34 | .. | 182 | .. | 140 | .. | 64.1 | 19 52 11.6 | .. | + | 20.0 | 70 58 52.8 | + 1.5 |
| 20 | 303 32 | 5.6 | 2.4 | 4.8 | 5.6 | 35 | .. | 415 | .. | 330 | .. | 64.1 | 56 23 59.6 | .. | + | 1 23.4 | 107 31 44.2 | .. |
| 21 | 303 32 | 5.6 | 2.4 | 4.8 | 5.6 | 33 | 000 | .. | .. | .. | 870 | 64.1 | 56 23 22.2 | .. | + | 1 23.4 | 107 31 6.8 | .. |
| 22 | 348 10 | 1.5 | 26.2 | 28.2 | 29.2 | 33 | .. | 780 | .. | 760 | .. | 64.1 | 11 45 29.5 | .. | + | 11.6 | 62 52 2.3 | + 0.4 |
| 23 | 327 52 | 5.3 | 1.5 | 2.8 | 5.0 | 36 | .. | 040 | .. | 020 | .. | 64.1 | 32 4 8.8 | .. | + | 34.9 | 83 11 4.9 | - 0.3 |
| 24 | 325 54 | 7.5 | 4.4 | 4.2 | 8.0 | 35 | .. | 380 | .. | 280 | .. | 64.1 | 34 2 0.5 | .. | + | 37.6 | 85 8 59.3 | + 0.2 |
| 25 | 300 0 | 3.7 | 28.0 | 1.9 | 4.7 | 30 | 370 | 260 | .. | .. | .. | 64.1 | 59 57 11.1 | .. | + | 1 37.2 | 111 5 9.5 | - 15.8 |
| 26 | 47 38 | 6.6 | 2.2 | 0.5 | 2.5 | 36 | 020 | .. | 950 | .. | 030 | 64.1 | 312 18 7.7 | .. | - | 1 2.3 | 3 23 26.6 | - 3.2 |
| 27 | 289 34 | 6.0 | 2.0 | 4.3 | 4.5 | 37 | .. | 980 | .. | 010 | .. | 64.1 | 70 22 23.9 | 66.0 | + | 2 38.0 | 121 31 23.1 | - 6.9 |
| 28 | 293 10 | 4.8 | 0.3 | 2.2 | 3.4 | 34 | .. | 780 | .. | 660 | .. | 64.1 | 66 45 47.6 | .. | + | 2 11.6 | 117 54 20.4 | - 5.4 |
| 29 | 290 48 | 9.5 | 5.6 | 7.1 | 7.5 | 36 | .. | .. | .. | 420 | 370 | 64.1 | 69 5 45.1 | .. | + | 2 27.9 | 120 14 34.2 | - 5.3 |
| 30 | 331 22 | 4.3 | 29.8 | 1.5 | 0.5 | 36 | .. | 880 | .. | 750 | .. | 64.1 | 28 34 18.8 | .. | + | 31.1 | 79 41 11.1 | - 1.0 |
| 31 | 329 36 | 7.9 | 4.3 | 5.6 | 4.6 | 37 | .. | 130 | .. | 030 | .. | 64.1 | 30 20 26.9 | 63.0 | + | 33.4 | 81 27 21.5 | - 3.0 |
| 32 | 343 38 | 9 27.3 | 23.4 | 25.0 | 24.5 | 38 | .. | .. | .. | 650 | 610 | 64.0 | 16 18 40.8 | 79.1 | + | 16.2 | 67 25 18.2 | - 1.9 |
| 33 | 337 34 | 10 0.5 | 27.3 | 0.1 | 28.0 | 39 | 310 | 315 | .. | 215 | 190 | 64.0 | 22 22 53.6 | .. | + | 22.8 | 73 29 37.6 | - 0.8 |
| 34 | 346 18 | 5.4 | 1.4 | 4.5 | 4.6 | 36 | .. | .. | .. | 110 | .. | 64.0 | 13 38 11.0 | .. | + | 13.4 | 64 44 45.6 | + 7.6 |
| 35 | 304 30 | 4.3 | 1.5 | 4.6 | 4.6 | 31 | 485 | 450 | .. | 365 | 340 | 64.0 | 55 24 57.8 | 80.3 | + | 1 20.1 | 106 32 39.1 | - 0.7 |
| 36 | 326 36 | 5.2 | 2.5 | 3.7 | 4.8 | 37 | 225 | 210 | .. | .. | .. | 64.0 | 33 20 26.5 | 82.5 | + | 36.2 | 84 27 23.9 | - 1.3 |
| 37 | 343 6 | 7.1 | 3.5 | 5.0 | 6.3 | 38 | 335 | 345 | .. | 310 | 250 | 64.0 | 16 50 45.6 | 83.4 | + | 16.6 | 67 57 23.4 | .. |
| 38 | 339 50 | 0.8 | 26.1 | 29.3 | 27.5 | 36 | 640 | 670 | .. | .. | .. | 64.0 | 20 6 12.7 | .. | + | 20.1 | 71 12 54.0 | .. |
| 39 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 83.3 | .. | .. | .. | .. |
| 40 | 341 30 | 6.6 | 3.7 | 4.5 | 6.4 | 32 | .. | 500 | .. | .. | .. | 64.0 | 18 25 15.7 | 85.2 | + | 18.2 | 69 31 55.1 | + 1.5 |
| 41 | 342 14 | 4.2 | 1.0 | 2.6 | 4.0 | 32 | .. | 435 | .. | 355 | .. | 64.0 | 17 41 12.4 | 85.4 | + | 17.5 | 68 47 51.1 | + 0.7 |
| 42 | 305 10 | 6.9 | 4.0 | 5.8 | 7.5 | 37 | 225 | 420 | 610 | 790 | 920 | 64.1 | 55 6 35.1 | 84.3 | + | 1 18.3 | 106 14 14.6 | .. |
| 43 | 199 0 | 7.9 | 6.3 | 6.6 | 3.2 | 36 | 625 | 620 | .. | .. | .. | 64.1 | 160 56 19.2 | .. | - | 19.0 | 70 10 21.0 | + 0.7 |
| 44 | 340 52 | 6.0 | 2.5 | 4.0 | 5.0 | 34 | .. | .. | .. | 095 | 085 | 64.1 | 19 3 40.8 | .. | + | 19.0 | 70 10 21.0 | + 0.7 |
| 45 | 13 28 | 8.5 | 5.7 | 8.5 | 8.0 | 36 | .. | 575 | .. | 485 | .. | 64.1 | 346 28 20.9 | .. | - | 13.2 | 37 34 28.9 | + 0.6 |
| 46 | 37 16 | 9.5 | 4.2 | 6.3 | 7.5 | 32 | 965 | 955 | .. | 980 | 915 | 64.1 | 322 39 25.2 | 82.8 | - | 41.9 | 13 45 4.5 | - 2.4 |
| 47 | 348 38 | 9.8 | 5.9 | 6.0 | 8.9 | 33 | 585 | .. | .. | .. | 455 | 64.1 | 11 17 34.8 | .. | + | 11.0 | 62 24 7.0 | - 2.0 |
| 48 | 348 38 | 9.8 | 5.9 | 6.0 | 8.9 | 33 | .. | 755 | .. | 685 | .. | 64.1 | 11 17 37.6 | .. | + | 11.0 | 62 24 9.8 | + 1.0 |
| 49 | 305 32 | 9.8 | 6.0 | 7.5 | 10.5 | 35 | .. | .. | .. | 755 | 770 | 64.1 | 54 24 10.2 | .. | + | 1 16.7 | 105 31 48.1 | - 2.2 |
| 50 | 1 54 | 9 5 | 6.2 | 8.3 | 9.2 | 30 | .. | 625 | .. | 530 | .. | 64.1 | 358 0 50.2 | .. | - | 1.9 | 49 7 9.3 | + 0.4 |

* For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| 3 | 30.13 | 75.5 | | | | | |
| 9 | 30.11 | 78.5 | | | | | |
| 11 | 30.22 | 74.2 | 4 | - 11.0 | + 26.8 | .. | + 15.8 |
| 14 | 30.22 | 77.6 | 5 | - 11.0 | - 26.8 | + 0.2 | - 37.6 |
| 16 | 30.21 | 79.8 | 8 | - 2.8 | + 15 46.7 | .. | + 15 43.8 |
| 27 | 30.24 | 71.0 | 9 | - 2.9 | - 15 46.7 | .. | - 15 49.7 |
| 31 | 30.21 | 68.0 | 12 | - 10.9 | + 27.3 | .. | + 16.4 |
| 32 | 30.27 | 76.6 | 13 | - 2.9 | - 15 46.2 | .. | - 15 49.1 |
| 35 | 30.26 | 78.0 | 14 | - 2.9 | + 15 46.2 | .. | + 15 43.3 |
| 36 | 30.25 | 80.0 | 15 | - 42 56.6 | + 15 30.6 | .. | - 27 26.0 |
| 37 | 30.25 | 81.1 | 20 | - 1.5 | - 18.7 | .. | - 20.2 |
| 39 | 30.24 | 81.4 | 21 | - 1.5 | + 18.7 | .. | + 17.2 |
| 40 | 30.21 | 84.3 | 37 | - 2.0 | .. | - 0.1 | - 2.1 |
| 41 | 30.20 | 84.3 | 38 | - 3.0 | - 15 46.3 | .. | - 15 49.3 |
| 42 | 30.16 | 82.6 | 42 | - 45 45.2 | + 15 16.8 | .. | - 30 28.4 |
| 46 | 30.15 | 81.7 | | | | | |

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. | | | | |
|---------|---------|-------------------------------|-----------|--------------------------------|------|------|-------|------|------|------|-------|------|--------------|--------|----------------|---------------------------|----------------------------|----------------|-------|--------|--------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | | | Clock adopted. | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| 1876. | | | | | | | | | | | | m. | s. | s. | s. | s. | h. | m. | s. | s. | |
| July 27 | 1 | B. A. C. 5026 . . . | P. | 23.2 | 26.4 | 28.3 | 36.3 | 38.8 | 41.5 | 49.4 | 51.3 | 54.5 | 9 | 38.86 | - 0.55. | . | -43.79 | 15 | 8 | 54.52 | - 2.21 |
| | 2 | Librae . . . | P. | . | . | 3.1 | 5.2 | 7.3 | 9.4 | 11.4 | . | . | 11 | 7.27 | - 1.03 | -43.75 | -43.79 | 15 | 10 | 22.45 | - 0.04 |
| | 3 | Ursae Minoris (R.) . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 4 | Ursae Minoris . . . | P. | . | . | . | 42.0 | 48.9 | 55.8 | 9.2 | 14.0 | 22.4 | 21 | 42.20 | + 0.29 | . | -43.79 | 15 | 20 | 58.70 | - 0.04 |
| | 5 | B. A. C. 5316 . . . | P. | 0.8 | 4.7 | 7.2 | 16.7 | 19.9 | 23.0 | 32.7 | 35.0 | 39.0 | 56 | 19.89 | - 0.38 | . | -43.80 | 15 | 55 | 35.71 | - 2.36 |
| | 6 | B. A. C. 5341 . . . | P. | 21.9 | 26.2 | 28.7 | 39.0 | 42.4 | 45.8 | 56.0 | 58.5 | 2.8 | 59 | 42.37 | - 0.32 | . | -43.80 | 15 | 58 | 58.25 | - 2.38 |
| | 7 | B. A. C. 5395 . . . | P. | 57.8 | 0.5 | 2.2 | 8.7 | 10.4 | 13.2 | 19.7 | 21.4 | 24.0 | 7 | 10.93 | - 1.16 | . | -43.80 | 16 | 0 | 25.97 | - 2.83 |
| | 8 | Weisse 180 . . . | P. | 52.3 | 54.8 | 56.4 | 2.7 | 4.7 | 6.9 | 12.9 | 14.8 | 17.4 | 12 | 4.77 | - 1.06 | . | -43.80 | 16 | 11 | 19.91 | - 2.75 |
| | 9 | B. A. C. 5514 . . . | P. | 17.7 | 24.9 | 29.3 | 46.9 | 52.7 | 58.4 | 15.7 | 20.0 | 27.3 | 22 | 52.54 | + 0.17 | . | -43.80 | 16 | 22 | 8.91 | - 2.58 |
| | 10 | B. A. C. 5523 . . . | P. | 4.7 | 8.1 | 10.0 | 18.3 | 21.1 | 23.9 | 32.0 | 34.1 | 37.5 | 25 | 21.08 | - 0.50 | . | -43.80 | 16 | 24 | 36.78 | - 2.45 |
| | 11 | Ophiuchi . . . | P. | 55.1 | 57.8 | 59.3 | 5.6 | 7.6 | 9.7 | 15.9 | 17.3 | 20.0 | 31 | 7.59 | - 1.04 | -43.79 | -43.80 | 16 | 30 | 22.75 | - 0.01 |
| | 12 | XVI, 18 . . . | P. | 3.5 | 6.7 | 8.6 | 15.9 | 18.3 | 20.8 | 28.0 | 30.0 | 33.0 | 38 | 18.31 | - 1.35 | . | -43.81 | 16 | 37 | 33.15 | - 3.30 |
| | 13 | XVI, 19 . . . | P. | 13.9 | 16.6 | 18.2 | 24.7 | 26.8 | 29.0 | 35.4 | 37.1 | 39.8 | 40 | 26.83 | - 1.15 | . | -43.81 | 16 | 39 | 41.87 | - 3.03 |
| | 14 | XVI, 20 . . . | P. | . | 12.6 | 15.0 | 17.5 | . | 22.1 | 27.0 | 28.6 | 31.8 | 41 | 17.41 | - 1.30 | . | -43.81 | 16 | 40 | 32.30 | - 3.26 |
| | 15 | Anonymous . . . | P. | 22.8 | 25.4 | 27.1 | 33.9 | 36.1 | 38.4 | 45.0 | 46.7 | 49.6 | 51 | 36.11 | - 1.20 | . | -43.81 | 16 | 50 | 51.10 | - 3.18 |
| | 16 | O. Arg. S. 161831 . . | P. | 58.8 | 1.6 | 3.4 | . | . | . | 21.2 | 22.9 | 25.7 | 53 | 12.29 | - 1.20 | . | -43.81 | 16 | 52 | 27.28 | - 3.19 |
| | 17 | O. Arg. S. 161832 . . | P. | . | . | 8.3 | 10.5 | 12.7 | 14.8 | 17.2 | . | . | 53 | 12.68 | - 1.20 | . | -43.81 | 16 | 52 | 27.67 | - 3.19 |
| | 18 | B. A. C. 57851 . . . | P. | 11.8 | 16.0 | 18.8 | . | . | . | 47.0 | 49.7 | 54.0 | 3 | 32.91 | - 0.30 | . | -43.81 | 17 | 2 | 48.80 | - 2.56 |
| | 19 | B. A. C. 57852 . . . | P. | . | . | 25.9 | 29.4 | 32.9 | 36.5 | 40.0 | . | . | 3 | 32.92 | - 0.30 | . | -43.81 | 17 | 2 | 48.81 | - 2.56 |
| | 20 | a ¹ Hercules . . . | P. | 34.3 | 36.9 | 38.5 | . | . | . | 55.6 | 57.0 | 59.6 | 9 | 47.00 | - 0.79 | -43.83 | -43.81 | 17 | 9 | 2.40 | + 0.04 |
| | 21 | a ² Hercules . . . | P. | . | . | 43.0 | 45.3 | 47.4 | 49.5 | 51.6 | . | . | 9 | 47.35 | - 0.79 | . | -43.81 | 17 | 9 | 2.75 | - 2.74 |
| | 22 | Lalande 31762 . . . | P. | 25.0 | 28.2 | 30.0 | 35.2 | 37.7 | 40.2 | 42.8 | 45.4 | . | 20 | 40.28 | - 0.56 | . | -43.81 | 17 | 19 | 55.91 | - 2.62 |
| | 23 | B. A. C. 5895 . . . | P. | . | 51.3 | 53.9 | 56.5 | 59.0 | 1.7 | 6.8 | 8.7 | 11.9 | 20 | 59.50 | - 0.56 | . | -43.81 | 17 | 20 | 12.13 | - 2.62 |
| | 24 | XVII, 10 . . . | P. | 25.9 | 28.9 | 30.8 | 37.8 | 40.3 | 42.7 | 49.8 | 51.6 | 54.6 | 30 | 40.27 | - 1.30 | . | -43.81 | 17 | 29 | 55.16 | - 3.60 |
| | 25 | O. Arg. S. 17137 . . | P. | 34.5 | 37.4 | 39.0 | 46.2 | 48.4 | 50.6 | 57.7 | 59.3 | 2.3 | 37 | 48.38 | - 1.24 | . | -43.82 | 17 | 37 | 3.32 | - 3.54 |
| | 26 | O. Arg. S. 17166 . . | P. | 39.2 | 42.3 | 44.0 | 51.0 | 53.0 | 55.4 | 2.2 | 4.0 | 6.9 | 38 | 53.11 | - 1.24 | . | -43.82 | 17 | 38 | 8.05 | - 3.54 |
| | 27 | XVII, 18 . . . | P. | 23.1 | 26.5 | 28.5 | 36.3 | 39.0 | 41.7 | 49.5 | 51.5 | 54.9 | 41 | 39.00 | - 1.44 | . | -43.82 | 17 | 40 | 53.74 | - 3.94 |
| | 28 | Anonymous . . . | P. | 48.4 | 51.0 | 52.9 | . | . | . | 13.4 | 16.2 | 46 | 2.27 | - 1.27 | . | -43.82 | 17 | 45 | 17.18 | - 3.63 | |
| | 29 | Anonymous . . . | P. | . | 2.5 | 4.8 | 7.0 | 9.4 | 11.9 | . | . | . | 46 | 7.10 | - 1.27 | . | -43.82 | 17 | 45 | 22.01 | - 3.63 |
| | 30 | O. Arg. S. 17313 . . | P. | . | 32 | 33.4 | 536.9 | 39.3 | 41.7 | 46.3 | 47.0 | 51.0 | 46 | 36.93 | - 1.27 | . | -43.82 | 17 | 45 | 51.84 | - 3.63 |
| | 31 | Herschel and South 3791 . | P. | 26.8 | 29.5 | 31.3 | . | . | . | 49.0 | 50.0 | 53.3 | 55 | 40.10 | - 1.19 | . | -43.82 | 17 | 54 | 55.09 | - 3.52 |
| | 32 | Herschel and South 3792 . | P. | . | 36.0 | 38.4 | 40.5 | 42.7 | 45.0 | . | . | . | 55 | 40.50 | - 1.19 | . | -43.82 | 17 | 54 | 55.49 | - 3.52 |
| | 33 | B. A. C. 6184 . . . | P. | 14.7 | 19.4 | 22.0 | 33.2 | 36.8 | 40.4 | 51.4 | 54.1 | 58.8 | 8 | 30.76 | - 0.26 | . | -43.82 | 18 | 7 | 52.68 | - 2.70 |
| | 34 | Ursae Minoris . . . | P. | . | 46.5 | 55.8 | . | . | 5.1 | 14.1 | 23.0 | . | 13 | 5.03 | + 5.36 | . | -43.82 | 18 | 12 | 26.57 | + 0.19 |
| | 35 | O. Arg. S. 18436 . . | P. | 46.0 | 49.0 | 50.7 | 57.5 | 59.9 | 2.3 | 9.0 | 10.0 | 13.8 | 29 | 59.90 | - 1.26 | . | -43.82 | 18 | 29 | 14.82 | - 3.80 |
| | 36 | a Lyrae . . . | P. | 16.0 | 19.2 | 21.2 | 29.1 | 31.7 | 34.3 | 42.1 | 44.0 | 47.4 | 33 | 31.67 | - 0.54 | -43.93 | -43.82 | 18 | 32 | 47.31 | + 0.13 |
| | 37 | 51 Cephei, S. P. . . | P. | . | 57.4 | 14.7 | 33.7 | 59.5 | 8.6 | . | . | . | 42 | 33.27 | - 8.13 | . | -43.82 | 6 | 41 | 41.32 | + 0.53 |
| | 38 | β Lyrae . . . | P. | 2.8 | 5.9 | 7.7 | 15.0 | 17.4 | 20.0 | 27.1 | 29.6 | 32.0 | 46 | 17.43 | - 0.60 | -43.89 | -43.83 | 18 | 45 | 33.00 | + 0.09 |
| | 39 | B. A. C. 6469 . . . | P. | 54.0 | 3.3 | 9.0 | 31.0 | 35.5 | 45.6 | 7.7 | 13.4 | 22.5 | 49 | 38.33 | + 0.50 | . | -43.83 | 18 | 48 | 55.00 | - 3.11 |
| | 40 | B. A. C. 6514 . . . | P. | 8.0 | 17.5 | 23.0 | 45.5 | 52.7 | 0.2 | 22.2 | 27.6 | 36.8 | 56 | 52.61 | + 0.50 | . | -43.83 | 18 | 56 | 9.28 | - 3.12 |
| | 41 | δ Aquilae . . . | P. | 50.4 | 53.0 | 54.5 | 0.8 | 2.8 | 4.8 | 11.0 | 12.4 | 14.9 | 20 | 2.73 | - 0.89 | -43.86 | -43.83 | 19 | 19 | 18.01 | + 0.08 |
| | 42 | κ Aquilae (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 43 | κ Aquilae . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 44 | γ Aquilae . . . | P. | 57.3 | 59.8 | 1.4 | 7.6 | 9.7 | 11.8 | 18.0 | 19.5 | 22.0 | 41 | 9.68 | - 0.82 | -43.86 | -43.83 | 19 | 40 | 25.03 | + 0.06 |
| | 45 | α Aquilae . . . | P. | 19.3 | 22.0 | 23.5 | 29.7 | 31 | 83.3 | 9.0 | 41.0 | 14.2 | 45 | 31.78 | - 0.84 | -43.78 | -43.83 | 19 | 44 | 47.11 | - 0.01 |
| | 46 | ε Draconis (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 47 | ε Draconis . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| Aug. 4 | 48 | 51 Cephei, S. P. . . | P. | . | 8.3 | . | 41.2 | . | 16.8 | . | . | . | 42 | 41.77 | - 7.43 | . | . | . | . | . | |
| | 49 | δ Draconis (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 50 | δ Draconis . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |

3. Bisections at threads II and III.
4, 9, 49, 50. Bisections at sets B and D.
7, 22, 24, 30. Thread B used.
25, 26, 31, 32. Thread A used.
34. Bisections at threads B₃, C₁, C₃, C₅, and D₁.
46. Bisections at set C.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellan'us Corrections. | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|---------------------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | | |
| | | r. " | " | " | " | | | | | | | | | | | | | |
| 1 | 359 46 | 10 9.3 | 6.5 | 7.8 | 9.5 | 34 | 570 | 585 | .. | .. | .. | 64.1 | 0 9 50.8 | .. | + | 0.2 | 51 16 12.2 | + 0.5 |
| 2 | 312 8 | 10.5 | 7.5 | 8.5 | 12.1 | 36 | .. | .. | .. | 150 | 155 | 64.1 | 47 48 17.4 | .. | + | 1 0.8 | 98 55 39.4 | + 0.8 |
| 3 | 146 34 | 6.0 | 5.0 | 5.4 | 7.5 | 36 | 845 | 800 | .. | .. | .. | 64.1 | 213 22 22.1 | .. | + | 36.4 | 17 43 22.7 | - 1.4 |
| 4 | 33 18 | 9.6 | 4.6 | 6.0 | 7.9 | 33 | .. | .. | .. | 895 | 880 | 64.1 | 326 37 39.8 | .. | - | 36.4 | 17 43 24.6 | + 0.5 |
| 5 | 11 16 | 10.1 | 6.5 | 8.4 | 10.4 | 33 | .. | 860 | .. | 810 | .. | 64.1 | 348 39 40.8 | .. | - | 11.1 | 39 45 50.9 | + 2.5 |
| 6 | 14 18 | 10.7 | 7.2 | 8.1 | 10.3 | 35 | .. | 790 | .. | 720 | .. | 64.1 | 345 38 10.5 | .. | - | 14.2 | 36 44 17.5 | + 2.9 |
| 7 | 300 0 | 5.9 | 1.2 | 3.1 | 6.0 | 30 | .. | 190 | .. | 120 | .. | 64.1 | 59 57 11.5 | 77.6 | + | 1 33.7 | 111 5 6.4 | -15.8 |
| 8 | 308 26 | 10.9 | 6.5 | 6.7 | 10.8 | 36 | .. | 260 | .. | 160 | .. | 64.1 | 51 30 16.6 | .. | + | 1 9.6 | 102 37 47.4 | -13.0 |
| 9 | 30 26 | 8.5 | 4.2 | 5.8 | 7.1 | 36 | 640 | .. | .. | .. | 625 | 64.1 | 329 30 21.0 | .. | - | 32.7 | 20 36 9.5 | + 3.9 |
| 10 | 3 12 | 7.9 | 4.6 | 7.1 | 7.7 | 36 | .. | 680 | .. | 595 | .. | 64.1 | 356 44 21.6 | .. | - | 3.2 | 47 50 39.6 | + 1.3 |
| 11 | 310 44 | 8.5 | 5.1 | 6.1 | 9.0 | 33 | 775 | 750 | .. | 710 | 660 | 64.1 | 49 11 36.9 | .. | + | 1 4.2 | 100 19 2.3 | + 1.5 |
| 12 | 287 28 | 12.6 | 8.7 | 11.0 | 13.0 | 35 | 010 | 920 | .. | .. | .. | 64.1 | 72 27 59.0 | .. | + | 2 53.6 | 123 37 13.8 | -17.8 |
| 13 | 301 12 | 8.5 | 4.3 | 6.2 | 9.1 | 37 | 870 | 860 | .. | .. | .. | 64.1 | 58 44 39.3 | .. | + | 1 31.2 | 109 52 31.7 | -13.7 |
| 14 | 290 6 | 10.6 | 6.3 | 7.5 | 10.3 | 35 | .. | .. | .. | 780 | 810 | 64.1 | 69 50 10.7 | .. | + | 2 29.9 | 120 59 1.8 | -16.8 |
| 15 | 296 54 | 8.1 | 4.9 | 5.0 | 7.9 | 33 | 530 | 480 | .. | .. | .. | 64.1 | 63 1 31.9 | .. | + | 1 18.7 | 114 9 41.8 | -14.3 |
| 16 | 297 4 | 7.8 | 5.3 | 5.9 | 9.2 | 38 | .. | 645 | .. | 550 | .. | 64.1 | 62 52 51.4 | .. | + | 1 48.0 | 114 1 0.6 | -14.1 |
| 17 | 297 4 | 7.8 | 5.3 | 5.9 | 9.2 | 38 | .. | 300 | .. | 150 | .. | 64.1 | 62 52 45.7 | .. | + | 1 48.0 | 114 0 54.9 | -14.1 |
| 18 | 15 40 | 7.0 | 3.3 | 5.8 | 6.5 | 34 | 450 | .. | .. | .. | 340 | 64.1 | 344 15 46.8 | .. | - | 15.7 | 35 21 52.3 | + 2.9 |
| 19 | 15 40 | 7.0 | 3.3 | 5.8 | 6.5 | 34 | .. | 660 | .. | 580 | .. | 64.1 | 344 15 49.7 | .. | - | 15.7 | 35 21 55.2 | + 2.9 |
| 20 | 335 34 | 7.8 | 4.0 | 4.2 | 8.3 | 32 | 550 | .. | .. | .. | 400 | 64.1 | 24 21 17.0 | .. | + | 25.2 | 75 28 3.4 | + 0.5 |
| 21 | 335 34 | 7.8 | 4.0 | 4.2 | 8.3 | 32 | .. | 635 | .. | 580 | .. | 64.1 | 24 21 18.9 | .. | + | 25.2 | 75 28 5.3 | - 3.4 |
| 22 | 358 6 | 11.5 | 8.5 | 9.0 | 10.7 | 30 | .. | 675 | .. | 635 | .. | 64.1 | 1 51 25.4 | .. | + | 1.8 | 52 57 48.4 | + 1.0 |
| 23 | 358 6 | 11.5 | 8.5 | 9.0 | 10.7 | 34 | .. | 270 | .. | .. | .. | 64.1 | 1 49 47.7 | .. | + | 1.8 | 52 56 10.7 | + 1.0 |
| 24 | 290 16 | 15.8 | 11.1 | 13.0 | 15.1 | 29 | .. | 550 | .. | 480 | .. | 64.1 | 69 41 11.3 | .. | + | 2 29.3 | 120 50 1.8 | -13.1 |
| 25 | 293 52 | 9.4 | 5.8 | 6.3 | 9.0 | 37 | 580 | 520 | .. | .. | .. | 64.1 | 66 2 1.4 | 74.5 | + | 2 4.8 | 117 10 27.4 | -11.6 |
| 26 | 293 52 | 9.4 | 5.8 | 6.3 | 9.0 | 35 | .. | 380 | .. | 210 | .. | 64.1 | 66 1 27.9 | .. | + | 2 4.7 | 117 9 53.8 | -11.5 |
| 27 | 282 10 | 7.5 | 3.0 | 5.6 | 6.6 | 35 | .. | .. | .. | 460 | 490 | 64.1 | 77 46 2.7 | .. | + | 4 10.9 | 128 56 34.8 | -14.2 |
| 28 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 29 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 30 | 292 16 | 13.4 | 9.3 | 11.1 | 12.1 | 28 | .. | .. | .. | 535 | 505 | 64.1 | 67 40 54.6 | .. | + | 2 15.0 | 118 49 30.8 | -11.2 |
| 31 | 298 0 | 7.5 | 3.0 | 5.8 | 7.8 | 36 | 880 | .. | .. | .. | 730 | 64.1 | 61 53 49.2 | .. | + | 1 44.1 | 113 1 54.5 | - 9.2 |
| 32 | 298 0 | 7.5 | 3.0 | 5.8 | 7.8 | 36 | .. | 245 | .. | 115 | .. | 64.1 | 61 53 40.0 | .. | + | 1 44.1 | 113 1 45.3 | - 9.2 |
| 33 | 17 16 | 8.5 | 6.4 | 6.9 | 8.5 | 33 | 385 | 400 | .. | .. | .. | 64.1 | 342 39 32.3 | .. | - | 17.4 | 33 45 36.1 | + 2.7 |
| 34 | 47 38 | 8.9 | 4.0 | 5.8 | 6.9 | 35 | 775 | 765 | 770 | 750 | 745 | 64.1 | 312 18 7.7 | 73.6 | - | 1 1.3 | 3 23 27.6 | - 1.9 |
| 35 | 293 14 | 9.7 | 6.5 | 7.8 | 10.0 | 32 | .. | 510 | .. | 390 | .. | 64.1 | 66 41 18.7 | .. | + | 2 8.9 | 117 49 48.8 | - 7.1 |
| 36 | 359 42 | 9.0 | 5.1 | 6.5 | 7.9 | 33 | 065 | .. | .. | .. | 925 | 64.1 | 0 13 26.4 | .. | + | 0.2 | 51 19 47.8 | - 0.3 |
| 37 | 53 46 | 8.4 | 3.3 | 5.9 | 5.9 | 31 | 040 | .. | 025 | .. | 030 | 64.1 | 306 8 54.4 | .. | - | 1 16.4 | 357 13 59.2 | - 0.6 |
| 38 | 354 16 | 11.7 | 8.8 | 9.4 | 10.7 | 36 | .. | 345 | .. | 210 | .. | 64.1 | 5 40 19.3 | .. | + | 5.6 | 56 46 46.1 | - 0.5 |
| 39 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 40 | 34 38 | 11.3 | 6.3 | 7.7 | 8.6 | 38 | .. | 475 | .. | 445 | .. | 64.1 | 324 58 52.0 | .. | - | 39.2 | 16 4 34.0 | + 2.0 |
| 41 | 323 56 | 9.1 | 4.9 | 5.4 | 9.0 | 38 | 390 | 365 | .. | 280 | 230 | 64.1 | 36 0 47.3 | .. | + | 40.7 | 87 7 49.2 | + 0.1 |
| 42 | 226 6 | 9.6 | 5.3 | 8.5 | 8.0 | 32 | 280 | 250 | .. | .. | .. | 64.1 | 133 49 14.6 | .. | - | 58.3 | 97 18 4.9 | + 2.4 |
| 43 | 313 46 | 12.3 | 8.2 | 9.5 | 9.6 | 37 | .. | .. | .. | 780 | 805 | 64.1 | 46 10 42.8 | .. | + | 58.3 | 97 18 2.3 | - 0.2 |
| 44 | 331 22 | 7.4 | 4.1 | 4.5 | 6.4 | 36 | .. | 635 | .. | 540 | .. | 64.1 | 28 34 19.4 | .. | + | 30.5 | 79 41 11.1 | - 0.8 |
| 45 | 320 36 | 9.1 | 5.2 | 5.5 | 6.9 | 37 | 140 | 165 | .. | .. | .. | 64.1 | 30 20 28.3 | .. | + | 32.8 | 81 27 22.3 | - 2.1 |
| 46 | 148 54 | 6.0 | 4.3 | 4.8 | 5.0 | 39 | .. | .. | 045 | 030 | 990 | 64.1 | 211 2 57.0 | .. | + | 33.8 | 20 2 50.4 | - 2.0 |
| 47 | 30 58 | 8.3 | 3.9 | 5.2 | 6.5 | 31 | .. | .. | .. | 560 | 370 | 64.1 | 328 57 3.0 | 71.5 | - | 33.8 | 20 2 50.4 | - 2.0 |
| 48 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 49 | 151 24 | 7.4 | 7.0 | 5.9 | 7.8 | 37 | 290 | 305 | .. | .. | .. | 66.7 | 208 32 33.8 | .. | + | 30.4 | 22 33 17.0 | - 2.6 |
| 50 | 28 28 | 8.0 | 5.1 | 5.5 | 6.1 | 32 | .. | .. | .. | 945 | 880 | 66.7 | 331 27 26.6 | 73.6 | - | 30.4 | 22 33 17.4 | - 2.2 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|------|
| 7 | in. | ° | | | | | |
| 25 | 30.13 | 79.2 | | | | | |
| 34 | 30.15 | 76.7 | | | | | |
| 47 | 30.14 | 75.8 | | | | | |
| 50 | 30.17 | 73.5 | | | | | |
| | | 74.8 | | | | | |

For summary of the elements of reduction see page 3.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | m. | s. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 1876. | | | | | | | | | | | | | m. | s. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

10. Transits at threads D₃, VI, and VII.
 10, 11, 16, 17. Thread A used.
 14. Bisections at threads IV-VI.

| Number. | Circle Division | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|-----------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | ° ' " | 10. " | " " | " " | " " | | | | | | | " " | ° ' " | ° " | ' " | ° ' " | " " | |
| 1 | 323 56 | 10 11.2 | 9.5 | 8.1 | 11.2 | 37 | .. | .. | .. | 835 | 790 | 66.7 | 36 0 45.9 | .. | + | 40.6 | 87 7 47.7 | - 0.4 |
| 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 3 | 359 10 | 4.3 | 0.4 | 28.1 | 0.7 | 31 | .. | 732 | .. | 650 | .. | 65.8 | 0 45 1.6 | 76.5 | + | 0.7 | 51 51 23.5 | - 0.6 |
| 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 5 | 299 20 | 4.2 | 29.9 | 29.9 | 1.9 | 34 | .. | 228 | .. | 122 | .. | 65.8 | 60 35 39.8 | .. | + 1 | 38.5 | 111 43 39.5 | + 10.8 |
| 6 | 314 56 | 10 2 | 8.6 | 5.4 | 10.4 | 32 | .. | 936 | .. | 778 | .. | 65.8 | 44 59 26.9 | .. | + | 55.6 | 96 6 43.7 | - 0.5 |
| 7 | 305 2 | 10.0 | 7.1 | 6.0 | 8.1 | 28 | .. | 936 | .. | 936 | .. | 65.8 | 54 52 25.9 | .. | + 1 | 19.0 | 106 0 6.1 | + 11.9 |
| 8 | 330 22 | 11.2 | 5.1 | 2.4 | 6.0 | 37 | .. | 032 | .. | 990 | .. | 65.8 | 29 34 28.1 | 76.2 | + | 31.6 | 80 41 20.9 | - 1.0 |
| 9 | 320 8 | 11.1 | 7.9 | 6.7 | 7.6 | 34 | .. | .. | .. | 544 | 526 | 65.8 | 39 47 53.2 | .. | + | 46.4 | 90 55 0.8 | - 2.9 |
| 10 | 305 28 | 11.6 | 7.1 | 7.2 | 10.2 | 38 | .. | .. | .. | 218 | 228 | 65.8 | 54 26 16.8 | .. | + 1 | 17.8 | 105 33 5.8 | + 15.7 |
| 11 | 305 28 | 11.6 | 7.1 | 7.2 | 10.2 | 40 | .. | 730 | .. | 590 | .. | 65.8 | 54 26 53.2 | .. | + 1 | 17.9 | 105 34 32.3 | + 15.9 |
| 12 | 310 8 | 13.0 | 11.0 | 8.6 | 11.8 | 39 | 602 | 590 | .. | .. | .. | 65.8 | 49 49 11.6 | .. | + 1 | 6.9 | 100 56 38.8 | .. |
| 13 | 310 8 | 13.0 | 11.0 | 8.6 | 11.8 | 38 | .. | .. | .. | 272 | 240 | 65.8 | 49 48 52.8 | .. | + 1 | 6.0 | 100 56 20.0 | .. |
| 14 | 310 48 | 5.3 | 3.5 | 0.4 | 6.1 | 37 | .. | .. | 318 | 208 | 962 | 65.8 | 49 8 31.1 | .. | + 1 | 4.4 | 100 15 56.7 | .. |
| 15 | 315 50 | 9.4 | 5.3 | 4.4 | 8.9 | 30 | .. | 746 | .. | 666 | .. | 65.8 | 44 4 52.3 | 75.0 | + | 54.0 | 95 12 7.5 | + 18.7 |
| 16 | 315 52 | 9.5 | 6.4 | 4.4 | 8.8 | 35 | .. | 200 | .. | 168 | .. | 65.8 | 44 1 27.7 | .. | + | 51.0 | 95 8 42.9 | + 19.6 |
| 17 | 315 52 | 9.5 | 6.4 | 4.4 | 8.8 | 29 | .. | 020 | .. | 940 | .. | 65.8 | 43 59 52.7 | .. | + | 53.9 | 95 7 7.8 | + 19.7 |
| 18 | 327 14 | 8.2 | 6.1 | 4.7 | 6.2 | 35 | .. | 726 | .. | 592 | .. | 65.8 | 32 42 7.5 | .. | + | 35.9 | 83 49 4.6 | - 0.8 |
| 19 | 349 26 | 9.8 | 6.7 | 4.5 | 6.5 | 30 | .. | 810 | .. | 770 | .. | 65.8 | 10 28 53.7 | .. | + | 10.4 | 61 35 25.3 | - 1.5 |
| 20 | 335 32 | 8.7 | 5.4 | 4.3 | 4.5 | 32 | .. | 480 | .. | 376 | .. | 65.8 | 24 23 17.5 | .. | + | 25.4 | 75 30 4.1 | - 0.7 |
| 21 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 22 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 73.5 | .. | .. | .. | .. |
| 23 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 24 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 25 | 353 12 | 4.3 | 1.0 | 0.0 | 0.7 | 35 | .. | 250 | .. | 125 | .. | 65.9 | 6 43 55.8 | .. | + | 6.5 | 57 50 23.5 | - 1.8 |
| 26 | 326 36 | 9.7 | 8.3 | 5.8 | 7.8 | 36 | .. | 770 | .. | 630 | .. | 65.9 | 33 20 25.1 | 81.5 | + | 36.2 | 84 27 22.5 | - 1.9 |
| 27 | 349 22 | 7.3 | 3.5 | 3.7 | 5.0 | 35 | .. | 110 | .. | 985 | .. | 65.9 | 10 33 56.9 | .. | + | 10.3 | 61 40 28.4 | - 0.3 |
| 28 | 336 58 | 4.8 | 2.4 | 0.6 | 2.5 | 39 | 920 | 900 | .. | .. | .. | 65.9 | 22 59 8.6 | 84.4 | + | 23.2 | 74 5 53.0 | .. |
| 29 | 336 26 | 7.2 | 5.5 | 4.1 | 6.1 | 38 | .. | .. | .. | 270 | 150 | 65.9 | 23 30 46.7 | .. | + | 23.8 | 74 37 31.7 | .. |
| 30 | 156 24 | 7.0 | 7.5 | 6.4 | 7.5 | 31 | 925 | 935 | .. | .. | .. | 65.9 | 203 31 10.1 | .. | + | 23.8 | 27 34 47.3 | - 0.9 |
| 31 | 23 28 | 8.3 | 7.0 | 7.3 | 7.5 | 38 | .. | .. | .. | 120 | 100 | 65.9 | 336 28 48.2 | 86.0 | - | 23.8 | 27 34 45.6 | - 2.6 |
| 32 | 342 14 | 8.2 | 8.4 | 6.1 | 7.8 | 32 | .. | 050 | .. | 950 | .. | 65.9 | 17 41 13.0 | .. | + | 17.4 | 68 47 51.6 | + 0.5 |
| 33 | 164 26 | 10.5 | 10.0 | 9.1 | 9.4 | 31 | 940 | 880 | .. | .. | .. | 65.9 | 195 29 12.0 | .. | + | 15.1 | 35 36 54.1 | - 1.9 |
| 34 | 15 20 | 7.3 | 5.6 | 7.0 | 7.6 | 38 | .. | .. | .. | 300 | 220 | 65.9 | 344 30 49.6 | .. | - | 15.1 | 35 36 55.7 | - 0.3 |
| 35 | 0 0 | 5.5 | 4.8 | 3.0 | 2.8 | 28 | .. | 790 | .. | 685 | .. | 65.9 | 359 54 19.6 | .. | - | 0.1 | 51 0 40.7 | - 0.6 |
| 36 | 52 22 | 6.4 | 3.3 | 4.0 | 2.9 | 33 | 920 | .. | 870 | .. | 020 | 65.9 | 307 33 38.8 | .. | - 1 | 10.9 | 358 38 49.1 | - 2.2 |
| 37 | 310 32 | 5.8 | 5.0 | 3.3 | 6.2 | 33 | .. | 640 | .. | 620 | .. | 65.9 | 49 23 35.2 | 85.5 | + 1 | 3.6 | 100 31 0.0 | - 0.8 |
| 38 | 283 50 | 8.0 | 5.9 | 6.0 | 6.5 | 35 | .. | 930 | .. | 840 | .. | 66.0 | 76 6 11.1 | .. | + 3 | 41.2 | 127 16 13.5 | - 11.7 |
| 39 | 47 38 | 11.2 | 9.0 | 8.2 | 8.0 | 35 | .. | .. | 290 | .. | 250 | 66.0 | 312 18 4.6 | 74.0 | - 1 | 1.3 | 3 23 24.5 | - 1.9 |
| 40 | 293 14 | 9.3 | 8.3 | 7.2 | 8.5 | 32 | .. | 515 | .. | 400 | .. | 66.0 | 66 41 20.5 | .. | + 2 | 8.7 | 117 49 50.4 | - 7.6 |
| 41 | 359 42 | 8.3 | 6.8 | 5.4 | 5.4 | 32 | .. | 755 | .. | 685 | .. | 66.0 | 0 13 23.1 | .. | + | 0.2 | 51 19 44.5 | - 0.6 |
| 42 | 53 46 | 12.6 | 10.0 | 9.2 | 7.5 | 30 | 480 | .. | 385 | .. | 405 | 66.0 | 306 8 50.8 | .. | - 1 | 16.3 | 357 13 55.7 | - 0.7 |
| 43 | 354 16 | 12.8 | 10.8 | 10.0 | 10.7 | 36 | .. | 915 | .. | 865 | .. | 66.0 | 5 40 16.2 | .. | + | 5.6 | 56 46 43.0 | - 0.6 |
| 44 | 0 4 | 9.1 | 7.3 | 6.0 | 6.3 | 30 | .. | 165 | .. | 090 | .. | 66.0 | 359 50 41.1 | .. | - | 0.2 | 50 57 5.1 | + 5.5 |
| 45 | 334 44 | 8.3 | 6.0 | 4.0 | 6.1 | 36 | .. | 350 | .. | 330 | .. | 66.0 | 25 12 17.9 | .. | + | 26.3 | 76 19 5.4 | - 0.5 |
| 46 | 151 24 | 11.0 | 11.2 | 9.6 | 9.6 | 37 | 405 | 315 | .. | .. | .. | 66.0 | 208 32 35.6 | .. | + | 30.4 | 22 33 15.4 | - 2.9 |
| 47 | 28 28 | 9.0 | 6.7 | 5.6 | 5.5 | 32 | .. | .. | .. | 830 | 850 | 66.0 | 331 27 27.0 | .. | - | 30.4 | 22 33 17.8 | - 0.3 |
| 48 | 145 42 | 7.7 | 8.7 | 6.2 | 6.3 | 32 | 370 | 300 | .. | .. | .. | 66.0 | 214 13 15.0 | .. | + | 38.0 | 16 52 28.2 | + 2.3 |
| 49 | 34 10 | 7.5 | 3.8 | 2.7 | 2.5 | 37 | .. | .. | .. | 870 | 800 | 66.0 | 325 46 41.4 | .. | - | 38.0 | 16 52 24.6 | - 1.3 |
| 50 | 226 6 | 12.0 | 11.3 | 12.0 | 8.1 | 32 | 015 | 005 | .. | .. | .. | 66.0 | 133 49 15.5 | .. | - | 58.2 | 97 18 3.9 | + 2.3 |

For summary of the elements of reduction see page 3.

| No. | Barom. | Air Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| 3 | 30.22 | 78.0 | 12 | - 0.8 | - 9.4 | .. | - 10.2 |
| 8 | 30.22 | 77.2 | 13 | - 0.8 | + 9.4 | .. | + 8.6 |
| 15 | 30.22 | 76.5 | 14 | - 41 33.5 | + 15 3.7 | .. | - 26 29.8 |
| 22 | 30.22 | 75.0 | 28 | - 3.4 | + 15 49.3 | .. | + 15 45.9 |
| 26 | 30.19 | 80.5 | 29 | - 3.5 | - 15 49.3 | .. | - 15 52.8 |
| 28 | 30.18 | 83.0 | | | | | |
| 31 | 30.17 | 85.0 | | | | | |
| 37 | 30.14 | 84.5 | | | | | |
| 39 | 30.14 | 77.0 | | | | | |

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. | | |
|--------|---------|-------------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|-------------|----------------------------|----|----|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. m. | s. | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| 1876. | | | | | | | | | | | | | m. | s. | s. | s. | s. | | | | |
| Aug. 9 | 1 | Aquilæ | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| | 2 | Aquilæ (R.) . . | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| | 3 | Aquilæ | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| | 4 | Helena | E. | 20.6 | 23.4 | 25.2 | 32.5 | 34.6 | 37.0 | 44.0 | 46.1 | 49.0 | 11 34.71 | - 1.03 | .. | -55.21 | 20 10 38.47 | .. | .. | .. | |
| | 5 | Capricorni . . | E. | 0.3 | 3.1 | 4.7 | 11.2 | 13.4 | 15.5 | 21.9 | 23.5 | 26.3 | 21 13.32 | - 0.92 | -55.25 | -55.22 | 20 20 17.18 | + 0.06 | .. | .. | |
| | 6 | Delphini . . . | E. | 4.0 | 6.6 | 8.2 | 14.4 | 16.5 | 18.5 | 24.7 | 26.3 | 29.0 | 28 16.47 | - 0.74 | -55.20 | -55.23 | 20 27 20.50 | + 0.02 | .. | .. | |
| | 7 | Mural Zones 64, 16 | E. | 14.8 | 17.6 | 19.5 | 26.0 | 28.3 | 30.4 | 37.4 | 39.0 | 42.0 | 29 28.33 | - 0.97 | .. | -55.23 | 20 28 32.13 | - 4.02 | .. | .. | |
| | 8 | Cygni | E. | 53.6 | 57.1 | 59.6 | 8.0 | 11.0 | 14.0 | 22.4 | 24.6 | 28.0 | 38 10.92 | - 0.55 | -55.23 | -55.24 | 20 37 15.13 | + 0.01 | .. | .. | |
| | 9 | Fides | E. | 57.1 | 0.2 | 1.9 | 8.4 | 10.5 | 12.6 | 19.3 | 21.0 | 23.6 | 40 10.51 | - 0.95 | .. | -55.24 | 20 39 14.32 | .. | .. | .. | |
| | 10 | Lyrae | F. | 28.8 | 32.0 | 34.0 | 41.8 | 44.5 | 47.1 | 55.0 | 57.0 | 0.3 | 33 44.50 | - 0.55 | -56.91 | -56.90 | 18 32 47.05 | + 0.03 | .. | .. | |
| | 11 | Lyrae | F. | 15.7 | 18.8 | 20.6 | 27.9 | 30.3 | 32.7 | 40.0 | 41.9 | 45.0 | 46 30.32 | - 0.60 | -56.89 | -56.90 | 18 45 32.82 | + 0.02 | .. | .. | |
| | 12 | B. A. C. 6495 . | F. | 46.2 | 49.7 | 51.5 | 59.4 | 2.0 | 4.7 | 12.6 | 14.5 | 17.8 | 56 2.04 | - 0.55 | .. | -56.90 | 18 55 4.59 | - 2.66 | .. | .. | |
| | 13 | B. A. C. 6516 . | F. | 24.8 | 28.7 | 30.8 | 40.2 | 43.0 | 46.2 | 55.3 | 57.7 | 1.5 | 58 43.13 | - 0.46 | .. | -56.90 | 18 57 45.77 | - 2.59 | .. | .. | |
| | 14 | B. A. C. 6579 ¹ . | F. | 33.7 | 37.4 | 39.9 | .. | .. | .. | 5.2 | 7.5 | 11.5 | 9 52.53 | - 0.44 | .. | -56.90 | 19 8 55.19 | - 2.60 | .. | .. | |
| | 15 | B. A. C. 6579 ² . | F. | .. | .. | 46.8 | 49.9 | 53.1 | 56.2 | 59.5 | .. | .. | 9 53.12 | - 0.44 | .. | -56.90 | 19 8 55.78 | - 2.60 | .. | .. | |
| | 16 | Anonymous . . | F. | 40.5 | 43.4 | 45.2 | 49.7 | 52.0 | 54.3 | 56.6 | 59.0 | .. | 28 54.30 | - 1.11 | .. | -56.90 | 19 27 56.29 | - 3.96 | .. | .. | |
| | 17 | Mural Zones 176, 77 | F. | 4.7 | 7.5 | 9.4 | 16.1 | 18.4 | 20.9 | 27.8 | 29.5 | 32.4 | 29 18.52 | - 1.11 | .. | -56.90 | 19 28 20.51 | - 3.96 | .. | .. | |
| | 18 | Mural Zones 176, 78 | F. | .. | .. | .. | .. | .. | .. | 6.0 | 7.8 | 10.7 | 29 56.95 | - 1.11 | .. | -56.90 | 19 28 58.94 | - 3.96 | .. | .. | |
| | 19 | Ursæ Minoris . | F. | .. | .. | .. | 18.5 | 11.0 | 2.0 | .. | .. | .. | 49 10.03 | + 12.48 | .. | -56.91 | 19 48 25.60 | - 0.44 | .. | .. | |
| | 20 | Capricorni . . | F. | 2.3 | 4.9 | 6.6 | 13.0 | 15.0 | 17.1 | 23.7 | 25.3 | 28.0 | 21 15.10 | - 1.02 | -56.92 | -56.91 | 20 20 17.17 | + 0.04 | .. | .. | |
| | 21 | Delphini . . . | F. | 5.7 | 8.4 | 10.0 | 16.0 | 18.2 | 20.3 | 26.6 | 28.0 | 30.7 | 28 18.21 | - 0.78 | -56.90 | -56.91 | 20 27 20.52 | + 0.04 | .. | .. | |
| | 22 | Canis Majoris . | F. | 9.0 | 11.8 | 13.4 | 20.4 | 22.6 | 24.8 | 31.8 | 33.4 | 36.4 | 4 22.62 | - 1.06 | -60.15 | -60.08 | 7 3 21.48 | + 0.02 | .. | .. | |
| | 23 | Geminorum . . | F. | 32.0 | 34.8 | 36.6 | 40.9 | 45.3 | 49.6 | 54.0 | 55.6 | 58.5 | 13 45.26 | - 0.73 | -60.16 | -60.08 | 7 12 44.45 | + 0.02 | .. | .. | |
| | 24 | Geminorum (R) . | F. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | -60.10 | 7 26 42.51 | + 0.15 | .. | .. | |
| | 25 | Geminorum . . | F. | .. | .. | .. | .. | .. | .. | .. | 54.8 | 57.7 | 27 43.29 | - 0.68 | -60.01 | -60.10 | 7 32 49.63 | - 0.14 | .. | .. | |
| | 26 | Canis Minoris . | F. | 38.3 | 40.9 | 42.5 | 48.5 | 50.6 | 52.6 | 58.7 | 0.1 | 2.8 | 33 50.56 | - 0.83 | -60.12 | -60.10 | 7 37 45.01 | + 0.03 | .. | .. | |
| | 27 | Geminorum . . | F. | 31.9 | 34.9 | 36.6 | 43.5 | 45.8 | 48.0 | 55.1 | 56.8 | 59.7 | 38 45.81 | - 0.70 | -60.16 | -60.10 | .. | .. | .. | .. | |
| | 28 | Ursæ Majoris (R.) | F. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| | 29 | Ursæ Majoris . | F. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| | 30 | Sun I. N. . . . | F. | 38.4 | 40.8 | 42.5 | 48.9 | 50.9 | 53.0 | 59.4 | 1.0 | 3.6 | 41 50.94 | - 0.78 | .. | -60.20 | 9 40 49.96 | .. | .. | .. | |
| | 31 | Sun II. S. . . . | F. | 51.7 | 53.3 | 57.4 | 59.7 | 1.8 | 3.9 | 6.0 | 10.2 | 11.7 | 44 1.74 | - 0.78 | .. | -60.20 | 9 43 0.76 | .. | .. | .. | |
| | 32 | Aquilæ | F. | 34.4 | 37.0 | 38.6 | 44.9 | 47.0 | 49.1 | 55.4 | 56.9 | 59.6 | 0 46.99 | - 0.69 | -60.70 | -60.60 | 18 59 45.61 | + 0.09 | .. | .. | |
| | 33 | B. A. C. 6579 ¹ . | F. | 37.2 | 41.1 | 43.5 | .. | .. | .. | 8.8 | 11.2 | 14.9 | 9 56.12 | - 0.42 | .. | -60.70 | 19 8 55.00 | - 2.54 | .. | .. | |
| | 34 | B. A. C. 6579 ² . | F. | .. | .. | 50.3 | 53.6 | 56.7 | 59.9 | 3.0 | .. | .. | 9 56.72 | - 0.42 | .. | -60.70 | 19 8 55.59 | - 2.54 | .. | .. | |
| | 35 | B. A. C. 6659 . | F. | 53.6 | 57.5 | 0.0 | 9.4 | 12.5 | 15.6 | 25.4 | 27.5 | 31.7 | 21 12.58 | - 0.41 | .. | -60.71 | 19 20 11.46 | - 2.57 | .. | .. | |
| | 36 | O. Arg. N. 19238 . | F. | 2.4 | 6.3 | 8.8 | 18.2 | 21.5 | 24.5 | 34.0 | 36.4 | 40.7 | 22 21.42 | - 0.41 | .. | -60.72 | 19 21 20.29 | - 2.57 | .. | .. | |
| | 37 | Anonymous . . | F. | 44.3 | 47.4 | 49.0 | 53.6 | 55.8 | 58.0 | 0.2 | 2.6 | .. | 28 58.08 | - 1.00 | .. | -60.72 | 19 27 56.36 | - 3.95 | .. | .. | |
| | 38 | Mural Zones 176, 77 | F. | 8.4 | 11.3 | 13.0 | 17.7 | 20.0 | 22.1 | 24.6 | 26.6 | .. | 29 22.18 | - 1.00 | .. | -60.72 | 19 28 20.46 | - 3.95 | .. | .. | |
| | 39 | Mural Zones 176, 78 | F. | .. | .. | .. | .. | .. | .. | 5.3 | 10.0 | 11.7 | 14.6 | 30 0.85 | - 1.00 | .. | -60.72 | 19 28 59.13 | - 3.96 | .. | .. |
| | 40 | Aquilæ | F. | 13.9 | 16.5 | 18.1 | 24.4 | 26.5 | 28.6 | 34.7 | 36.3 | 38.9 | 41 26.43 | - 0.71 | -60.72 | -60.73 | 19 40 24.99 | + 0.02 | .. | .. | |
| | 41 | Aquilæ | F. | 36.3 | 38.8 | 40.4 | 46.6 | 48.6 | 50.7 | 56.9 | 58.4 | 1.2 | 45 48.66 | - 0.72 | -60.76 | -60.73 | 19 44 47.21 | + 0.07 | .. | .. | |
| | 42 | Ursæ Minoris . | F. | .. | .. | .. | 12.0 | 3.0 | 55.0 | .. | .. | .. | 49 13.27 | + 9.69 | .. | -60.73 | 19 48 22.23 | - 0.64 | .. | .. | |
| | 43 | Capricorni . . | F. | 27.4 | 29.0 | 33.3 | 35.3 | 37.5 | 39.6 | 41.7 | 45.9 | 47.4 | 47 37.46 | - 0.88 | -60.76 | -60.81 | 21 46 35.77 | - 0.02 | .. | .. | |
| | 44 | Aquarii | F. | 17.6 | 20.2 | 21.6 | 27.8 | 29.9 | 32.0 | 38.0 | 39.5 | 42.0 | 0 29.84 | - 0.78 | -60.73 | -60.82 | 21 59 28.24 | - 0.06 | .. | .. | |
| | 45 | Draconis (R.) . | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | -61.44 | 17 27 40.09 | + 0.15 | .. | .. | |
| | 46 | Draconis . . . | E. | .. | .. | .. | .. | .. | .. | 55.5 | 58.1 | 2.2 | 28 42.15 | - 0.62 | .. | -61.44 | .. | .. | .. | .. | |
| | 47 | Draconis (R.) . | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | -61.47 | 17 37 42.74 | + 0.15 | .. | .. | |
| | 48 | Draconis . . . | E. | .. | .. | .. | 14.6 | 30.4 | 56.0 | 7.0 | 11.5 | 18.7 | 38 44.64 | - 0.43 | .. | -61.48 | 17 41 38.84 | + 0.01 | .. | .. | |
| | 49 | Herculis . . . | E. | 27.2 | 30.0 | 32.0 | 38.7 | 41.0 | 43.5 | 50.4 | 52.0 | 55.0 | 42 41.09 | - 0.77 | -61.49 | -61.48 | .. | .. | .. | .. | |
| | 50 | Herschel and South 379 ¹ | E. | 44.3 | 46.9 | 48.7 | .. | .. | .. | 6.4 | 8.0 | 10.9 | 55 57.53 | - 1.08 | .. | -61.52 | 17 54 54.93 | - 3.38 | .. | .. | |

7, 9, 17, 18, 38, 39. Thread A used.
16, 36, 37. Thread B used.
48. Telescope micrometer reading decreased one revolution in reduction.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom ^r . | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | |
| | ° ' " | r. " | " " | " " | " " | | | | | | | " " | ° ' " | ° ' " | " " | ° ' " | " " |
| 1 | 313 46 | 10 10.0 | 8.3 | 7.0 | 8.5 | 37 | .. | .. | .. | 730 | 760 | 66.0 | 46 10 42.5 | .. | + | 58.2 | 97 18 1.9 |
| 2 | 208 30 | 6.0 | 6.5 | 5.8 | 2.0 | 33 | 965 | 995 | .. | .. | .. | 66.0 | 151 25 39.7 | .. | - | 30.5 | 79 41 12.0 |
| 3 | 331 22 | 8.9 | 7.5 | 6.0 | 7.3 | 36 | .. | .. | .. | 125 | 100 | 66.0 | 28 34 16.6 | .. | + | 30.5 | 79 41 8.3 |
| 4 | 289 52 | 12.5 | 10.5 | 9.5 | 10.2 | 35 | .. | 275 | .. | 190 | .. | 66.0 | 70 4 5.3 | .. | + | 2 33.1 | 121 12 59.6 |
| 5 | 302 26 | 8.3 | 5.3 | 3.9 | 5.6 | 31 | .. | 710 | .. | 580 | .. | 66.0 | 57 29 5.6 | .. | + | 1 27.7 | 108 36 54.5 |
| 6 | 331 56 | 8.9 | 8.1 | 6.0 | 6.9 | 35 | 240 | 185 | .. | .. | .. | 66.0 | 28 0 1.2 | .. | + | 29.8 | 79 6 52.2 |
| 7 | 296 12 | 6.3 | 3.1 | 4.0 | 4.6 | 28 | .. | .. | .. | 000 | 080 | 66.0 | 63 39 36.4 | .. | + | 1 52.7 | 114 47 50.3 |
| 8 | 5 52 | 5.9 | 5.0 | 4.0 | 2.0 | 32 | 685 | 670 | .. | .. | .. | 66.0 | 354 3 19.6 | .. | - | 5.8 | 45 9 35.0 |
| 9 | 298 20 | 6.6 | 3.4 | 3.1 | 4.3 | 35 | .. | 870 | .. | 820 | .. | 66.0 | 61 33 34.9 | 72.0 | + | 1 43.1 | 112 41 39.2 |
| 10 | 359 42 | 5.0 | 1.2 | 29.5 | 1.6 | 32 | .. | .. | .. | 886 | 810 | 67.3 | 0 13 22.7 | .. | + | 0.2 | 51 19 44.1 |
| 11 | 354 16 | 8.3 | 5.6 | 3.3 | 6.4 | 36 | .. | .. | .. | 120 | 030 | 67.3 | 5 40 16.1 | .. | + | 5.5 | 56 46 42.8 |
| 12 | 0 4 | 9.4 | 5.5 | 4.8 | 7.0 | 30 | .. | 014 | .. | 864 | .. | 67.3 | 359 50 42.0 | .. | - | 0.2 | 50 57 3.0 |
| 13 | 8 54 | 6.8 | 3.7 | 3.0 | 2.6 | 35 | .. | .. | .. | 495 | 452 | 67.3 | 351 2 5.3 | .. | - | 8.8 | 42 8 17.7 |
| 14 | 10 40 | 5.5 | 2.0 | 1.5 | 3.3 | 36 | .. | 550 | .. | 450 | .. | 67.3 | 349 16 19.0 | .. | - | 10.6 | 40 22 29.6 |
| 15 | 10 40 | 5.5 | 2.0 | 1.5 | 3.3 | 36 | 090 | .. | .. | .. | 890 | 67.3 | 349 16 11.6 | 76.0 | - | 10.6 | 40 22 22.2 |
| 16 | 294 28 | 8.7 | 4.4 | 3.8 | 6.2 | 39 | 628 | 638 | .. | .. | .. | 67.3 | 65 31 40.4 | .. | + | 2 1.7 | 116 40 3.3 |
| 17 | 294 28 | 8.7 | 4.4 | 3.8 | 6.2 | 36 | .. | .. | .. | 888 | .. | 67.3 | 65 25 54.4 | .. | + | 2 1.3 | 116 34 16.9 |
| 18 | 294 28 | 8.7 | 4.4 | 3.8 | 6.2 | 42 | .. | .. | .. | .. | 250 | 67.3 | 65 27 16.7 | .. | + | 2 1.3 | 116 35 39.2 |
| 19 | 49 58 | 5.6 | 0.7 | 28.8 | 29.9 | 37 | .. | 928 | 932 | 940 | .. | 67.3 | 305 58 38.8 | .. | - | 1 6.4 | 1 3 53.6 |
| 20 | 302 26 | 8.5 | 3.1 | 2.0 | 5.7 | 31 | .. | .. | .. | 526 | 500 | 67.3 | 57 29 4.7 | 76.2 | + | 1 27.2 | 108 36 53.1 |
| 21 | 331 56 | 7.1 | 3.3 | 0.5 | 3.5 | 35 | 408 | 328 | .. | .. | .. | 67.3 | 28 0 1.0 | .. | + | 29.6 | 79 6 51.8 |
| 22 | 294 52 | 2.6 | 27.1 | 27.1 | 0.5 | 32 | .. | 778 | .. | 618 | .. | 66.8 | 65 3 15.9 | 77.8 | + | 1 57.9 | 116 11 35.0 |
| 23 | 343 16 | 3.5 | 0.2 | 26.9 | 1.7 | 38 | 394 | 352 | .. | 276 | 210 | 66.8 | 16 40 43.4 | .. | + | 16.5 | 67 47 21.1 |
| 24 | 186 40 | 3.4 | 2.1 | 0.6 | 0.5 | 35 | 658 | 632 | .. | .. | .. | 66.8 | 173 16 2.4 | .. | - | 6.5 | 57 50 25.3 |
| 25 | 353 12 | 5.4 | 1.6 | 1.6 | 6.3 | 34 | .. | .. | .. | 956 | 910 | 66.8 | 6 43 56.1 | .. | + | 6.5 | 57 50 23.8 |
| 26 | 326 36 | 3.3 | 0.1 | 28.0 | 1.8 | 36 | .. | .. | .. | 996 | 004 | 66.8 | 33 20 24.4 | .. | + | 36.2 | 84 27 21.8 |
| 27 | 349 22 | 3.4 | 28.0 | 28.4 | 2.1 | 35 | .. | 360 | .. | 305 | .. | 66.8 | 10 33 57.7 | .. | + | 10.2 | 61 40 29.1 |
| 28 | 170 18 | 6.4 | 4.8 | 4.5 | 4.2 | 34 | .. | 660 | .. | .. | .. | 66.8 | 189 37 50.8 | .. | + | 9.2 | 1 28 21.2 |
| 29 | 9 34 | 9 29.6 | 26.4 | 25.3 | 28.5 | 36 | .. | .. | .. | 365 | 395 | 66.8 | 350 22 11.8 | 83.8 | - | 9.2 | 41 28 23.8 |
| 30 | 335 8 | 10 7.0 | 4.5 | 3.0 | 3.0 | 37 | 284 | 270 | .. | .. | .. | 66.8 | 24 48 30.9 | .. | + | 25.2 | 75 55 17.3 |
| 31 | 334 36 | 11.4 | 8.0 | 5.6 | 8.2 | 35 | .. | .. | .. | 620 | 525 | 66.8 | 25 20 9.7 | 84.0 | + | 25.8 | 76 26 56.7 |
| 32 | 334 44 | 6.5 | 4.0 | 1.7 | 7.1 | 36 | .. | 424 | .. | 308 | .. | 66.7 | 25 12 17.7 | .. | + | 25.9 | 76 19 4.8 |
| 33 | 10 40 | 9.1 | 6.5 | 7.1 | 6.9 | 36 | 144 | .. | .. | .. | 046 | 66.7 | 349 16 17.0 | .. | - | 10.4 | 40 22 27.8 |
| 34 | 10 40 | 9.1 | 6.5 | 7.1 | 6.9 | 35 | .. | 695 | .. | 550 | .. | 66.7 | 349 16 9.2 | .. | - | 10.4 | 40 22 20.0 |
| 35 | 11 4 | 8.6 | 7.7 | 6.9 | 7.6 | 34 | 674 | 666 | .. | .. | .. | 66.7 | 348 51 54.3 | .. | - | 10.8 | 39 58 4.7 |
| 36 | 11 4 | 8.6 | 7.7 | 6.9 | 7.6 | 32 | .. | 210 | .. | 100 | .. | 66.7 | 348 53 48.8 | 78.0 | - | 10.8 | 39 59 59.2 |
| 37 | 294 28 | 7.1 | 4.8 | 4.2 | 4.8 | 39 | .. | 688 | .. | 676 | .. | 66.7 | 65 31 41.1 | .. | + | 2 0.3 | 116 40 2.6 |
| 38 | 294 28 | 7.1 | 4.8 | 4.2 | 4.8 | 36 | .. | .. | .. | 752 | 736 | 66.7 | 65 25 51.1 | .. | + | 1 59.8 | 116 34 12.1 |
| 39 | 294 28 | 7.1 | 4.8 | 4.2 | 4.8 | 42 | .. | .. | .. | .. | 070 | 66.7 | 65 27 12.9 | .. | + | 1 59.9 | 116 35 34.0 |
| 40 | 331 22 | 6.2 | 4.1 | 1.1 | 4.7 | 36 | .. | .. | .. | 254 | 250 | 66.7 | 28 34 16.1 | .. | + | 30.0 | 79 41 7.3 |
| 41 | 329 36 | 10.4 | 8.5 | 6.8 | 11.4 | 36 | .. | .. | .. | 590 | 608 | 66.7 | 30 20 26.6 | .. | + | 32.2 | 81 27 20.0 |
| 42 | 49 58 | 5.4 | 1.4 | 29.8 | 29.7 | 37 | .. | .. | 762 | 756 | 750 | 66.7 | 309 58 35.6 | 77.3 | - | 1 5.7 | 1 3 51.1 |
| 43 | 306 56 | 7.0 | 5.0 | 3.2 | 5.7 | 36 | 126 | 086 | .. | .. | .. | 66.7 | 53 0 13.1 | .. | + | 1 13.3 | 104 7 47.6 |
| 44 | 320 8 | 7.6 | 6.1 | 4.2 | 7.2 | 34 | .. | 750 | .. | 700 | .. | 66.7 | 39 47 54.0 | 75.8 | + | 46.1 | 90 55 1.3 |
| 45 | 166 26 | 13.8 | 13.8 | 12.0 | 12.3 | 34 | 500 | 395 | .. | .. | .. | 66.2 | 193 29 54.4 | .. | + | 13.2 | 37 36 13.6 |
| 46 | 13 26 | 14.7 | 13.4 | 13.0 | 12.6 | 35 | .. | .. | .. | 010 | 990 | 66.2 | 346 30 6.4 | .. | - | 13.2 | 37 36 14.4 |
| 47 | 150 2 | 8.5 | 9.5 | 7.5 | 8.5 | 38 | 670 | 570 | .. | .. | .. | 66.2 | 209 54 53.1 | .. | + | 31.6 | 21 10 50.5 |
| 48 | 29 50 | 6.4 | 4.8 | 4.3 | 4 8 | 32 | .. | .. | .. | 700 | 650 | 66.2 | 330 5 7.9 | 82.0 | - | 31.6 | 21 10 57.5 |
| 49 | 348 50 | 4.8 | 2.5 | 0.6 | 3.9 | 34 | 360 | .. | .. | .. | 340 | 66.2 | 11 5 44.8 | .. | + | 10.8 | 62 12 16.8 |
| 50 | 298 0 | 7.1 | 5.7 | 5.5 | 7.5 | 26 | 665 | .. | .. | .. | 605 | 66.2 | 61 53 49.5 | .. | + | 1 42.7 | 113 1 53.4 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " " | " " | " " | " " |
| 9 | 30.17 | 74.0 | 30 | - 3.7 | + 15 49.7 | . | + 15 46.0 |
| 15 | 30.23 | 78.5 | 31 | - 3.7 | - 15 49.7 | . | - 15 53.4 |
| 20 | 30.23 | 78.0 | | | | | |
| 22 | 29.99 | 77.5 | | | | | |
| 29 | 29.98 | 83.0 | | | | | |
| 31 | 29.97 | 84.0 | | | | | |
| 36 | 29.97 | 79.5 | | | | | |
| 42 | 29.97 | 79.0 | | | | | |
| 44 | 29.98 | 77.8 | | | | | |
| 48 | 30.15 | 82.5 | | | | | |

For summary of the elements of reduction see page 3.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. |
|------------------|---------|-------------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|-------------------|--------------|----------------|----------------|---------------------------|----|-------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | m. | s. | |
| 1876. Aug. 16 | 1 | Herschel and South 379 ² | E. | | | 53.6 | 55.8 | 58.0 | 0.3 | 2.4 | | | m. s. 55 58.03 | — 1.08 | | — 61.52 | 17 | 54 | 55.43 | — 3.38 |
| | 2 | γ ² Sagittarii . . . | E. | 42.6 | 45.7 | 47.4 | 54.5 | 56.9 | 59.3 | 6.4 | 8.2 | 11.2 | 58 56.91 | — 1.16 | — 61.56 | — 61.53 | 17 | 57 | 54.22 | + 0.04 |
| | 3 | δ Ursæ Minoris . . | E. | 53.0 | 37.0 | 2.0 | 46.0 | 20.5 | 54.5 | 38.5 | 4.0 | 48.0 | 13 20.30 | + 1.23 | | — 61.59 | 18 | 12 | 20.03 | + 0.02 |
| | 4 | B. A. C. 6252 . . | E. | 46.5 | 50.4 | 52.7 | 2.2 | 5.5 | 8.6 | 18.0 | 20.4 | 24.4 | 19 5.41 | — 0.64 | | — 61.61 | 18 | 18 | 3.16 | — 2.34 |
| | 5 | ι Aquilæ . . . | E. | 21.0 | 23.5 | 25.0 | 31.2 | 33.4 | 35.4 | 41.7 | 43.2 | 45.8 | 29 33.36 | — 0.97 | — 61.61 | — 61.64 | 18 | 28 | 30.75 | + 0.04 |
| | 6 | 51 Cephei, S. P. . . | E. | 7.5 | 14.0 | 42.5 | 35.5 | 54.0 | 11.0 | 3.5 | 32.5 | 38.5 | 42 53.19 | — 3.07 | | — 61.69 | 6 | 41 | 48.43 | + 0.22 |
| | 7 | a Cygni . . . | E. | 0.6 | 4.0 | 6.5 | 15.0 | 17.9 | 21.0 | 29.3 | 31.4 | 35.1 | 38 17.87 | — 0.67 | — 62.09 | | | | | |
| | 8 | Venus II, N. . . | E. | 27.9 | 29.6 | 33.9 | 35.9 | 38.1 | 40.4 | 42.5 | 46.7 | 48.4 | 18 38.16 | — 0.86 | | — 66.26 | 7 | 17 | 31.04 | — 1.30 |
| | 9 | Venus S. . . | E. | | | | | | | | | | | — 0.65 | — 66.30 | — 66.26 | 7 | 26 | 42.80 | + 0.28 |
| | 10 | a ² Geminorum . . | E. | 35.2 | 38.2 | 40.1 | 47.4 | 49.8 | 52.0 | 59.5 | 1.0 | 4.2 | 27 49.71 | — 0.99 | — 66.20 | — 66.26 | 7 | 32 | 49.68 | — 0.32 |
| | 11 | a Canis Minoris . . | E. | 44.6 | 47.2 | 48.8 | 54.8 | 56.9 | 59.0 | 5.1 | 6.7 | 9.3 | 33 56.93 | — 0.70 | — 66.29 | — 66.26 | 7 | 37 | 45.13 | 0.00 |
| | 12 | β Geminorum . . | E. | 38.2 | 41.0 | 43.0 | 49.8 | 52.0 | 54.4 | 1.5 | 2.9 | 6.0 | 38 52.09 | | | | | | | |
| 21 | 13 | Sun I, S. . . | E. | 3.6 | 6.0 | 7.8 | 13.8 | 16.1 | 18.1 | 24.4 | 26.0 | 28.4 | 3 16.02 | — 0.94 | | — 6.23 | 10 | 3 | 8.85 | |
| | 14 | Sun II, N. . . | E. | | | 21.6 | 23.7 | 25.7 | 27.8 | 29.9 | | | 5 25.75 | — 0.94 | | — 6.23 | 10 | 5 | 18.58 | |
| | 15 | a Ursæ Majoris (R.) | E. | | | 6.6 | 11.2 | 15.5 | 20.0 | 28.8 | 32.0 | 37.8 | 56 11.14 | + 0.05 | | — 6.22 | 10 | 56 | 4.97 | + 0.20 |
| | 16 | a Ursæ Majoris . . | E. | | | | | | | | | | 3 50.77 | — 1.00 | | — 6.22 | 11 | 3 | 43.55 | + 0.18 |
| | 17 | Mercury I, C. . . | E. | 38.3 | 40.9 | 42.5 | 48.8 | 50.8 | 52.8 | 59.0 | 0.6 | 3.2 | | | | | | | | |
| | 18 | γ Ursæ Majoris (R.) | E. | | | | | | | | | | | — 0.23 | | — 6.22 | 11 | 47 | 19.53 | + 0.27 |
| | 19 | γ Ursæ Majoris . . | E. | | | 22.5 | 26.0 | 29.5 | 32.9 | 40.1 | 42.6 | 47.0 | 47 25.98 | — 22.42 | | — 6.21 | 1 | 13 | 44.26 | — 0.50 |
| | 20 | Polaris, S. P. . . | E. | 51.0 | 3.0 | 57.5 | 37.5 | 13.0 | 46.0 | 28.5 | 26.0 | 33.5 | 14 12.89 | — 1.24 | — 6.11 | — 6.20 | 13 | 18 | 41.00 | — 0.11 |
| | 21 | a Virginis . . . | E. | 36.0 | 38.6 | 40.1 | 46.4 | 48.4 | 50.5 | 56.7 | 58.3 | 1.0 | 18 48.44 | — 1.10 | — 6.20 | — 6.20 | 13 | 28 | 24.00 | 0.00 |
| | 22 | ζ Virginis . . . | E. | 19.0 | 23.3 | 27.1 | 29.3 | 31.3 | 34.4 | 35.4 | 39.5 | 43.4 | 28 31.30 | | | | | | | |
| | 23 | η Bootis . . . | E. | 42.5 | 45.3 | 47.0 | 53.3 | 55.5 | 57.7 | 4.3 | 5.8 | 8.6 | 48 55.56 | — 0.87 | — 6.30 | — 6.20 | 13 | 48 | 48.49 | + 0.05 |
| | 24 | λ Ursæ Minoris . . | E. | | | | 12.5 | 3.0 | 55.0 | 46.0 | | | 48 4.10 | + 19.47 | | — 6.54 | 19 | 48 | 17.03 | — 0.64 |
| | 25 | a ² Capricorni . . | E. | 9.0 | 11.6 | 13.4 | 19.6 | 21.7 | 23.9 | 30.0 | 31.7 | 34.3 | 11 21.69 | — 0.98 | — 6.64 | — 6.56 | 20 | 11 | 14.15 | + 0.12 |
| | 26 | Weisse (2) 538 . . | E. | | | 2.0 | 4.3 | 6.6 | 8.7 | 10.9 | | | 16 6.51 | — 0.68 | | — 6.57 | 20 | 15 | 59.26 | — 3.04 |
| | 27 | π Capricorni . . | E. | 12.0 | 14.6 | 16.3 | 22.8 | 24.9 | 27.0 | 33.7 | 35.1 | 38.0 | 20 24.93 | — 1.04 | — 6.72 | — 6.57 | 20 | 20 | 17.32 | + 0.18 |
| 26 | 28 | ε Delphini . . . | E. | 15.5 | 18.0 | 19.6 | 25.8 | 27.9 | 30.0 | 36.2 | 37.9 | 40.6 | 27 27.94 | — 0.76 | — 6.65 | — 6.58 | 20 | 27 | 20.60 | + 0.12 |
| | 29 | a Cygni (R.) . . | E. | | | | | | | | | | | | | | | | | |
| | 30 | a Cygni . . . | E. | | | | | | | | | | | | | | | | | |
| | 31 | μ Aquarii (R.) . . | E. | | | | | | | | | | | | | | | | | |
| | 32 | μ Aquarii . . . | E. | | | | | | | | | | | | | | | | | |
| | 33 | ζ Cygni . . . | E. | 35.8 | 38.7 | 40.5 | 47.4 | 49.7 | 52.0 | 59.3 | 0.9 | 3.9 | 7 49.80 | — 0.58 | — 6.67 | — 6.61 | 21 | 7 | 42.61 | + 0.07 |
| | 34 | B. A. C. 7447 . . | E. | 11.5 | 14.2 | 15.9 | 22.4 | 24.6 | 26.9 | 33.5 | 35.0 | 37.9 | 20 24.66 | — 1.07 | | — 6.62 | 21 | 20 | 16.97 | — 3.99 |
| | 35 | β Aquarii . . . | E. | 3.2 | 4.9 | 8.9 | 10.9 | 13.0 | 15.0 | 17.0 | 21.3 | 22.7 | 25 12.99 | — 0.91 | — 6.64 | — 6.63 | 21 | 25 | 5.45 | + 0.04 |
| | 36 | Anonymous . . . | E. | 35.0 | 37.4 | 39.0 | 45.2 | 47.3 | 49.4 | 55.6 | 57.4 | 59.9 | 27 47.36 | — 0.95 | | — 6.63 | 21 | 27 | 39.78 | — 3.68 |
| | 37 | Pandora . . . | E. | 10.6 | 13.5 | 15.4 | 19.5 | 23.9 | 28.5 | 32.6 | 35.0 | 37.5 | 33 24.06 | — 1.10 | | — 6.63 | 21 | 33 | 16.33 | |
| | 38 | ε Pegasi . . . | E. | 4.0 | 6.6 | 8.2 | 14.4 | 16.4 | 18.5 | 24.7 | 26.2 | 28.8 | 38 16.42 | — 0.77 | — 6.56 | — 6.64 | 21 | 38 | 9.01 | + 0.07 |
| | 39 | Sun I, S. . . | F. | 29.5 | 32.2 | 33.8 | 39.9 | 42.0 | 44.3 | 50.4 | 51.9 | 54.5 | 21 42.06 | — 0.82 | | — 9.28 | 10 | 21 | 31.96 | |
| | 40 | Sun II, N. . . | F. | 38.9 | 41.4 | 43.0 | 49.3 | 51.4 | 53.4 | 59.6 | 1.2 | 3.9 | 23 51.34 | — 0.82 | | — 9.28 | 10 | 23 | 41.24 | |
| | 41 | Mercury II, S. . . | F. | | | 9.5 | 11.5 | 13.7 | 15.6 | 17.8 | | | 33 13.63 | — 0.87 | | — 9.32 | 11 | 33 | 3.44 | — 0.18 |
| | 42 | Mercury, N. . . | F. | | | | | | | | | | | | | | | | | |
| | 43 | 12 Canum Venat. . | F. | | | | | 27.5 | 30.0 | 35.2 | 37.3 | 40.4 | 50 24.76 | — 0.58 | — 9.38 | — 9.36 | 12 | 50 | 14.82 | + 0.02 |
| | 44 | Polaris, S. P. . . | F. | | | 4.0 | 36.0 | 10.0 | 43.0 | 16.0 | | | 14 9.18 | — 11.83 | | — 9.37 | 1 | 13 | 47.98 | — 0.46 |
| 26 | 45 | ζ Virginis . . . | F. | 22.2 | 24.7 | 26.2 | 30.1 | 34.1 | 38.2 | 42.4 | 43.9 | 46.4 | 28 34.24 | — 0.90 | — 9.39 | — 9.38 | 13 | 28 | 23.96 | + 0.01 |
| | 46 | η Bootis . . . | F. | 45.6 | 48.2 | 49.8 | 56.3 | 58.4 | 0.6 | 7.2 | 8.6 | 11.4 | 48 58.46 | — 0.75 | — 9.38 | — 9.40 | 13 | 48 | 48.31 | — 0.07 |
| | 47 | Moon I, N. . . | F. | 58.1 | 1.1 | 2.8 | 10.0 | 12.3 | 14.6 | 21.6 | 23.3 | 26.3 | 12 12.23 | — 1.14 | | — 9.48 | 16 | 12 | 1.61 | + 69.34 |
| | 48 | ζ Ophiuchi . . . | F. | 20.5 | 23.0 | 24.6 | 30.7 | 32.9 | 34.9 | 41.1 | 42.6 | 45.2 | 30 32.83 | — 0.97 | — 9.47 | — 9.49 | 16 | 30 | 22.37 | — 0.02 |
| | 49 | η Herculis . . . | F. | 34.9 | 38.3 | 40.1 | 48.1 | 50.7 | 53.3 | 1.3 | 3.0 | 6.4 | 38 50.68 | — 0.54 | — 9.53 | — 9.50 | 16 | 38 | 40.64 | + 0.04 |
| | 50 | κ Ophiuchi . . . | F. | 48.2 | 50.7 | 52.3 | 58.5 | 0.6 | 2.6 | 8.9 | 10.4 | 13.0 | 52 0.58 | — 0.80 | — 9.49 | — 9.51 | 16 | 51 | 50.27 | + 0.02 |

20. Bisections at threads C₃ and D₃.
37. Thread A used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | | | | | |
| 1 | 298 0 | 10 7.1 | 5.7 | 5.5 | 7.5 | 26 | .. | 085 | .. | 060 | .. | 66.2 | 61 53 41.0 | .. | + 1 42.7 | 113 1 44.9 | - 9.5 |
| 2 | 290 40 | 7.5 | 6.7 | 6.3 | 7.5 | 38 | .. | 415 | .. | 290 | .. | 66.2 | 69 16 49.6 | .. | + 2 24.4 | 120 25 35.2 | - 0.5 |
| 3 | 47 38 | 9.8 | 8.0 | 7.2 | 7.2 | 35 | 080 | .. | 105 | .. | 055 | 66.2 | 312 18 0.8 | .. | - 1 0.6 | 3 23 21.4 | - 3.4 |
| 4 | 10 42 | 11.5 | 10.5 | 9.2 | 10.3 | 33 | .. | 890 | .. | 835 | .. | 66.2 | 349 13 44.8 | .. | - 10.5 | 40 19 55.5 | + 7.1 |
| 5 | 312 44 | 12.0 | 10.6 | 8.8 | 11.3 | 36 | .. | 580 | .. | 440 | .. | 66.2 | 47 12 25.2 | .. | + 59.7 | 98 19 46.1 | 0.0 |
| 6 | 53 46 | 11.0 | 11.0 | 7.5 | 7.4 | 30 | 220 | .. | 120 | .. | 170 | 66.2 | 306 8 46.6 | .. | - 1 15.7 | 357 13 52.1 | - 2.6 |
| 7 | 5 52 | 7.3 | 7.2 | 5.2 | 5.8 | 32 | .. | 350 | .. | 270 | .. | 66.2 | 354 3 16.9 | .. | - 5.8 | 45 9 32.3 | - 1.3 |
| 8 | 337 54 | 0.5 | 28.3 | 27.2 | 28.6 | 34 | 295 | .. | .. | .. | 190 | 66.5 | 22 1 39.0 | .. | + 23.0 | 73 8 23.2 | .. |
| 9 | 337 54 | 0.5 | 28.3 | 27.2 | 28.6 | 36 | .. | 940 | .. | 670 | .. | 66.5 | 22 2 18.2 | .. | + 23.0 | 73 9 2.4 | .. |
| 10 | 353 12 | 5.1 | 2.3 | 1.7 | 4.8 | 35 | .. | 185 | .. | 075 | .. | 66.5 | 6 43 57.4 | 66.0 | + 6.7 | 57 50 25.3 | - 0.9 |
| 11 | 326 36 | 3.8 | 2.0 | 1.0 | 4.3 | 36 | .. | 870 | .. | 850 | .. | 66.5 | 33 20 23.0 | .. | + 37.4 | 84 27 21.6 | - 2.3 |
| 12 | 349 22 | 7.0 | 3.5 | 4.2 | 6.1 | 34 | .. | 975 | .. | 885 | .. | 66.5 | 10 33 56.0 | .. | + 10.6 | 61 40 27.8 | - 1.8 |
| 13 | 332 38 | 2.4 | 29.6 | 29.3 | 1.3 | 33 | 410 | 320 | .. | .. | .. | 66.5 | 27 17 27.0 | 70.4 | + 29.1 | 78 24 17.3 | .. |
| 14 | 333 10 | 5.4 | 2.6 | 1.8 | 5.0 | 34 | .. | .. | .. | 380 | 310 | 66.5 | 26 45 46.0 | .. | + 28.4 | 77 52 35.6 | .. |
| 15 | 156 24 | 8.0 | 7.2 | 7.6 | 8.2 | 31 | 810 | 740 | .. | .. | .. | 66.5 | 203 31 8.2 | .. | + 24.5 | 27 34 48.5 | - 3.2 |
| 16 | 23 28 | 3.1 | 0.5 | 2.0 | 2.4 | 38 | .. | .. | .. | 820 | 790 | 66.5 | 336 28 53.9 | .. | - 24.5 | 27 34 50.6 | - 1.1 |
| 17 | 328 4 | 7.8 | 5.7 | 4.9 | 8.8 | 39 | .. | 150 | .. | 170 | .. | 66.5 | 31 53 2.3 | .. | + 35.0 | 82 59 58.5 | .. |
| 18 | 164 26 | 12.2 | 10.5 | 10.3 | 13.2 | 31 | 550 | 445 | .. | .. | .. | 66.5 | 195 29 8.1 | .. | + 15.6 | 35 36 57.5 | - 1.4 |
| 19 | 15 26 | 5.7 | 3.0 | 4.5 | 6.5 | 38 | .. | .. | .. | 610 | 530 | 66.5 | 344 30 53.0 | .. | - 15.6 | 35 36 58.6 | - 0.3 |
| 20 | 52 22 | 4.2 | 2.4 | 2.7 | 6.3 | 31 | .. | .. | 170 | .. | 420 | 66.5 | 307 33 43.4 | .. | - 12.7 | 358 38 51.9 | - 2.7 |
| 21 | 310 12 | 5.3 | 4.0 | 3.0 | 5.5 | 33 | .. | 515 | .. | 455 | .. | 66.5 | 49 43 32.9 | .. | + 6.0 | 100 31 0.1 | 0.0 |
| 22 | 321 6 | 5.1 | 3.2 | 3.0 | 5.5 | 38 | .. | 070 | .. | 980 | .. | 66.5 | 38 50 42.2 | .. | + 45.0 | 89 57 48.4 | - 0.5 |
| 23 | 340 4 | 1 8 | 0.0 | 29.3 | 1.0 | 36 | .. | 300 | .. | 180 | .. | 66.5 | 19 52 11.4 | .. | + 20.2 | 70 58 52.8 | + 1.1 |
| 24 | 47 58 | 8.3 | 5.7 | 4.5 | 4.2 | 37 | .. | 635 | 690 | 670 | .. | 66.6 | 309 58 38.4 | .. | - 1 8.2 | 1 3 51.4 | - 0.6 |
| 25 | 358 8 | 8.6 | 9.0 | 8.3 | 9.9 | 34 | .. | 960 | .. | 840 | .. | 66.6 | 51 47 59.2 | .. | + 12.8 | 102 55 33.2 | - 0.9 |
| 26 | 340 18 | 6.0 | 5.4 | 4.5 | 6.3 | 31 | .. | 105 | .. | 935 | .. | 66.6 | 19 36 57.3 | 60.0 | + 20.5 | 70 43 39.0 | + 9.4 |
| 27 | 302 26 | 6.0 | 2.7 | 3.0 | 5.1 | 31 | .. | 545 | .. | 430 | .. | 66.6 | 57 29 2.2 | .. | + 1 29.8 | 108 36 53.2 | - 0.8 |
| 28 | 331 56 | 5.6 | 3.0 | 2.3 | 4.6 | 35 | .. | 210 | .. | 190 | .. | 66.6 | 27 59 58.9 | .. | + 30.5 | 79 6 50.6 | - 0.5 |
| 29 | 174 0 | 6.4 | 5.8 | 4.8 | 4.1 | 38 | 145 | 190 | .. | .. | .. | 66.6 | 185 56 44.2 | .. | + 6.0 | 45 9 31.0 | + 1.1 |
| 30 | 5 52 | 9 28.3 | 27.5 | 27.2 | 24.8 | 32 | .. | .. | .. | 785 | 835 | 66.6 | 354 3 16.8 | .. | - 6.0 | 45 9 32.0 | - 0.1 |
| 31 | 228 16 | 10 10.3 | 7.0 | 7.9 | 7.7 | 38 | 000 | 975 | .. | .. | .. | 66.6 | 131 40 45.0 | .. | - 1 4.6 | 99 26 40.8 | + 0.5 |
| 32 | 311 36 | 8.2 | 6.2 | 7.2 | 9.2 | 32 | .. | .. | .. | 050 | 050 | 66.6 | 48 19 15.2 | .. | + 1 4.6 | 99 26 41.0 | + 0.7 |
| 33 | 350 46 | 7.1 | 3.7 | 3.2 | 5.6 | 35 | .. | .. | .. | 695 | 665 | 66.6 | 9 10 8.4 | .. | + 9.3 | 60 16 38.9 | + 0.3 |
| 34 | 299 20 | 0.8 | 26.5 | 28.2 | 29.5 | 34 | .. | 215 | .. | 170 | .. | 66.6 | 60 35 38.1 | .. | + 1 42.1 | 111 43 41.4 | + 10.6 |
| 35 | 314 56 | 6.7 | 3.6 | 3.3 | 7.5 | 32 | .. | 865 | .. | 805 | .. | 66.6 | 44 59 24.0 | .. | + 57.7 | 96 6 42.9 | 0.0 |
| 36 | 311 0 | 5.7 | 2.0 | 2.9 | 7.0 | 32 | .. | 115 | .. | 400 | .. | 66.6 | 48 35 16.7 | .. | + 1 6.2 | 100 2 44.1 | + 12.1 |
| 37 | 296 58 | 4.8 | 3.7 | 4.3 | 6.5 | 40 | .. | 910 | .. | 885 | .. | 66.6 | 62 56 53.4 | .. | + 1 52.7 | 114 5 57.3 | - 5.3 |
| 38 | 330 22 | 5.3 | 2.8 | 2.7 | 4.1 | 36 | .. | .. | .. | 770 | 760 | 66.6 | 29 34 23.6 | .. | + 32.8 | 80 41 17.6 | - 1.7 |
| 39 | 330 56 | 10.0 | 6.3 | 7.3 | 9.8 | 36 | 890 | 980 | .. | .. | .. | 64.6 | 29 0 27.5 | .. | + 30.5 | 80 7 19.2 | .. |
| 40 | 331 28 | 6.8 | 4.5 | 3.0 | 4.6 | 38 | .. | .. | .. | 231 | 136 | 64.6 | 28 28 43.9 | 81.0 | + 29.8 | 79 35 34.9 | .. |
| 41 | 324 18 | 9.4 | 8.1 | 5.4 | 9.7 | 32 | 250 | .. | .. | .. | 134 | 64.6 | 35 37 15.0 | .. | + 39.4 | 86 44 15.6 | .. |
| 42 | 324 18 | 9.4 | 8.1 | 5.4 | 9.7 | 31 | .. | 886 | .. | 820 | .. | 64.6 | 35 37 9.8 | .. | + 39.4 | 86 44 10.4 | .. |
| 43 | 0 0 | 10.2 | 8.0 | 5.8 | 9.8 | 28 | .. | .. | .. | 586 | 548 | 64.6 | 359 54 21.1 | .. | - 0.1 | 51 0 42.2 | - 1.6 |
| 44 | 52 22 | 6.1 | 2.7 | 2.9 | 4.7 | 34 | 284 | 278 | 268 | 296 | 278 | 64.6 | 307 33 42.8 | 81.6 | - 1 11.2 | 358 38 52.8 | - 3.0 |
| 45 | 321 6 | 6.5 | 3.3 | 2.8 | 8.2 | 38 | .. | 236 | .. | 196 | .. | 64.6 | 38 50 44.3 | .. | + 44.1 | 89 57 49.6 | + 0.7 |
| 46 | 340 4 | 7.9 | 6.2 | 3.9 | 8.2 | 35 | .. | .. | .. | 958 | .. | 64.6 | 19 52 11.9 | 82.0 | + 19.8 | 70 58 52.9 | + 0.9 |
| 47 | 294 6 | 8.4 | 7.4 | 5.6 | 10.0 | 32 | .. | 840 | 918 | 040 | .. | 65.9 | 65 49 27.2 | 78.0 | + 2 2.1 | 116 57 50.5 | .. |
| 48 | 310 44 | 5.2 | 3.7 | 1.6 | 5.8 | 33 | .. | 810 | .. | 716 | .. | 65.9 | 49 11 36.2 | .. | + 1 3.9 | 100 19 1.3 | + 0.4 |
| 49 | 0 12 | 12.4 | 11.8 | 9.5 | 9.8 | 35 | 085 | 056 | .. | 914 | 890 | 65.9 | 359 44 2.2 | .. | - 0.3 | 50 50 23.1 | + 1.2 |
| 50 | 330 36 | 7.7 | 5.8 | 3.2 | 5.6 | 31 | .. | 274 | .. | 246 | .. | 65.9 | 29 18 59.5 | .. | + 31.1 | 80 25 51.8 | 0.0 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| 10 | in. | ° | | | | | |
| 13 | 30.26 | 66.0 | 8 | - 7.2 | + 19.6 | .. | + 12.4 |
| 26 | 30.15 | 63.5 | 9 | - 7.2 | - 19.6 | 0.0 | - 26.8 |
| 40 | 30.09 | 80.5 | 13 | - 4.0 | - 15 50.8 | .. | - 15 54.8 |
| 44 | 30.05 | 81.5 | 14 | - 3.9 | + 15 50.8 | .. | + 15 46.9 |
| 46 | 30.03 | 81.5 | 17 | - 3.6 | .. | + 0.1 | - 3.5 |
| 47 | 30.02 | 78.5 | 39 | - 4.3 | - 15 52.1 | .. | - 15 56.4 |
| | | | 40 | - 4.2 | + 15 52.1 | .. | + 15 47.9 |
| | | | 41 | - 4.0 | - 2.7 | + 0.2 | - 6.5 |
| | | | 42 | - 4.0 | + 2.7 | .. | - 1.3 |
| | | | 47 | -49 51.6 | + 14 57.7 | .. | - 34 54.0 |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|--------|---------|-------------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | |
| | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| 1876. | | | | | | | | | | | | | | | | | | |
| Aug 26 | 1 | δ Herculis . . . | F. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 9 12.23 | - 0.76 | - 9.47 | - 9.52 | 17 9 1.95 | - 0.03 |
| | 2 | α^1 Herculis . . . | F. | .. | 8.0 | 10.0 | 12.2 | 14.3 | 16.5 | 20.7 | 22.3 | 24.9 | 9 12.23 | - 0.56 | .. | - 9.52 | 17 19 55.38 | - 2.08 |
| | 3 | Lalande 31762 . . | F. | 50.2 | 53.3 | 55.4 | 0.3 | 2.9 | 5.3 | 7.9 | .. | .. | 20 5.46 | .. | .. | .. | .. | .. |
| | 4 | B. A. C. 5895 . . | F. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | - 1.15 | .. | - 9.54 | 17 50 50.42 | - 3.38 |
| | 5 | B. A. C. 6072 . . | F. | 47.1 | 50.0 | 51.7 | 58.8 | 1.2 | 3.4 | 10.5 | 12.2 | 15.1 | 51 1.11 | .. | .. | .. | .. | .. |
| | 6 | Herschel and South 379 ¹ | F. | 52.0 | 54.9 | 56.5 | .. | .. | .. | 14.2 | 15.9 | 18.8 | 55 5.38 | - 1.09 | .. | - 9.54 | 17 54 54.75 | - 3.26 |
| | 7 | Herschel and South 379 ² | F. | .. | .. | 1.2 | 3.5 | 5.8 | 8.0 | 10.3 | .. | .. | 55 5.77 | - 1.09 | .. | - 9.54 | 17 54 55.14 | - 3.26 |
| | 8 | B. A. C. 6184 . . | F. | 39.6 | 44.1 | 47.1 | 57.9 | 1.8 | 5.3 | 16.5 | 19.2 | 23.7 | 8 1.69 | - 0.29 | .. | - 9.55 | 18 7 51.85 | - 1.89 |
| | 9 | XVIII (7) . . . | F. | 11.6 | 14.8 | 16.8 | 24.4 | 27.0 | 29.5 | 37.0 | 39.0 | 42.2 | 10 26.92 | - 1.28 | .. | - 9.55 | 18 10 16.09 | - 3.80 |
| | 10 | Mural Zones 45, 21 | F. | 48.1 | 51.0 | 52.7 | 59.6 | 2.0 | 4.3 | 11.1 | 12.9 | 15.8 | 33 1.94 | - 1.14 | .. | - 9.57 | 18 32 51.23 | - 3.63 |
| | 11 | Mural Zones 47, 21 | F. | .. | .. | 41.8 | 44.2 | 46.4 | 48.7 | 51.1 | .. | .. | 42 46.45 | - 1.15 | .. | - 9.57 | 18 42 35.73 | - 3.72 |
| | 12 | Anonymous . . . | F. | .. | .. | .. | .. | 5.2 | 7.4 | 9.8 | 14.5 | 16.2 | 49 5.14 | - 1.16 | .. | - 9.57 | 18 48 54.41 | - 3.77 |
| | 13 | Mural Zones 47, 23 | F. | 24.7 | 27.4 | 29.3 | 36.0 | 38.6 | 40.9 | 48.0 | 49.7 | 52.6 | 50 38.58 | - 1.16 | .. | - 9.58 | 18 50 27.84 | - 3.77 |
| | 14 | B. A. C. 6516 . . | F. | .. | 49.3 | 52.4 | 55.6 | 58.4 | 1.5 | .. | .. | .. | 57 55.48 | - 0.42 | .. | - 9.58 | 18 57 45.48 | - 2.30 |
| | 15 | δ Aquilæ . . . | F. | .. | .. | .. | .. | .. | .. | 36.5 | 38.1 | 40.6 | 19 28.36 | - 0.83 | - 9.65 | - 9.59 | 19 19 17.94 | + 0.11 |
| | 16 | B. A. C. 7077 . . | F. | 30.3 | 33.4 | 35.2 | 41.7 | 44.0 | 46.3 | 53.0 | 54.7 | 57.6 | 25 44.02 | - 1.10 | .. | - 9.63 | 20 25 33.29 | - 4.05 |
| | 17 | Anonymous . . . | F. | 50.5 | 53.5 | 55.0 | 1.9 | 4.2 | 6.4 | 13.1 | 14.7 | 17.5 | 27 4.09 | - 1.10 | .. | - 9.63 | 20 26 53.36 | - 4.05 |
| | 18 | B. A. C. 7237 . . | F. | 45.9 | 48.7 | 50.5 | 57.3 | 59.5 | 1.7 | 8.5 | 10.0 | 12.9 | 45 59.44 | - 1.09 | .. | - 9.64 | 20 45 48.71 | - 4.05 |
| | 19 | Mural Zones 187, 66 | F. | 56.6 | 59.0 | 0.8 | 7.2 | 9.5 | 11.7 | 18.2 | 19.9 | 22.6 | 7 9.50 | - 1.04 | .. | - 9.66 | 21 6 58.80 | - 3.96 |
| | 20 | O. Arg. S. 21237 . | F. | 56.0 | 58.9 | 0.5 | 6.9 | 9.2 | 11.3 | 17.9 | 19.5 | 22.2 | 8 9.16 | - 1.04 | .. | - 9.66 | 21 7 58.46 | - 3.96 |
| | 21 | ι Pegasi . . . | F. | 21.7 | 24.2 | 25.9 | 32.4 | 34.6 | 36.7 | 43.4 | 44.9 | 47.6 | 16 34.60 | - 0.68 | - 9.63 | - 9.66 | 21 16 24.26 | - 0.08 |
| | 22 | Rhodope . . . | F. | 57.5 | 0.0 | 1.6 | 8.6 | 10.8 | 13.0 | 20.0 | 21.3 | 23.7 | 23 10.72 | - 1.04 | .. | - 9.67 | 21 23 0.01 | .. |
| | 23 | Anonymous . . . | F. | 38.2 | 40.8 | 42.3 | 48.4 | .. | 52.4 | 58.9 | 0.3 | 2.9 | 27 50.52 | - 0.93 | .. | - 9.67 | 21 27 39.92 | - 3.70 |
| | 24 | ϵ Pegasi . . . | F. | 7.0 | 9.7 | 11.2 | 17.4 | 19.5 | 21.5 | 27.9 | 29.4 | 32.1 | 38 19.52 | - 0.77 | - 9.63 | - 9.67 | 21 38 9.08 | - 0.03 |
| | 25 | μ Capricorni . . | F. | 33.9 | 36.4 | 38.0 | 44.4 | 46.5 | 48.5 | 55.0 | 56.4 | 59.0 | 46 46.46 | - 0.97 | - 9.59 | - 9.68 | 21 46 35.81 | - 0.06 |
| | 26 | Flora . . . | F. | 32.5 | 35.5 | 37.4 | 43.6 | 45.9 | 47.9 | 54.4 | 56.0 | 58.8 | 18 45.78 | - 1.02 | .. | - 9.70 | 22 18 35.06 | .. |
| | 27 | Saturn I, N. . . | F. | 7.0 | 9.7 | 11.0 | .. | .. | .. | 27.7 | 29.4 | 32.0 | 29 19.47 | - 0.95 | .. | - 9.70 | 22 29 8.82 | .. |
| | 28 | Saturn II, S. . . | F. | .. | .. | 16.6 | 18.6 | 20.8 | 23.0 | 25.1 | .. | .. | 29 20.83 | - 0.95 | .. | - 9.70 | 22 29 10.18 | .. |
| | 29 | α Piscis Australis | F. | 48.8 | 51.7 | 53.4 | 0.5 | 2.9 | 5.2 | 12.3 | 14.0 | 17.0 | 51 2.87 | - 1.15 | - 9.76 | - 9.71 | 22 50 52.01 | + 0.09 |
| | 30 | α Pegasi . . . | F. | 36.2 | 38.8 | 40.4 | 46.7 | 48.8 | 51.0 | 57.3 | 58.9 | 1.5 | 58 48.84 | - 0.71 | - 9.72 | - 9.72 | 22 58 38.41 | + 0.03 |
| | 31 | Lomia . . . | F. | 21.8 | 24.3 | 26.0 | 32.4 | 34.7 | 36.7 | 42.9 | 44.8 | 47.0 | 2 34.51 | - 0.92 | .. | - 9.72 | 23 2 23.87 | .. |
| | 32 | Angelina . . . | F. | 14.9 | 17.2 | 18.7 | 24.7 | 26.8 | 28.8 | 34.8 | 36.6 | 39.0 | 14 26.83 | - 0.86 | .. | - 9.73 | 23 14 16.24 | .. |
| | 33 | Lydia . . . | F. | .. | .. | 18.3 | 20.3 | 22.5 | 24.6 | 26.7 | .. | .. | 17 22.49 | - 0.97 | .. | - 9.73 | 23 17 11.79 | .. |
| | 34 | Alexandra . . . | F. | .. | .. | 9.6 | 11.6 | 13.6 | 15.6 | 17.8 | .. | .. | 22 13.65 | - 0.77 | .. | - 9.73 | 23 22 3.15 | .. |
| | 35 | Leto . . . | F. | 57.5 | 59.8 | 1.3 | 7.9 | 10.0 | 12.1 | 18.0 | 20.0 | 22.4 | 38 9.89 | - 0.98 | .. | - 9.74 | 23 37 59.17 | .. |
| | 36 | α Canis Minoris . | E. | 48.9 | 51.5 | 53.0 | 59.3 | 1.3 | 3.3 | 9.5 | 11.0 | 13.6 | 33 1.27 | - 1.05 | - 10.32 | .. | .. | .. |
| | 37 | β Geminorum . . | E. | 42.4 | 45.5 | 47.1 | 51.6 | 53.9 | 56.5 | 58.7 | 1.0 | .. | 37 56.37 | - 0.76 | - 10.33 | .. | .. | .. |
| | 38 | Sun I, N. . . | E. | 49.0 | 51.6 | 53.2 | 59.6 | 1.6 | 3.6 | 9.7 | 11.2 | 13.9 | 29 1.49 | - 1.02 | .. | - 10.39 | 10 28 50.08 | .. |
| | 39 | Sun II . . . | E. | 58.4 | 0.7 | 3.4 | 8.5 | 10.8 | 12.8 | 18.9 | 20.4 | 23.0 | 31 10.77 | - 1.02 | .. | - 10.39 | 10 30 59.36 | .. |
| | 40 | Mercury, C. . . | E. | 6.4 | 8.6 | 10.5 | 16.5 | 18.5 | 20.6 | 26.7 | 28.2 | 30.6 | 44 18.51 | - 1.12 | .. | - 10.42 | 11 44 6.97 | + 0.03 |
| | 41 | γ Ursæ Majoris (R.) | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 42 | γ Ursæ Majoris . | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 43 | ι Canum Venat. . | E. | 9.9 | 13.3 | 15.2 | 23.3 | 25.7 | 28.5 | 36.4 | 38.4 | 41.7 | 50 25.82 | - 0.65 | - 10.39 | - 10.44 | 12 50 14.73 | - 0.05 |
| | 44 | Polaris, S. P. . . | E. | .. | .. | .. | 48.5 | 23.5 | 58.0 | 30.5 | .. | .. | 14 23.48 | - 21.29 | .. | - 10.45 | 1 13 51.74 | + 1.82 |
| | 45 | γ Draconis (R.) . | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 46 | γ Draconis . . . | E. | .. | .. | .. | 56.5 | 59.8 | 3.0 | 9.6 | 12.0 | 16.0 | 53 56.45 | - 0.28 | .. | - 10.52 | 17 53 45.65 | 0.00 |
| | 47 | Moon I, N. . . | E. | .. | .. | .. | .. | 27.0 | 29.5 | 34.4 | 36.0 | 39.0 | 3 24.56 | - 1.51 | .. | - 10.52 | 18 3 12.53 | + 70.03 |
| | 48 | δ Ursæ Minoris . | E. | .. | .. | 8.3 | 44.5 | 18.5 | 52.5 | 28.0 | .. | .. | 12 18.60 | + 8.21 | .. | - 10.53 | 18 12 16.28 | + 0.72 |
| | 49 | δ Draconis (R.) . | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | + 0.40 | .. | - 10.58 | 19 12 33.13 | - 0.02 |
| | 50 | δ Draconis . . . | E. | .. | .. | 32.5 | 38.0 | 43.2 | 48.7 | 54.0 | .. | .. | 12 43.31 | .. | .. | .. | .. | .. |

3, 5, 10, 11, 17 Thread B used.
13, 16, 22, 23, 31, 32, 33, 34, 35. Thread A used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | | |
| | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | " | ° ' " | ° ' " | ° ' " | ° ' " | " | |
| 1 | 354 48 | 10 9.0 | 7.7 | 6.7 | 8.7 | 37 | .. | .. | .. | 170 | 132 | 65.9 | 5 8 33.3 | .. | + | 5.0 | 56 14 59.5 | + 0.8 |
| 2 | 335 34 | 5.0 | 3.9 | 1.6 | 5.8 | 32 | .. | .. | .. | 200 | 164 | 65.9 | 24 21 13.3 | .. | + | 25.1 | 75 27 59.6 | - 0.6 |
| 3 | 358 6 | 8.8 | 7.2 | 4.5 | 7.4 | 30 | .. | .. | .. | 312 | 318 | 65.9 | 1 51 20.0 | .. | + | 1.8 | 52 57 43.0 | + 5.0 |
| 4 | 358 6 | 8.8 | 7.2 | 4.5 | 7.4 | 33 | .. | .. | .. | 884 | 828 | 65.9 | 1 49 41.8 | .. | + | 1.8 | 52 56 4.8 | + 5.8 |
| 5 | 292 22 | 13.7 | 12.6 | 10.7 | 12.8 | 33 | .. | .. | .. | 228 | .. | 65.9 | 67 36 9.4 | .. | + | 2 14.3 | 118 44 44.9 | - 11.8 |
| 6 | 298 0 | 3.8 | 29 6 | 29.6 | 1.2 | 26 | .. | .. | .. | 884 | 778 | 65.9 | 61 53 46.9 | .. | + | 1 44.0 | 113 1 52.1 | - 9.6 |
| 7 | 298 0 | 3.8 | 29 6 | 29.6 | 1.2 | 26 | .. | 312 | .. | 160 | .. | 65.9 | 61 53 37.8 | .. | + | 1 44.0 | 113 1 43 0 | - 9.6 |
| 8 | 17 16 | 8.1 | 6.7 | 5.6 | 7.4 | 32 | 892 | 822 | .. | .. | .. | 65.9 | 342 39 25.2 | .. | - | 17.4 | 33 45 29.0 | + 9.0 |
| 9 | 283 50 | 5 6 | 1 8 | 2.8 | 6.9 | 36 | 308 | 274 | .. | .. | .. | 65.9 | 76 6 13.9 | 72.0 | + | 3 41.3 | 127 16 16.4 | - 12.8 |
| 10 | 293 28 | 6.9 | 4 2 | 3.8 | 5.1 | 36 | .. | 000 | .. | 990 | .. | 65.9 | 66 30 43.5 | .. | + | 2 7.8 | 117 39 12.5 | - 7.9 |
| 11 | 292 24 | 6.9 | 4 6 | 4.0 | 5.5 | 42 | .. | 100 | .. | 096 | .. | 65.9 | 67 36 17.3 | .. | + | 2 14 8 | 118 44 53.3 | - 7.3 |
| 12 | 292 6 | 4.3 | 2 4 | 1.6 | 3.6 | 31 | .. | 850 | .. | 846 | .. | 65.9 | 67 49 5.6 | .. | + | 2 16.3 | 118 57 43.1 | - 6.7 |
| 13 | 292 6 | 4.3 | 2 4 | 1.6 | 3.6 | 31 | .. | 126 | .. | 128 | .. | 65.9 | 67 46 21.1 | .. | + | 2 16.0 | 118 54 58.3 | - 6.6 |
| 14 | 8 54 | 4.5 | 2 4 | 1.5 | 1.7 | 35 | .. | .. | .. | 536 | 372 | 65.9 | 351 2 2.0 | 70.5 | - | 8.8 | 42 8 14 4 | + 9.9 |
| 15 | 323 56 | 7.7 | 4 1 | 3.0 | 7.1 | 38 | .. | .. | .. | 066 | 040 | 65.9 | 36 0 44.2 | .. | + | 40.7 | 87 7 46.1 | + 0.1 |
| 16 | 295 40 | 6.0 | 1 4 | 1.1 | 4.1 | 34 | .. | 876 | .. | 840 | .. | 65.9 | 64 13 18.4 | .. | + | 1 55.9 | 115 21 35.5 | + 4.2 |
| 17 | 295 40 | 6.0 | 1 4 | 1.1 | 4.1 | 38 | .. | 654 | .. | 636 | .. | 65.9 | 64 19 22.3 | .. | + | 1 56.4 | 115 27 39.9 | + 4.3 |
| 18 | 296 50 | 4.8 | 1 7 | 1.1 | 5.7 | 37 | .. | 220 | .. | 160 | .. | 65.9 | 63 6 27.8 | .. | + | 1 50.5 | 114 14 39.5 | + 6.5 |
| 19 | 300 28 | 4.8 | 0 3 | 1 4 | 5.5 | 34 | .. | 534 | .. | 480 | .. | 65.9 | 59 27 46.4 | .. | + | 1 35.2 | 110 35 42.8 | + 9.3 |
| 20 | 300 28 | 4.8 | 0 3 | 1 4 | 5.5 | 30 | .. | 900 | .. | 780 | .. | 65.9 | 59 26 50.3 | 67.6 | + | 1 35.2 | 110 34 46.7 | + 9.4 |
| 21 | 340 20 | 6.1 | 3 2 | 1 2 | 5.8 | 37 | .. | .. | .. | 530 | 514 | 65.9 | 19 36 34.8 | .. | + | 20.1 | 70 43 16.1 | + 0.6 |
| 22 | 300 6 | 6.7 | 3 5 | 2 8 | 7.2 | 36 | .. | 320 | .. | 320 | .. | 65.9 | 59 47 42.8 | .. | + | 1 36.5 | 110 55 40.5 | .. |
| 23 | 310 58 | 3.9 | 2 2 | 0 0 | 2 5 | 34 | .. | 800 | .. | 756 | .. | 65.9 | 48 55 16.3 | .. | + | 1 4.7 | 100 2 42.2 | + 12.3 |
| 24 | 330 22 | 9.8 | 7 2 | 5 5 | 7 7 | 36 | .. | 782 | .. | 746 | .. | 65.9 | 29 34 25.7 | .. | + | 32.0 | 80 41 18 9 | + 0.4 |
| 25 | 306 56 | 5.6 | 2 1 | 1 5 | 5 0 | 36 | .. | 186 | .. | 152 | .. | 65.9 | 53 0 12.5 | .. | + | 1 14.8 | 104 7 48.5 | - 0.2 |
| 26 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 27 | 309 32 | 10.4 | 6 0 | 6 8 | 10 2 | 31 | 698 | .. | .. | .. | 540 | 65.9 | 50 23 7.5 | .. | + | 1 8.2 | 101 30 36.9 | .. |
| 28 | 309 32 | 10.4 | 6 0 | 6 8 | 10 2 | 32 | .. | 866 | .. | 822 | .. | 65.9 | 50 23 26.4 | .. | + | 1 8.2 | 101 30 55.8 | .. |
| 29 | 290 48 | 6.7 | 4 2 | 3 7 | 7 5 | 33 | .. | 580 | .. | 556 | .. | 65.9 | 69 7 31.5 | .. | + | 2 27.2 | 120 16 22.9 | - 1.2 |
| 30 | 335 36 | 10.4 | 7 2 | 5 9 | 8 6 | 37 | 390 | 368 | .. | .. | .. | 65.9 | 24 20 34.8 | .. | + | 25.6 | 75 27 21.6 | - 1.2 |
| 31 | 310 38 | 9.0 | 6 8 | 5 9 | 8 8 | 33 | .. | 968 | .. | 900 | .. | 65.9 | 49 15 8.9 | .. | + | 1 5.6 | 100 22 35.7 | - 3.4 |
| 32 | 317 16 | 8.6 | 6 6 | 5 4 | 9 2 | 37 | 430 | 412 | .. | .. | .. | 65.9 | 42 38 1.1 | .. | + | 52.1 | 93 45 14.4 | - 3.1 |
| 33 | 305 56 | 7.3 | 4 4 | 3 3 | 7 1 | 41 | 430 | 416 | .. | .. | .. | 65.9 | 53 59 0.4 | .. | + | 1 17.8 | 105 6 39.4 | - 3.7 |
| 34 | 328 38 | 7 4 | 4 2 | 3 3 | 5 0 | 36 | .. | 008 | .. | 000 | .. | 65.9 | 31 15 38.0 | .. | + | 34.4 | 82 22 33.6 | - 3.4 |
| 35 | 305 2 | 9.7 | 6 8 | 6 9 | 9 1 | 38 | .. | 594 | .. | 570 | .. | 65.9 | 54 52 20.5 | 64.5 | + | 1 20.4 | 106 0 2.1 | - 5.6 |
| 36 | 326 36 | 1.2 | 28.9 | 28.5 | 0.7 | 37 | .. | 105 | .. | 045 | .. | 65.5 | 33 20 22.4 | 69.0 | + | 37.2 | 84 27 20.8 | - 2.9 |
| 37 | 349 22 | 6.6 | 0 8 | 3 3 | 5 2 | 35 | .. | 250 | .. | 140 | .. | 65.5 | 10 33 57.0 | .. | + | 10.6 | 61 40 29.7 | - 0.2 |
| 38 | 330 46 | 5.1 | 2 0 | 2 0 | 4 8 | 39 | .. | 620 | .. | 610 | .. | 65.5 | 29 11 5.0 | 77.0 | + | 30.9 | 80 17 57.1 | .. |
| 39 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 40 | 322 50 | 2.8 | 29.0 | 28.5 | 2 4 | 32 | .. | 850 | .. | 910 | .. | 65.5 | 37 5 19.0 | .. | + | 41.6 | 88 12 21.8 | .. |
| 41 | 164 26 | 6.5 | 4 8 | 5 7 | 7 0 | 31 | .. | 745 | 795 | .. | .. | 65.5 | 195 29 6.5 | .. | + | 15.2 | 35 36 59.5 | - 1.2 |
| 42 | 15 26 | 10.3 | 6 7 | 10 0 | 12 1 | 38 | .. | .. | 410 | 340 | .. | 65.5 | 344 30 53.9 | 80.0 | - | 15.2 | 35 36 59.9 | - 0.9 |
| 43 | 0 0 | 3.6 | 2 0 | 0 7 | 2 5 | 29 | .. | 090 | .. | 040 | .. | 65.5 | 359 54 22.4 | .. | - | 0.1 | 51 0 43.5 | - 0.7 |
| 44 | 52 22 | 0.5 | 5 7 | 7 3 | 7 3 | 34 | .. | .. | 050 | .. | 115 | 65.5 | 397 33 44.0 | .. | - | 1 11.4 | 358 38 53.8 | - 2.8 |
| 45 | 167 20 | 9 29.7 | 28.4 | 28.7 | 26.7 | 37 | 985 | 895 | .. | .. | .. | 66.6 | 192 20 33.7 | 71.5 | + | 12.5 | 38 29 35.0 | - 1.8 |
| 46 | 12 32 | 10 10.0 | 7 3 | 7 2 | 7 9 | 32 | .. | .. | .. | 840 | 820 | 66.6 | 347 23 28.2 | .. | - | 12.5 | 38 29 36.9 | + 0.1 |
| 47 | 291 52 | 13.0 | 12 6 | 13 4 | 15 5 | 34 | .. | 260 | 200 | 120 | .. | 66.6 | 63 3 53.0 | .. | + | 2 18.2 | 119 12 32.4 | .. |
| 48 | 47 38 | 8.7 | 5 2 | 5 0 | 4 8 | 35 | 220 | .. | 320 | .. | 280 | 66.6 | 312 18 2.0 | .. | - | 1 1.6 | 3 23 21.6 | - 1.0 |
| 49 | 151 24 | 4.7 | 4 5 | 4 3 | 5 8 | 38 | 002 | 880 | .. | .. | .. | 66.6 | 208 32 39.5 | .. | + | 30.7 | 22 33 11.0 | - 2.2 |
| 50 | 28 28 | 14.5 | 9 8 | 11 3 | 11 5 | 32 | .. | .. | .. | 105 | 020 | 66 6 | 331 27 20.8 | .. | - | 30.7 | 22 33 11.3 | - 1.9 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " | " | " | " |
| 9 | 30.04 | 74.0 | 27 | - 0.8 | + 9.4 | .. | + 8.6 |
| 14 | 30.04 | 72.2 | 28 | - 0.8 | - 9.4 | .. | - 10.2 |
| 20 | 30.06 | 70.0 | 38 | - 4.3 | + 15 52.6 | .. | + 15 48.3 |
| 35 | 30.05 | 67.0 | 40 | - 4.3 | .. | + 0.2 | - 4.1 |
| 36 | 30.29 | 68.0 | 47 | - 50 8.6 | + 14 47.7 | .. | - 35 20.9 |
| 38 | 30.08 | 76.0 | | | | | |
| 42 | 30.06 | 78.0 | | | | | |
| 45 | 30.12 | 73.0 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. | |
|------------------|---------|----------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|--------------|--------|----------------|---------------------------|----------------------------|----------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | | | Clock adopted. |
| | | | | | | | | | | | | | m. s. | s. | s. | | | s. |
| 1876. Aug. 28 | 1 | ♂ Aquilæ | E. | 17.3 | 19.7 | 21.3 | 27.5 | 29.6 | 31.5 | 37.5 | 39.0 | 41.7 | 19 29.46 | — 1.04 | —10.56 | —10.58 | 19 19 17.84 | + 0.03 |
| | 2 | κ Aquilæ (R.) . . | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 3 | κ Aquilæ | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 4 | γ Aquilæ | E. | 24.0 | 26.5 | 28.1 | 34.4 | 36.5 | 38.5 | 44.8 | 46.3 | 49.0 | 40 36.46 | — 0.95 | —10.59 | —10.59 | 19 40 24.92 | + 0.03 |
| | 5 | α Aquilæ | E. | 46.2 | 48.8 | 50.5 | 56.6 | 58.7 | 0.8 | 7.0 | 8.5 | 11.2 | 44 58.70 | — 0.97 | —10.62 | —10.59 | 19 44 47.14 | + 0.07 |
| | 6 | μ Aquarii (R.) . . | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 7 | μ Aquarii | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 8 | Pandora | E. | 0.9 | 3.9 | 5.8 | 12.0 | 14.1 | 16.6 | 23.5 | 25.1 | 28.0 | 27 14.43 | — 1.40 | .. | —10.63 | 21 27 2.40 | .. |
| | 9 | Anonymous | E. | 52.3 | 55.0 | 56.5 | 3.0 | 5.1 | 7.5 | 13.6 | 15.1 | 18.0 | 0 5.12 | — 1.30 | .. | —10.66 | 21 59 53.16 | — 3.89 |
| | 10 | Mural Zones 207, 63 | E. | 43.6 | 46.3 | 48.0 | .. | .. | .. | 5.0 | 6.8 | 9.2 | 1 56.45 | — 1.30 | .. | —10.66 | 22 1 44.49 | — 3.89 |
| | 11 | Anonymous | E. | 49.4 | 52.0 | 53.6 | .. | .. | .. | 10.7 | 12.5 | 15.0 | 2 2.20 | — 1.30 | .. | —10.66 | 22 1 50.24 | — 3.89 |
| | 12 | Flora | E. | 43.0 | 45.7 | 47.4 | 53.9 | 56.0 | 58.0 | 4.5 | 6.0 | 9.0 | 16 55.94 | — 1.33 | .. | —10.67 | 22 16 43.94 | .. |
| | 13 | 9 Draconis, S. P. | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 14 | Saturn N. . . . | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 15 | Saturn S. . . . | E. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 16 | ζ Pegasi | E. | 19.3 | 21.8 | 23.5 | 29.7 | 31.9 | 33.9 | 40.0 | 41.0 | 44.3 | 35 31.78 | — 0.94 | —10.81 | —10.69 | 22 35 20.15 | + 0.18 |
| | 17 | α Piscis Australis . | E. | 49.9 | 52.9 | 54.0 | 1.7 | 4.0 | 6.4 | 13.5 | 15.3 | 18.4 | 51 4.08 | — 1.51 | —10.59 | —10.70 | 22 50 51.87 | — 0.07 |
| | 18 | α Pegasi | E. | 37.1 | 39.9 | 41.6 | 48.0 | 50.0 | 52.1 | 58.5 | 0.0 | 2.0 | 58 49.98 | — 0.87 | —10.68 | —10.70 | 22 58 38.41 | + 0.01 |
| | 19 | Angelina | E. | 41.7 | 44.0 | 45.0 | 52.0 | 54.0 | 56.0 | 2.0 | 3.7 | 6.0 | 12 53.92 | — 1.10 | .. | —10.71 | 23 12 42.11 | .. |
| | 20 | Lydia | E. | 34.6 | 37.0 | 38.9 | 45.0 | 47.1 | 49.3 | 55.6 | 57.0 | 0.0 | 15 47.21 | — 1.26 | .. | —10.71 | 23 15 35.22 | .. |
| | 21 | Anonymous | E. | 10.9 | 13.3 | 15.0 | 20.8 | 22.9 | 24.9 | 31.5 | 32.0 | 35.5 | 20 23.08 | — 1.15 | .. | —10.72 | 23 20 11.21 | — 3.58 |
| 30 | 22 | Sun I, N. . . . | F. | 7.0 | 9.5 | 11.0 | 17.2 | 19.3 | 21.3 | 27.5 | 29.2 | 31.7 | 36 19.30 | — 0.93 | .. | —11.42 | 10 36 6.95 | .. |
| | 23 | Sun II, S. . . . | F. | 16.0 | 18.4 | 20.0 | 26.3 | 28.3 | 30.4 | 36.7 | 38.0 | 40.8 | 38 28.33 | — 0.93 | .. | —11.42 | 10 38 15.98 | .. |
| | 24 | Polaris, S. P. . . | F. | .. | .. | .. | 17.0 | 21.0 | 24.0 | 26.0 | .. | .. | 14 20.35 | —18.07 | .. | —11.48 | .. | .. |
| | 25 | ζ Virginis | F. | 26.7 | 28.2 | 32.3 | 31.4 | 36.5 | 38.5 | 40.5 | 44.0 | 46.1 | 28 36.42 | — 1.02 | —11.49 | .. | .. | .. |
| | 26 | γ Bootis | F. | 47.6 | 50.4 | 52.0 | 58.4 | 0.6 | 2.8 | 9.2 | 10.7 | 13.6 | 49 0.59 | — 0.82 | —11.48 | .. | .. | .. |
| Sept. 2 | 27 | Sun I, N. . . . | F. | .. | .. | 10.4 | 12.5 | 14.5 | 16.5 | 18.5 | .. | .. | 47 14.49 | — 0.86 | .. | —13.88 | 10 46 59.75 | .. |
| | 28 | Sun II, S. . . . | F. | .. | .. | 19.0 | 21.2 | 23.2 | 25.2 | 27.6 | .. | .. | 49 23.25 | — 0.86 | .. | —13.88 | 10 49 8.51 | .. |
| | 29 | Polaris, S. P. . . | F. | .. | .. | 19.0 | 51.0 | 25.0 | 59.0 | 32.0 | .. | .. | 14 24.74 | —17.45 | .. | —13.94 | 1 13 53.35 | + 0.63 |
| | 30 | α Virginis | F. | 43.6 | 46.0 | 47.7 | 54.0 | 56.0 | 58.0 | 4.2 | 5.8 | 8.4 | 18 55.97 | — 1.05 | —13.93 | —13.94 | 13 18 40.98 | — 0.03 |
| | 31 | ζ Virginis | F. | 26.4 | 29.0 | 30.7 | 36.8 | 38.8 | 40.8 | 47.0 | 48.3 | 51.0 | 28 38.77 | — 0.94 | —13.93 | —13.94 | 13 28 23.89 | — 0.01 |
| | 32 | γ Bootis | F. | 52.7 | 54.3 | 58.6 | 0.8 | 3.0 | 5.1 | 7.3 | 11.6 | 13.3 | 49 2.97 | — 0.74 | —13.97 | —13.95 | 13 48 48.28 | — 0.03 |
| | 33 | Anonymous | F. | 55.3 | 58.0 | 59.7 | 6.0 | 8.2 | 10.3 | 16.6 | 18.5 | 21.0 | 0 8.16 | — 1.07 | .. | —14.16 | 21 59 52.93 | — 3.91 |
| | 34 | Anonymous | F. | 28.2 | 30.8 | 32.7 | 39.3 | 41.2 | 43.4 | 49.5 | 51.4 | 53.0 | 1 41.19 | — 1.07 | .. | —14.16 | 22 1 25.96 | — 3.91 |
| | 35 | Mural Zones 207, 70 | F. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 36 | Mural Zones 207, 71 | F. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 37 | Moon I, S. . . . | F. | 17.5 | 20.2 | 21.7 | 28.2 | 30.3 | 32.3 | 38.8 | 40.4 | 43.0 | 21 30.27 | — 1.02 | .. | —14.17 | 22 21 15.08 | +63.66 |
| | 38 | Saturn I, N. . . . | F. | 11.7 | 14.3 | 16.0 | .. | .. | .. | 32.6 | 34.2 | 36.8 | 27 24.27 | — 1.00 | .. | —14.17 | 22 27 9.10 | .. |
| | 39 | Saturn II, S. . . . | F. | .. | .. | 21.4 | 23.4 | 25.6 | 27.6 | 29.7 | .. | .. | 27 25.55 | — 1.00 | .. | —14.17 | 22 27 10.38 | .. |
| | 40 | λ Aquarii | F. | .. | 23.4 | 25.4 | 27.5 | 29.7 | 31.7 | 36.0 | 37.4 | 40.0 | 46 27.59 | — 0.97 | —14.24 | —14.18 | 22 46 12.14 | + 0.14 |
| | 41 | Alexandra | F. | 30.5 | 32.8 | 34.6 | 40.9 | 42.8 | 44.9 | 51.0 | 52.8 | 55.5 | 15 42.87 | — 0.92 | .. | —14.19 | 23 15 27.76 | .. |
| | 42 | B. A. C. 8184 . . | F. | 13.7 | 16.4 | 17.9 | 24.0 | 26.0 | 28.0 | 34.4 | 35.8 | 38.4 | 23 26.07 | — 0.93 | .. | —14.20 | 23 23 10.94 | — 3.60 |
| | 43 | ω Piscium | F. | 2.8 | 5.4 | 7.0 | 13.0 | 15.1 | 17.1 | 23.3 | 24.8 | 27.4 | 53 15.10 | — 0.82 | —14.17 | —14.21 | 23 53 0.07 | — 0.07 |
| | 44 | α Andromedæ . . | F. | 3.0 | 5.8 | 7.7 | 14.6 | 17.0 | 19.2 | 26.2 | 27.8 | 30.9 | 2 16.91 | — 0.58 | —14.19 | —14.21 | 0 2 2.12 | 0.00 |
| | 45 | Lalande 512 . . . | F. | 9.0 | 11.5 | 13.0 | 19.2 | 21.3 | 23.4 | 29.5 | 31.0 | 33.7 | 19 21.29 | — 0.87 | .. | —14.22 | 0 19 6.20 | — 3.41 |
| | 46 | β Ceti | F. | 28.0 | 30.5 | 32.3 | 38.6 | 40.7 | 43.0 | 49.4 | 51.0 | 53.8 | 37 40.81 | — 1.09 | —14.24 | —14.23 | 0 37 25.49 | + 0.06 |
| | 47 | Weisse 753 . . . | F. | 48.1 | 49.8 | 53.8 | 55.8 | 57.7 | 59.9 | 2.2 | 6.1 | 7.5 | 44 57.88 | — 0.85 | .. | —14.23 | 0 44 42.80 | — 3.34 |

8, 10, 19, 20, 21, 34, 36, 41. Thread A used.

9, 33. Thread B used.

10. Telescope micrometer reading decreased one revolution in reduction.

37. Bisections at sets B and D.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | |
| 1 | 323 56 | 10 9.3 | 6.3 | 6.0 | 9.5 | 37 | .. | 840 | .. | 780 | .. | 66.6 | 36 0 42.6 | .. | + | 41.0 | 87 7 44.8 | - 0.1 |
| 2 | 226 6 | 11.9 | 9.0 | 11.9 | 9.5 | 32 | 280 | 180 | .. | .. | .. | 66.6 | 133 49 18.9 | .. | - | 58.8 | 97 18 1.1 | + 0.3 |
| 3 | 313 46 | 6.7 | 3.8 | 4.8 | 6.5 | 37 | .. | .. | .. | 730 | 695 | 66.6 | 46 10 39.6 | .. | + | 58.8 | 97 17 59.6 | - 1.2 |
| 4 | 331 22 | 7.9 | 3.9 | 4.5 | 6.8 | 36 | .. | 235 | .. | 100 | .. | 66.6 | 28 34 15.5 | .. | + | 30.8 | 79 41 7.5 | + 0.2 |
| 5 | 329 36 | 7.2 | 4.5 | 6.3 | 4.8 | 36 | .. | 840 | .. | 700 | .. | 66.6 | 30 20 24.7 | .. | + | 33.1 | 81 27 19.0 | - 0.9 |
| 6 | 228 16 | 13.3 | 9.5 | 11.7 | 10.3 | 37 | 885 | 720 | .. | .. | .. | 66.6 | 131 40 45.1 | .. | - | 1 3 6 | 99 26 39.7 | - 0.4 |
| 7 | 311 36 | 10.3 | 8.3 | 9.1 | 9.2 | 31 | .. | .. | .. | 875 | 870 | 66.6 | 48 19 13.0 | .. | + | 1 3.6 | 99 26 38.7 | - 1.4 |
| 8 | 296 52 | 5.8 | 3.5 | 3.2 | 5.3 | 34 | .. | 020 | .. | 880 | .. | 66.6 | 63 1 6.6 | .. | + | 1 51.2 | 114 9 19.0 | - 5.2 |
| 9 | 303 50 | 1.3 | 28.7 | 28.8 | 0.5 | 30 | .. | 160 | .. | 150 | .. | 66.6 | 56 7 9.7 | .. | + | 1 24.6 | 107 14 55.5 | +14.7 |
| 10 | 303 50 | 1.3 | 28.7 | 28.8 | 0.5 | 26 | .. | .. | .. | 480 | 430 | 66.6 | 56 0 52.8 | .. | + | 1 24.3 | 107 8 38.3 | +14.9 |
| 11 | 303 50 | 1.3 | 28.7 | 28.8 | 9.5 | 31 | .. | .. | .. | .. | 500 | 66.6 | 56 4 58.9 | .. | + | 1 24.5 | 107 12 44.6 | +14.9 |
| 12 | 301 48 | 6.3 | 3.5 | 3.3 | 4.8 | 32 | .. | 075 | .. | 030 | .. | 66.6 | 58 7 11.0 | .. | + | 1 31.4 | 109 15 3.6 | - 7.5 |
| 13 | 64 40 | 5.9 | 2.0 | 3.7 | 3.5 | 37 | .. | 350 | .. | 300 | .. | 66.6 | 295 16 29.8 | .. | - | 2 0.1 | 346 20 50.9 | - 3.5 |
| 14 | 309 30 | 3.7 | 29.5 | 0.0 | 3.2 | 37 | 760 | .. | .. | .. | 560 | 66.6 | 50 26 34.0 | .. | + | 1 9.0 | 101 34 4.2 | .. |
| 15 | 309 30 | 3.7 | 29.5 | 0.0 | 3.2 | 39 | .. | 010 | .. | 890 | .. | 66.6 | 50 26 53.8 | .. | + | 1 9.0 | 101 34 24.0 | .. |
| 16 | 331 14 | 6.6 | 4.3 | 4.2 | 5.6 | 34 | .. | 080 | .. | 000 | .. | 66.6 | 28 41 42.3 | .. | + | 31.2 | 70 48 34.7 | - 2.1 |
| 17 | 290 48 | 11.0 | 9.7 | 8.7 | 10.2 | 33 | .. | 180 | .. | 070 | .. | 66.6 | 69 7 32.8 | .. | + | 2 28.6 | 120 16 22.6 | - 1.7 |
| 18 | 335 36 | 11.1 | 9.4 | 9.0 | 10.0 | 37 | .. | 220 | .. | 100 | .. | 66.6 | 24 20 34.9 | 62.0 | + | 25.8 | 75 27 21.9 | - 0.5 |
| 19 | 317 6 | 12.4 | 8.8 | 9.5 | 10.5 | 33 | .. | 410 | .. | 400 | .. | 66.6 | 42 47 4.2 | .. | + | 52.8 | 93 54 18.2 | - 3.1 |
| 20 | 305 44 | 8.9 | 6.8 | 7.7 | 9.0 | 33 | .. | 560 | .. | 515 | .. | 66.6 | 54 9 4.0 | .. | + | 1 18.9 | 105 16 44.1 | - 4.7 |
| 21 | 313 22 | 7.0 | 6.3 | 6.0 | 6.5 | 18 | .. | .. | .. | 160 | 130 | 66.6 | 46 27 7.6 | .. | + | 1 0.0 | 97 34 28.8 | +20.9 |
| 22 | 330 2 | 9.4 | 5.7 | 5.0 | 7.5 | 35 | 308 | 288 | .. | .. | .. | 64.4 | 29 54 0.8 | .. | + | 31.2 | 81 0 53.2 | .. |
| 23 | 329 30 | 3.8 | 0.8 | 29.4 | 0.5 | 34 | .. | .. | .. | 606 | 578 | 64.4 | 30 25 45.0 | .. | + | 31.9 | 81 32 38.1 | .. |
| 24 | 52 22 | 4.7 | 29.6 | 1.7 | 0.6 | 34 | .. | 574 | 580 | 570 | 578 | 64.4 | 307 33 44.8 | 85.6 | - | 1 10.6 | 358 38 55.4 | - 1.8 |
| 25 | 321 6 | 9.6 | 5.7 | 7.5 | 10.7 | 37 | .. | .. | .. | 990 | 976 | 64.4 | 38 50 44.6 | .. | + | 43.7 | 89 57 49.5 | + 0.6 |
| 26 | 340 4 | 6.5 | 2.9 | 4.5 | 7.8 | 36 | .. | .. | .. | 160 | 054 | 64.4 | 19 52 13.1 | 86.2 | + | 19.6 | 70 58 53.9 | + 1.6 |
| 27 | 328 56 | 6.6 | 5.0 | 4.0 | 4.4 | 33 | 030 | 076 | .. | .. | .. | 64.8 | 30 59 24.9 | .. | + | 33.3 | 82 6 19.4 | .. |
| 28 | 328 24 | 7.6 | 0.5 | 5.0 | 5.1 | 32 | .. | .. | .. | 056 | 934 | 64.8 | 31 31 10.6 | 74.8 | + | 34.0 | 82 38 5.8 | .. |
| 29 | 52 22 | 5.7 | 2.2 | 2.6 | 3.6 | 34 | 602 | .. | 572 | .. | 672 | 64.8 | 307 33 47.5 | .. | - | 1 11.5 | 358 38 57.2 | - 1.0 |
| 30 | 310 32 | 5.7 | 3.7 | 0.8 | 5.7 | 33 | .. | 684 | .. | 586 | .. | 64.8 | 49 23 33.1 | 78.0 | + | 1 4.2 | 100 30 58.5 | - 1.0 |
| 31 | 321 6 | 9.6 | 5.9 | 4.3 | 9.1 | 38 | .. | 100 | .. | 020 | .. | 64.8 | 38 50 44.2 | .. | + | 44.4 | 89 57 49.8 | + 0.9 |
| 32 | 340 3 | 8 7.0 | 3.8 | 3.0 | 5.1 | 32 | .. | .. | .. | 066 | 042 | 64.8 | 19 52 10.8 | 77.2 | + | 20.0 | 70 58 52.0 | - 0.5 |
| 33 | 303 50 | 9 21.4 | 16.9 | 17.1 | 20.1 | 31 | .. | 096 | .. | 056 | .. | 65.3 | 56 7 11.6 | .. | + | 1 24.7 | 107 14 57.5 | +14.6 |
| 34 | 303 50 | 21.4 | 16.9 | 17.1 | 20.1 | 27 | .. | .. | .. | 872 | 914 | 65.3 | 56 1 18.0 | .. | + | 1 24.4 | 107 9 3.6 | +14.8 |
| 35 | 304 2 | 10 9.9 | 4.7 | 4.8 | 8.7 | 32 | 670 | 656 | .. | .. | .. | 65.3 | 55 31 20.8 | .. | + | 1 22.9 | 106 39 4.9 | +15.6 |
| 36 | 304 24 | 9.9 | 4.7 | 4.8 | 8.7 | 28 | .. | .. | .. | 890 | 852 | 65.3 | 55 27 51.1 | .. | + | 1 22.7 | 106 35 35.0 | +15.7 |
| 37 | 308 16 | 3.8 | 28.7 | 28.9 | 2.3 | 33 | 340 | .. | 290 | .. | 110 | 65.3 | 51 39 24.6 | .. | + | 1 12.0 | 102 46 57.8 | .. |
| 38 | 309 20 | 3.1 | 28.9 | 28.8 | 2.8 | 32 | 026 | .. | .. | .. | 850 | 65.3 | 50 35 4.4 | .. | + | 1 9.5 | 101 42 35.1 | .. |
| 39 | 309 20 | 3.1 | 28.9 | 28.8 | 2.8 | 33 | .. | 290 | .. | 300 | .. | 65.3 | 50 35 25.3 | 61.6 | + | 1 9.5 | 101 42 56.0 | .. |
| 40 | 312 50 | 3.7 | 0.0 | 29.4 | 1.9 | 37 | .. | 900 | .. | 834 | .. | 65.3 | 47 6 35.7 | .. | + | 1 1.5 | 98 13 58.4 | - 1.7 |
| 41 | 316 44 | 7.0 | 2.1 | 2.0 | 5.6 | 38 | .. | 550 | .. | 538 | .. | 65.3 | 43 10 15.5 | 61.0 | + | 53.6 | 94 17 30.3 | - 4.5 |
| 42 | 315 50 | 1.2 | 26.8 | 26.2 | 1.0 | 31 | .. | 060 | .. | 960 | .. | 65.3 | 44 4 48.3 | .. | + | 55.3 | 95 12 4.8 | +21.2 |
| 43 | 327 14 | 2.5 | 29.0 | 28.3 | 2.4 | 35 | .. | .. | .. | 670 | 654 | 65.3 | 32 42 2.2 | .. | + | 36.8 | 83 49 0.2 | - 1.0 |
| 44 | 349 26 | 5.4 | 0.6 | 0.6 | 3.1 | 30 | .. | 750 | .. | 700 | .. | 65.3 | 10 28 47.7 | 60.0 | + | 10.6 | 61 35 19.5 | - 0.5 |
| 45 | 322 18 | 10.8 | 7.8 | 5.8 | 10.8 | 32 | 440 | 428 | .. | 326 | 310 | 65.3 | 37 37 19.2 | .. | + | 44.2 | 88 44 24.6 | +23.1 |
| 46 | 302 24 | 3.3 | 28.0 | 28.8 | 1.8 | 34 | .. | .. | .. | 348 | 326 | 65.3 | 57 31 41.6 | .. | + | 1 29.9 | 108 39 32.7 | - 3.4 |
| 47 | 323 48 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| 18 | 30.12 | 65.0 | 14 | — 0.8 | + 9.9 | .. | + 9.1 |
| 24 | 30.02 | 84.5 | 15 | — 0.8 | — 9.9 | .. | — 10.7 |
| 26 | 30.01 | 84.5 | 23 | — 4.4 | + 15 52.4 | .. | + 15 48.0 |
| 28 | 29.96 | 74.0 | 24 | — 4.5 | — 15 52.4 | .. | — 15 56.9 |
| 30 | 29.99 | 77.5 | 28 | — 4.5 | + 15 53.2 | .. | + 15 48.7 |
| 32 | 30.00 | 77.2 | 29 | — 4.6 | — 15 53.2 | .. | — 15 57.8 |
| 39 | 30.19 | 65.0 | 38 | — 43 11.0 | — 15 5.3 | .. | — 58 16.3 |
| 41 | 30.10 | 65.0 | 39 | — 0.8 | + 10.4 | .. | + 9.6 |
| 44 | 30.10 | 64.0 | 40 | — 0.8 | — 10.4 | .. | — 11.2 |

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. | |
|------------------|---------|---------------------------|-----------|--------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|------------|--------------|----------------|----------------|---------------------------|-------------|----------------------------|--------|
| | | | | I. | II | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | | | |
| | | | | m. | s. | | | | | | | | | s. | s. | s. | h. | m. | s. | s. |
| 1876. Sept. 2 | 1 | B. A. C. 237 . . . | F. | . . | 9. | 11.8 | 13.9 | 15.8 | 17.8 | 21.8 | 23.6 | 26.2 | 45 | 13.80 | - 0.85 | . . | -14.23 | 0 44 58.72 | - 3.34 | |
| | 2 | Schjellerup 337 . . | F. | 34.0 | 5.0 | 9.1 | 11.2 | 13.3 | 15.5 | 17.6 | 21.3 | 23.2 | 52 | 13.31 | - 0.84 | . . | -14.23 | 0 51 58.24 | - 3.31 | |
| | 3 | Durch. 3, 133 . . . | F. | 24.0 | 27. | 28.8 | 34 | 8 | 36.9 | 38.8 | 44.9 | 46.5 | 49.1 | 52 | 36.86 | - 0.84 | . . | 0 52 21.79 | - 3.31 | |
| | 4 | Polaris | F. | . | . | 54.0 | 22.0 | 50.0 | 16.0 | . | . | . | 13 | 49.38 | +18.43 | . . | -14.24 | 1 13 53.57 | + 0.61 | |
| | 5 | Piscium | F. | 56.7 | 39. | 0.7 | 7.0 | 9.0 | 11.0 | 17.3 | 18.8 | 21.5 | 39 | 9.01 | - 0.79 | -14.20 | -14.25 | 1 38 53.97 | - 0.08 | |
| | 6 | β Arietis | F. | 52.0 | 5 | 57.0 | 3.5 | 5.6 | 7.8 | 14.5 | 15.9 | 18.7 | 48 | 5.66 | - 0.67 | -14.27 | -14.26 | 1 47 50.73 | + 0.03 | |
| | 7 | Neptune | F. | 53.1 | 5 | 57.6 | 3.7 | 5.8 | 7.9 | 14.1 | 15 | 7 | 14 | 5.80 | - 0.76 | . . | -14.27 | 2 13 50.77 | . . | |
| | 8 | Hydra | S. | 17.1 | 19.0 | 21.3 | 27.5 | 29.5 | 31.5 | 37.7 | 39.3 | 41.9 | 40 | 29.50 | - 0.99 | -14.64 | -14.71 | 8 40 13.80 | - 0.11 | |
| | 9 | Hydra | S. | 34.0 | 30 | 38.3 | 44.3 | . . | 48.3 | 54.6 | 56.0 | 58.8 | 21 | 46.38 | - 1.08 | -14.74 | -14.70 | 9 21 30.60 | + 0.01 | |
| | 10 | Leonis | S. | 50.5 | 33.0 | 54.6 | 0.9 | 2.9 | 4.9 | 11.3 | 12.8 | 15.4 | 2 | 2.90 | - 0.92 | -14.73 | -14.69 | 10 1 47.29 | 0.00 | |
| | 11 | Leonis | S. | 11.8 | 14. | 16.2 | 22.7 | 24.9 | 27.2 | 33.6 | 35.2 | 38.0 | 13 | 24.89 | - 0.82 | -14.70 | -14.69 | 10 13 9.38 | - 0.01 | |
| | 12 | Sun I, S. | S. | 17.0 | 19.0 | 21.2 | 27.4 | 29.4 | 31.5 | 37.6 | 39.0 | 41.8 | 54 | 29.39 | - 1.01 | . . | -14.68 | 10 54 13.70 | . . | |
| | 13 | Sun II, N. | S. | | | 33.7 | 35.8 | 37.7 | 39.8 | 42.0 | | | 56 | 37.81 | - 1.01 | . . | -14.68 | 10 50 22.12 | . . | |
| | 14 | Mercury C. | S. | 10.6 | 13. | 4.7 | 20.7 | 22.8 | 24.0 | 31.0 | 32.5 | 35.2 | 20 | 22.84 | - 1.14 | . . | -14.66 | 12 20 7.04 | + 0.04 | |
| | 15 | β Corvi | S. | 56.2 | 58.0 | 0.7 | | | | 18.4 | 20.0 | 22.9 | 28 | 9.52 | - 1.43 | -14.71 | -14.66 | 12 27 53.43 | + 0.01 | |
| | 16 | Canum Venat. . . . | S. | | | | 29.9 | 32.5 | 35.2 | 40.6 | 42.6 | 45.7 | 50 | 29.98 | - 0.56 | -14.70 | -14.65 | 12 50 14.77 | + 0.05 | |
| | 17 | Polaris, S. P. . . . | S. | | | 5.0 | 57.0 | 32.0 | 6.0 | 37.0 | | | 14 | 30.94 | -23.02 | . . | -14.65 | 1 13 53.27 | - 0.45 | |
| | 18 | Virginis | S. | | | | 58.8 | 1.0 | 5.1 | 6.6 | 9.2 | 18 | 56.77 | - 1.26 | -14.53 | -14.65 | 13 18 40.86 | - 0.14 | | |
| | 19 | Virginis | S. | 27.4 | 29.0 | 31.4 | 37.5 | 39.7 | 41.7 | 47.9 | 49.4 | 51.9 | 28 | 39.64 | - 1.11 | -14.65 | -14.64 | 13 28 23.89 | + 0.01 | |
| | 20 | Cephei, S. P. . . . | S. | | | | 39.5 | 55.5 | 31.5 | 0.5 | 5.0 | 42 | 20.34 | -12.60 | . . | -14.75 | 6 41 52.99 | - 3.85 | | |
| | 21 | Lyre | S. | 33.1 | 36. | 38.2 | 45.6 | 48.0 | 50.3 | 57.8 | 0.0 | 2.6 | 45 | 48.03 | - 0.60 | -14.97 | -14.75 | 18 45 32.68 | + 0.25 | |
| | 22 | Aquila | S. | 48.4 | 51. | 7.0 | 59.0 | 1.0 | 3.1 | 5.3 | 11.0 | 13.7 | 0 | 1.06 | - 0.88 | -14.80 | -14.76 | 18 59 45.42 | + 0.14 | |
| | 23 | Mural Zones 119, 60 | S. | | | 8.4 | 0.7 | 2.9 | 5.0 | 7.4 | | | 31 | 2.89 | - 1.46 | . . | -14.76 | 19 30 46.07 | - 3.85 | |
| | 24 | O. Arg. S. 19809 . . | S. | 22.5 | 25. | 7.3 | 34.2 | 36.4 | 38.6 | 45.7 | 47.4 | 50.5 | 31 | 36.47 | - 1.40 | . . | -14.76 | 19 31 20.25 | - 3.85 | |
| | 25 | Aquila | S. | 28.1 | 30. | 32.3 | 38.4 | 40.4 | 42.5 | 48.9 | 50.4 | 53.0 | 40 | 40.51 | - 0.93 | -14.73 | -14.77 | 19 40 24.81 | - 0.01 | |
| | 26 | Aquila | S. | 50.4 | 53.0 | 4.5 | 0.8 | 2.7 | 4.8 | 11.0 | 12.6 | 15.0 | 44 | 2.76 | - 0.95 | -14.77 | -14.77 | 19 44 47.04 | + 0.04 | |
| | 27 | Ursæ Minoris. . . . | S. | | | | 52.0 | 37.0 | 28.0 | | | | 47 | 49.10 | +29.77 | . . | -14.77 | 19 48 4.10 | - 0.25 | |
| | 28 | B. A. C. 6913 | S. | 45.9 | 52.1 | 5.5 | 0.6 | 14.5 | 19.0 | 33.1 | 36.7 | 42.3 | 1 | 14.39 | - 0.62 | . . | -14.77 | 20 0 58.91 | - 2.03 | |
| | 29 | B. A. C. 6948 | S. | 14.5 | 17.4 | 9.2 | 26.3 | 28.8 | 31.1 | 38.2 | 39.9 | 42.9 | 8 | 28.70 | - 1.52 | . . | -14.78 | 20 8 12.40 | - 4.12 | |
| | 30 | Weisse (2) 538 . . . | S. | 1.8 | 4.5 | 0.0 | 12.7 | 14.8 | 16.9 | 23.3 | 25.0 | 27.0 | 16 | 14.73 | - 0.81 | . . | -14.78 | 20 15 59.14 | - 2.95 | |
| | 31 | B. A. C. 7175 | S. | 20.0 | 23.4 | 5.4 | 33.2 | 36.0 | 38.6 | 46.6 | 48.5 | 51.9 | 38 | 35.97 | - 1.73 | . . | -14.79 | 20 38 19.45 | - 4.66 | |
| | 32 | B. A. C. 7237 | S. | 51.5 | 54.4 | 36.0 | 2.6 | 4.9 | 7.1 | 14.0 | 15.5 | 18.3 | 46 | 4.02 | - 1.42 | . . | -14.79 | 20 45 48.71 | - 4.02 | |
| | 33 | Mural Zones 187, 66 | S. | 1.9 | 4.7 | 6.2 | 12.8 | 14.0 | 17.2 | 23.8 | 25.4 | 28.1 | 7 | 15.00 | - 1.36 | . . | -14.79 | 21 6 58.85 | - 3.95 | |
| | 34 | O. Arg. S. 21237 . . | S. | 1.5 | 4.2 | 5.9 | 12.5 | 14.7 | 16.8 | 23.4 | 25.0 | 27.7 | 8 | 14.63 | - 1.36 | . . | -14.79 | 21 7 58.48 | - 3.95 | |
| | 35 | B. A. C. 7447 | S. | 19.9 | 22.6 | 24.3 | 30.8 | 33.2 | 35.3 | 41.8 | 43.4 | 46.4 | 20 | 33.08 | - 1.37 | . . | -14.80 | 2 20 16.91 | - 4.01 | |
| | 36 | B. A. C. 7483 | S. | 14.8 | 17.0 | 23.0 | 27.3 | 30.6 | 33.8 | 37.3 | 44.0 | 46.6 | 26 | 30.59 | - 0.21 | . . | -14.80 | 21 26 15.58 | - 2.79 | |
| | 37 | O. Arg. S. 21542 . . | S. | 18.9 | 21.5 | 23.0 | 29 | 4 | 31.6 | 33.6 | 40.0 | 41.6 | 44.3 | 32 | 31.54 | - 1.28 | . . | -14.80 | 21 32 15.46 | - 3.86 |
| | 38 | B. A. C. 7589 | S. | 49.0 | 53.0 | 55.5 | 5.5 | 8.8 | 12.0 | 21.0 | 24.4 | 28.5 | 41 | 8.73 | - 0.22 | . . | -14.80 | 21 40 53.71 | - 2.87 | |
| | 39 | Flora | S. | 28.0 | 30.5 | 32.3 | 38.7 | 41.0 | 43.0 | 49.8 | 51.4 | 54.2 | 10 | 40.99 | - 1.35 | . . | -14.81 | 22 10 24.83 | . . | |
| | 40 | Tr. Zones 205, 40 . | S. | 48.0 | 50.6 | 52.0 | 8.6 | 0.7 | 2.7 | 9.0 | 10.7 | 13.3 | 17 | 0.63 | - 1.27 | . . | -14.81 | 22 16 44.55 | - 3.87 | |
| | 41 | Tr. Zones 204, 17 . | S. | 27.3 | 30.0 | 31.6 | 7.9 | 40.0 | 42.2 | 48.5 | 50.1 | 52.8 | 19 | 40.04 | - 1.27 | . . | -14.81 | 22 19 23.91 | - 3.88 | |
| | 42 | Saturn I, S. | S. | 38.8 | 41.2 | 42.6 | | | | 59.6 | 1.0 | 3.6 | 26 | 51.18 | - 1.22 | . . | -14.82 | 22 26 35.14 | . . | |
| | 43 | Saturn II, N. | S. | | | 48.0 | 0.3 | 52.4 | 51.4 | 56.6 | | | 26 | 52.43 | - 1.22 | . . | -14.82 | 22 26 36.30 | . . | |
| | 44 | Pegasi | S. | 23.4 | 26.1 | 27.7 | 31.0 | 36.0 | 37.9 | 44.0 | 45.7 | 48.3 | 35 | 35.90 | - 0.93 | -14.90 | -14.82 | 22 35 20.15 | + 0.14 | |
| | 45 | Piscis Australis . . | S. | 54.2 | 57.2 | 58.6 | 6.0 | 8.4 | 0.7 | 17.7 | 19.6 | 22.4 | 51 | 8.34 | - 1.52 | -14.77 | -14.82 | 22 50 52.00 | - 0.01 | |
| | 46 | Pegasi | S. | 41.7 | 44.0 | 45.7 | 42.1 | 54.2 | 56.3 | 2.6 | 4.1 | 6.8 | 58 | 54.17 | - 0.87 | -14.80 | -14.82 | 22 58 38.48 | + 0.01 | |
| | 47 | α Cygni | P. | 18.9 | 22.5 | 24.0 | 33.3 | 36.2 | 39.1 | 47.6 | 49.8 | 53.5 | 37 | 36.19 | - 0.36 | -21.04 | -21.10 | 20 37 14.73 | - 0.04 | |
| | 48 | μ Aquarii (R.) . . . | P. | | | | | | | | | | 46 | 23.65 | - 1.11 | -21.12 | -21.10 | 20 46 1.44 | + 0.09 | |
| | 49 | μ Aquarii | P. | | | | | | | 31.9 | 33.5 | 36.1 | 46 | 23.65 | - 0.62 | -21.15 | -21.11 | 21 7 42.47 | + 0.05 | |
| | 50 | ζ Cygni | P. | 50.0 | 53.1 | 54.8 | 1.9 | 4.3 | 6.5 | 13.5 | 15.4 | 18.3 | 8 | 4.20 | | | | | | |

3. Thread B used.

16. Telescope micrometer reading decreased one revolution in reduction.

20. Bisections at threads C₁ and D₃.

39, 40. Thread A used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | | | | | | |
| 1 | 323 48 | 10 3.4 | 28.1 | 26.4 | 29.8 | 24 | 028 | .. | 950 | .. | 65.3 | 35 15 1.4 | .. | + | 40.6 | 86 22 3.2 | +23.7 | |
| 2 | 324 38 | 3.4 | 28.1 | 26.4 | 29.8 | 34 | .. | .. | 765 | 745 | 65.3 | 35 20 19.6 | .. | + | 40.7 | 86 27 21.5 | +23.7 | |
| 3 | 324 38 | 2.6 | 27.0 | 27.3 | 26.4 | 33 | 665 | 590 | 740 | .. | 65.3 | 310 15 43.9 | .. | - | 7.8 | 1 21 57.3 | -4.3 | |
| 4 | 49 10 | 10.1 | 5.9 | 4.8 | 7.8 | 37 | .. | 890 | .. | 766 | .. | 65.3 | 30 20 41.1 | .. | + | 33.7 | 81 27 36.0 | -2.2 |
| 5 | 329 36 | 8.5 | 4.1 | 3.1 | 6.4 | 30 | .. | 970 | .. | 890 | .. | 65.3 | 18 40 53.9 | .. | + | 19.5 | 69 47 34.6 | -0.7 |
| 6 | 341 14 | 3.7 | 29.5 | 28.6 | 0.8 | 37 | 980 | 964 | .. | 864 | 836 | 65.3 | 27 20 35.9 | 57.5 | + | 29.8 | 75 27 20.9 | .. |
| 7 | 332 36 | 0.1 | 27.5 | 26.4 | 26.0 | 38 | 310 | 290 | .. | .. | .. | 65.7 | 32 0 38.1 | 71.2 | + | 35.0 | 83 7 34.3 | +0.3 |
| 8 | 327 56 | 9 29.8 | 27.8 | 27.6 | 28.7 | 35 | .. | 480 | .. | 260 | .. | 65.7 | 46 59 55.0 | .. | + | 59.7 | 98 7 15.9 | +0.1 |
| 9 | 312 56 | 10 5.7 | 5.6 | 3.6 | 4.5 | 38 | .. | 720 | .. | 592 | .. | 65.7 | 26 18 51.8 | .. | + | 27.5 | 77 25 10.5 | +1.0 |
| 10 | 333 38 | 5.7 | 4.2 | 1.5 | 3.0 | 32 | .. | 680 | .. | 602 | .. | 65.7 | 18 25 18.5 | .. | + | 18.5 | 69 31 58.2 | +1.4 |
| 11 | 341 30 | 1.6 | 27.1 | 26.9 | 1.0 | 33 | 650 | 620 | .. | .. | .. | 65.7 | 32 15 28.8 | .. | + | 31.8 | 83 22 24.8 | .. |
| 12 | 327 40 | 2.3 | 0.1 | 29.2 | 2.5 | 34 | .. | .. | 160 | 110 | .. | 65.7 | 31 43 39.2 | 78.8 | + | 34.1 | 82 50 34.5 | .. |
| 13 | 328 12 | 3.4 | 1.9 | 1.4 | 2.0 | 33 | .. | 070 | .. | 040 | .. | 65.7 | 42 1 23.3 | .. | + | 49.4 | 93 8 33.9 | .. |
| 14 | 317 54 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 15 | 298 22 | 7.2 | 5.8 | 4.5 | 5.8 | 29 | .. | .. | 880 | 910 | 65.7 | 359 54 24.6 | .. | - | 0.1 | 51 0 45.7 | +0.2 | |
| 16 | 0 0 | 5.6 | 3.0 | 3.4 | 1.7 | 34 | 540 | .. | 500 | .. | 550 | 65.7 | 307 33 46.9 | .. | - | 111.0 | 358 38 57.1 | -1.7 |
| 17 | 52 22 | 5.6 | 4.0 | 2.7 | 6.8 | 33 | .. | .. | 500 | 490 | 65.7 | 49 23 33.4 | .. | + | 3.7 | 100 30 58.3 | -1.1 | |
| 18 | 310 32 | 8.0 | 5.0 | 6.5 | 8.7 | 38 | .. | 110 | .. | 960 | .. | 65.7 | 38 50 44.4 | .. | + | 44.0 | 89 57 49.6 | +0.7 |
| 19 | 321 6 | 10.9 | 7.0 | 9.0 | 6.6 | 30 | .. | .. | 230 | 220 | 65.0 | 306 8 44.8 | .. | - | 16.0 | 357 13 50.0 | -1.3 | |
| 20 | 53 46 | 7.7 | 6.0 | 4.9 | 6.7 | 35 | .. | .. | 862 | 852 | 65.0 | 5 40 11.0 | 72.8 | + | 5.5 | 56 46 37.7 | -1.4 | |
| 21 | 354 16 | 7.1 | 4.6 | 2.5 | 6.3 | 36 | .. | 350 | .. | 170 | .. | 65.0 | 25 12 14.8 | .. | + | 26.2 | 76 19 2.2 | -0.7 |
| 22 | 334 44 | 6.8 | 5.5 | 4.0 | 7.0 | 34 | 000 | 025 | .. | .. | .. | 65.0 | 65 29 39.8 | .. | + | 2.7.5 | 117 38 8.5 | -2.6 |
| 23 | 293 26 | 6.8 | 5.5 | 4.0 | 7.0 | 37 | .. | .. | 108 | 008 | 65.0 | 66 30 28.2 | .. | + | 2.7.6 | 117 38 57.0 | -2.6 | |
| 24 | 293 26 | 4.0 | 3.0 | 1.5 | 2.7 | 36 | 460 | 430 | .. | .. | .. | 65.0 | 28 34 14.4 | .. | + | 30.4 | 79 41 6.0 | -0.6 |
| 25 | 331 22 | 6.7 | 5.4 | 4.0 | 5.3 | 36 | 985 | 968 | .. | .. | .. | 65.0 | 30 20 25.1 | .. | + | 32.7 | 81 27 19.0 | -0.3 |
| 26 | 329 36 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 27 | .. | 10.9 | 7.6 | 8.0 | 8.2 | 30 | .. | 180 | .. | 214 | .. | 65.0 | 334 36 46.1 | 71.2 | - | 26.5 | 25 42 40.8 | +14.0 |
| 28 | 25 18 | 8.8 | 6.2 | 6.2 | 7.5 | 35 | .. | 540 | .. | 490 | .. | 65.0 | 69 14 5.2 | .. | + | 26.1 | 120 22 52.5 | +0.6 |
| 29 | 290 42 | 10.9 | 8.7 | 6.9 | 9.1 | 30 | .. | 904 | .. | 868 | .. | 65.0 | 19 36 56.3 | .. | + | 19.9 | 70 43 37.4 | +11.7 |
| 30 | 340 18 | 11.0 | 8.7 | 9.2 | 10.0 | 35 | .. | 320 | .. | 940 | .. | 65.0 | 78 28 1.7 | .. | + | 26.3 | 129 38 49.2 | +1.9 |
| 31 | 281 28 | 3.8 | 1.7 | 1.2 | 2.7 | 37 | .. | 440 | .. | 372 | .. | 65.0 | 63 6 29.3 | .. | + | 149.6 | 114 14 40.1 | +6.1 |
| 32 | 296 50 | 10.0 | 7.1 | 7.3 | 9.5 | 34 | 340 | 290 | .. | .. | .. | 65.0 | 59 27 47.2 | .. | + | 134.4 | 110 35 42.8 | +8.9 |
| 33 | 300 28 | 10.0 | 7.1 | 7.3 | 9.5 | 30 | .. | .. | 604 | 614 | 65.0 | 59 26 52.2 | .. | + | 131.4 | 110 34 47.8 | +9.1 | |
| 34 | 300 28 | 9.8 | 7.0 | 7.3 | 9.3 | 34 | .. | 010 | .. | 930 | .. | 65.0 | 60 35 42.7 | .. | + | 138.8 | 111 43 42.7 | +10.1 |
| 35 | 299 20 | 8.3 | 6.0 | 5.5 | 7.1 | 30 | .. | .. | 480 | 460 | 65.0 | 346 28 49.2 | .. | - | 13.4 | 37 34 57.0 | +15.7 | |
| 36 | 13 26 | 7.5 | 4.6 | 3.9 | 5.9 | 29 | .. | 230 | .. | 140 | .. | 65.0 | 54 52 26.6 | 70.9 | + | 119.3 | 106 0 7.1 | +12.2 |
| 37 | 305 2 | 11.2 | 9.0 | 9.0 | 8.8 | 34 | .. | 954 | .. | 960 | .. | 65.0 | 347 11 45.0 | .. | - | 13.8 | 38 17 52.4 | +15.9 |
| 38 | 12 44 | 8.9 | 6.2 | 4.9 | 7.1 | 38 | 210 | 200 | .. | .. | .. | 65.0 | 59 0 11.5 | .. | + | 132.8 | 110 8 5.5 | -7.6 |
| 39 | 300 54 | 11.0 | 8.4 | 7.7 | 9.0 | 38 | 675 | 600 | .. | .. | .. | 65.0 | 54 26 20.4 | .. | + | 118.1 | 105 33 59.7 | +16.2 |
| 40 | 305 28 | 11.0 | 8.4 | 7.7 | 9.0 | 30 | .. | 620 | .. | 755 | .. | 65.0 | 54 26 55.2 | .. | + | 118.1 | 105 34 32.5 | +16.5 |
| 41 | 305 28 | 12.0 | 9.4 | 8.1 | 10.0 | 38 | .. | 070 | .. | 070 | .. | 65.0 | 50 38 47.1 | .. | + | 18.2 | 101 46 16.5 | .. |
| 42 | 309 18 | 12.0 | 9.4 | 8.1 | 10.0 | 36 | 910 | .. | .. | 620 | .. | 65.0 | 50 38 27.0 | .. | + | 18.1 | 101 45 56.3 | .. |
| 43 | 309 18 | 7.5 | 5.5 | 3.7 | 5.5 | 34 | 330 | 285 | .. | .. | .. | 65.0 | 28 41 44.5 | .. | + | 30.6 | 79 48 36.3 | +0.3 |
| 44 | 331 14 | 11.1 | 12.5 | 11.0 | 12.4 | 33 | .. | 505 | .. | 312 | .. | 65.0 | 59 7 38.3 | .. | + | 25.6 | 120 16 25.1 | +0.2 |
| 45 | 290 48 | 6.5 | 3.6 | 2.0 | 4.8 | 37 | .. | 740 | .. | 580 | .. | 65.0 | 24 20 35.3 | 70.3 | + | 25.3 | 75 27 21.8 | +0.7 |
| 46 | 335 36 | 2.1 | 0.0 | 28.5 | 27.9 | 32 | .. | 260 | .. | 190 | .. | 66.8 | 354 3 9.5 | 62.4 | - | 6.0 | 45 9 24.7 | -1.5 |
| 47 | 5 52 | 11.4 | 8.1 | 9.1 | 7.9 | 37 | 880 | 895 | .. | .. | .. | 66.8 | 131 40 44.6 | .. | - | 1.1 | 99 26 40.7 | +6.9 |
| 48 | 228 16 | 7.0 | 4.5 | 3.9 | 6.3 | 32 | .. | .. | 055 | 075 | 66.8 | 48 19 13.7 | .. | + | 1.1 | 99 26 38.6 | -1.2 | |
| 49 | 311 36 | 5.2 | 1.8 | 0.8 | 3.5 | 35 | .. | 590 | .. | 435 | .. | 66.8 | 9 10. 2.9 | .. | + | 9.2 | 60 16 33.3 | -0.2 |
| 50 | 350 46 | | | | | | | | | | | | | | | | | |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|---------|
| 7 | 30.12 | 62.0 | 7 | 0.1 | .. | .. | 0.1 |
| 8 | 30.10 | 69.0 | 12 | 4.7 | - 15 | 55.1 | 15 59.8 |
| 13 | 30.08 | 77.0 | 13 | 4.6 | + 15 | 55.1 | 15 50.5 |
| 21 | 29.99 | 74.0 | 14 | 5.1 | .. | 0.3 | 4.8 |
| 27 | 30.00 | 73.0 | 42 | 0.8 | - 10.1 | .. | 10.9 |
| 37 | 30.01 | 72.0 | 43 | 0.8 | + 10.1 | .. | 9.3 |
| 46 | 30.03 | 71.6 | | | | | |
| 47 | 30.16 | 64.0 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. | | | |
|-------------------|---------|------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|--------|----|----------------------------|--------|--------|--|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | m. | s. | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| 1876. Sept. 13 | 1 | α Cephei (R) | P. | | | | | | | | | | m. | s. | s. | s. | s. | | | | | | |
| | 2 | α Cephei | P. | | | 51.7 | 56.3 | 0.6 | 5.0 | 9.3 | | | 16 | 0.60 | + 0.16 | | -21.11 | 21 | 15 | 39.65 | + 0.04 | | |
| | 3 | β Aquarii | P. | 15.3 | 17.0 | 19.4 | 25.6 | 27.7 | 29.0 | 35.8 | 37.4 | 40.0 | 25 | 27.63 | - 1.07 | -21.13 | -21.11 | 21 | 25 | 5.45 | + 0.05 | | |
| | 4 | Anonymous | P. | 49.6 | 52.1 | 53.6 | 59.9 | 2.0 | 4.1 | 10.2 | 11.8 | 14.3 | 28 | 1.96 | - 1.12 | | -21.11 | 21 | 27 | 39.73 | - 3.68 | | |
| | 5 | ε Pegasi | P. | 18.0 | 21.3 | 22.8 | 29.0 | 31.2 | 33.1 | 39.4 | 40.9 | 43.5 | 38 | 31.09 | - 0.88 | -21.11 | -21.11 | 21 | 38 | 9.10 | + 0.01 | | |
| | 6 | 11 Cephei | P. | | | 16.4 | 22.9 | 29.1 | 35.3 | 41.3 | | | 40 | 20.03 | + 0.72 | | -21.11 | 21 | 40 | 8.64 | + 0.02 | | |
| | 7 | Weisse 1314 | P. | 16.6 | 19.3 | 20.7 | 27.0 | 29.1 | 31.2 | 37.5 | 39.0 | 41.6 | 58 | 29.11 | - 1.13 | | -21.12 | 21 | 58 | 6.80 | - 3.77 | | |
| | 8 | Anonymous | P. | 30.7 | 33.1 | 34.6 | 40.9 | 43.1 | 45.2 | 51.3 | 52.9 | 55.6 | 59 | 43.04 | - 1.13 | | -21.12 | 21 | 59 | 20.79 | - 3.77 | | |
| | 9 | 32 Ursæ Majoris, S. P. | P. | | | 35.5 | 39.4 | 45.5 | 29.7 | 15.7 | | | 9 | 25.53 | - 2.06 | | -21.11 | 10 | 9 | 2.36 | + 0.13 | | |
| 14 | 10 | Venus II, S. | F. | 49.3 | 51.8 | 53.5 | 59.9 | 2.0 | 4.0 | 10.5 | 12.0 | 14.8 | 36 | 1.98 | - 1.00 | | -22.03 | 8 | 35 | 38.95 | - 0.93 | | |
| | 11 | Venus N. | F. | | | | | | | | | | | | | | | | | | | | |
| | 12 | α Hydre | F. | 41.9 | 44.4 | 46.0 | 52.0 | 54.1 | 56.2 | 2.6 | 4.0 | 6.6 | 21 | 54.20 | - 1.36 | -22.08 | -22.05 | 9 | 21 | 30.79 | 0.00 | | |
| | 13 | ι Leonis | F. | 50.7 | 2.5 | 4.3 | 11.0 | 13.2 | 15.5 | 22.3 | 23.8 | 26.7 | 39 | 13.22 | - 0.87 | -22.11 | -22.05 | 9 | 38 | 50.30 | 0.00 | | |
| | 14 | α Leonis | F. | 58.0 | 0.6 | 2.0 | 8.4 | 10.6 | 12.6 | 18.9 | 20.3 | 23.0 | 2 | 10.49 | - 1.06 | -22.02 | -22.06 | 10 | 1 | 47.37 | - 0.08 | | |
| | 15 | γ ¹ Leonis | F. | 22.0 | 23.8 | 28.0 | 30.4 | 32.6 | 34.8 | 36.9 | 41.3 | 42.9 | 13 | 32.52 | - 0.94 | -22.07 | -22.06 | 10 | 13 | 9.52 | - 0.01 | | |
| | 16 | ρ Leonis | F. | 28.8 | 31.5 | 33.1 | 39.3 | 41.4 | 43.4 | 49.6 | 51.2 | 53.7 | 26 | 41.33 | - 1.10 | -22.05 | -22.07 | 10 | 26 | 18.16 | - 0.09 | | |
| | 17 | α Ursæ Majoris | F. | 0.3 | | 9.5 | 17.9 | 27.0 | | | | | 56 | 26.92 | + 0.19 | | -22.08 | 10 | 56 | 5.03 | + 0.05 | | |
| 15 | 18 | Sun I, S. | F. | 59.0 | 1.6 | 3.1 | 9.3 | 11.5 | 13.4 | 19.4 | 21.0 | 23.5 | 34 | 11.31 | - 1.20 | | -22.09 | 11 | 33 | 48.02 | | | |
| | 19 | Sun II, N. | F. | 7.2 | 9.6 | 11.2 | 17.3 | 19.4 | 21.5 | 27.5 | 29.0 | 31.7 | 36 | 19.38 | - 1.20 | | -22.09 | 11 | 35 | 56.09 | | | |
| | 20 | Polaris, S. P. | F. | | | 17.0 | | 51.0 | | | | | 14 | 51.25 | -29.68 | | -22.12 | 1 | 13 | 59.45 | - 0.19 | | |
| 18 | 21 | Venus II, S. | F. | 14.0 | 16.6 | 18.2 | 24.5 | 29.7 | 28.8 | 35.2 | 36.8 | 39.4 | 51 | 26.69 | - 0.94 | | -25.14 | 8 | 51 | 0.61 | - 0.88 | | |
| | 22 | Venus, N. | F. | | | | | | | | | | | | | | | | | | | | |
| | 23 | α Hydre | F. | 14.9 | 17.4 | 19.0 | 55.0 | 57.3 | 59.3 | 5.4 | 6.6 | 9.6 | 21 | 57.17 | - 1.23 | -25.10 | -25.15 | 9 | 21 | 30.79 | - 0.08 | | |
| | 24 | β Cephei, S. P. | F. | | | 45.1 | 38.8 | 32.9 | 27.0 | 20.5 | | | 27 | 32.81 | - 2.16 | | -25.15 | 21 | 27 | 5.20 | - 0.21 | | |
| | 25 | μ Leonis | F. | 56.5 | 59.3 | 1.0 | 7.8 | 10.3 | 12.4 | 19.4 | 20.9 | 23.8 | 46 | 10.16 | - 0.79 | -25.18 | -25.16 | 9 | 45 | 44.21 | + 0.01 | | |
| | 26 | α Leonis | F. | 1.0 | 3.7 | 5.2 | 11.4 | 13.7 | 15.7 | 22.0 | 23.5 | 26.0 | 2 | 13.58 | - 0.97 | -25.13 | -25.17 | 10 | 1 | 47.44 | - 0.08 | | |
| | 27 | γ ¹ Leonis | F. | 22.6 | 25.2 | 27.0 | 33.4 | 35.7 | 38.0 | 44.3 | 46.0 | 48.7 | 13 | 35.66 | - 0.87 | -25.21 | -25.17 | 10 | 13 | 9.62 | + 0.02 | | |
| 19 | 28 | Polaris, S. P. | F. | | | 47.0 | | | | 55.0 | | | 14 | 49.75 | -24.05 | | -25.23 | 1 | 14 | 0.47 | - 0.62 | | |
| | 29 | Venus II, S. | S. | 9.3 | 11.8 | 13.4 | 19.0 | 22.0 | 24.2 | 30.6 | 32.2 | 34.8 | 55 | 22.02 | - 0.84 | | -25.78 | 8 | 54 | 55.40 | - 0.87 | | |
| | 30 | α Hydre | S. | 45.5 | 48.0 | 49.4 | 55.7 | 57.8 | 59.9 | 6.0 | 7.1 | 10.0 | 21 | 57.77 | - 1.13 | -25.78 | -25.78 | 9 | 21 | 30.86 | - 0.03 | | |
| | 31 | ε Leonis | S. | 3.4 | 6.2 | 7.9 | 14.6 | 16.8 | 19.0 | 25.8 | 27.5 | 30.3 | 39 | 16.86 | - 0.73 | -25.79 | -25.79 | 9 | 38 | 50.34 | - 0.06 | | |
| | 32 | α Leonis | S. | 1.8 | 4.3 | 5.8 | 12.0 | 14.2 | 16.2 | 22.5 | 24.0 | 26.8 | 2 | 14.18 | - 0.88 | -25.80 | -25.80 | 10 | 1 | 47.50 | - 0.04 | | |
| 20 | 33 | Sun I, S. | S. | 59.6 | 2.2 | 3.8 | 10.0 | 12.0 | 13.9 | 20.2 | 21.8 | 24.2 | 52 | 11.07 | - 1.04 | | -25.83 | 11 | 51 | 45.10 | | | |
| | 34 | Sun II, N. | S. | 7.7 | 10.3 | 11.7 | 15.8 | | | | | | 54 | 19.96 | - 1.04 | | -25.83 | 11 | 53 | 53.09 | | | |
| | 35 | Polaris, S. P. | S. | | | 46.0 | | 49.5 | 23.5 | 56.0 | 59.0 | 9.5 | 14 | 49.98 | -23.12 | | -25.86 | 1 | 14 | 1.00 | - 0.52 | | |
| | 36 | ζ Virginis | S. | | | 48.8 | 50.8 | 52.8 | 54.8 | 58.9 | 0.4 | 3.0 | 28 | 50.76 | - 1.06 | -25.90 | -25.87 | 13 | 28 | 23.83 | + 0.03 | | |
| | 37 | η Bootis | S. | 1.8 | 4.6 | 6.2 | 12.5 | 14.9 | 16.9 | 23.5 | 25.0 | 27.7 | 49 | 14.79 | - 0.83 | -25.85 | -25.87 | 13 | 48 | 48.09 | - 0.07 | | |
| | 38 | α Bootis | S. | | | | | | | 32.6 | 37.0 | 38.5 | 41.3 | 10 | 28.27 | - 0.81 | -25.87 | -25.88 | 14 | 10 | 1.58 | - 0.01 | |
| | 39 | γ Aquilæ | S. | 39.4 | 41.8 | 43.6 | 49.6 | 51.8 | 53.9 | 0.1 | 1.6 | 4.2 | 40 | 51.78 | - 0.95 | -26.10 | -26.08 | 19 | 40 | 24.75 | + 0.14 | | |
| | 40 | α Aquilæ | S. | 1.6 | 4.0 | 5.6 | 11.8 | 14.0 | 16.0 | 22.1 | 23.8 | 26.2 | 45 | 13.89 | - 0.97 | -26.08 | -26.03 | 19 | 44 | 46.84 | + 0.04 | | |
| | 41 | B. A. C. 6881 | S. | 6.8 | 10.7 | 13.4 | 23.3 | 26.5 | 29.7 | 39.0 | 42.0 | 46.2 | 56 | 20.47 | - 0.31 | | -26.09 | 19 | 56 | 0.07 | - 1.89 | | |
| | 42 | B. A. C. 6913 | S. | 56.4 | 2.3 | 6.0 | 20.0 | 24.8 | 29.4 | 43.6 | 47.1 | 53.3 | 1 | 24.77 | + 0.13 | | -26.10 | 20 | 0 | 58.80 | - 1.39 | | |
| | 43 | Weisse (2) 538 | S. | 12.8 | 15.5 | 17.1 | 23.7 | 25.9 | 27.9 | 34.5 | 36.3 | 39.0 | 16 | 25.86 | - 0.84 | | -26.10 | 20 | 15 | 58.94 | - 2.75 | | |
| | 44 | B. A. C. 7035 | S. | 56.5 | 0.7 | 3.4 | 13.8 | 17.4 | 20.9 | 31.5 | 33.0 | 35.4 | 20 | 17.39 | - 0.24 | | -26.11 | 20 | 19 | 51.03 | - 1.99 | | |
| | 45 | B. A. C. 7055 | S. | 27.0 | 31.3 | 33.9 | 44.4 | 48.0 | 51.3 | 1.9 | 4.4 | 8.9 | 22 | 47.99 | - 0.24 | | -26.11 | 20 | 22 | 21.55 | - 2.01 | | |
| | 46 | α Cygni | S. | 23.7 | 27.4 | 29.6 | 38.3 | 41.1 | 44.0 | 52.5 | 54.8 | 58.3 | 37 | 41.08 | - 0.44 | -25.98 | -26.11 | 20 | 37 | 14.53 | - 0.11 | | |
| | 47 | B. A. C. 7260 | S. | 57.6 | 0.9 | 2.8 | 10.9 | 13.5 | 16.3 | 24.4 | 26.1 | 29.6 | 50 | 13.57 | - 0.53 | | -26.12 | 20 | 49 | 46.92 | - 2.53 | | |
| | 48 | B. A. C. 7316 | S. | 49.2 | 52.3 | 54.0 | 1.2 | 3.5 | 5.8 | 13.0 | 14.6 | 17.7 | 59 | 3.48 | - 1.50 | | -26.13 | 20 | 58 | 35.85 | - 4.16 | | |
| | 49 | Mural Zones 187, 61 | S. | 13.0 | 15.7 | 17.3 | 21.6 | 24.0 | 26.2 | 28.3 | 30.5 | | 7 | 26.10 | - 1.34 | | -26.13 | 21 | 6 | 58.63 | - 3.85 | | |
| | 50 | O. Arg. S. 21237 | S. | 12.8 | 15.5 | 17.0 | 23.6 | 26.0 | 28.3 | 34.6 | 36.2 | 39.0 | 8 | 25.86 | - 1.34 | | -26.13 | 21 | 7 | 58.39 | - 3.86 | | |

2, 6, 9, 24. Bisections at set B and D.
4, 8. Thread A used.
7. Thread B used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom't. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | | |
| 1 | 156 46 | 10 6.5 | 5.0 | 4.2 | 6.3 | 34 | 970 | 940 | .. | .. | .. | 66.8 | 203 9 55.0 | .. | + | 24.5 | 27 56 1.7 | - 3.8 |
| 2 | 23 6 | 9.6 | 7.3 | 7.5 | 7.8 | 35 | .. | .. | .. | 420 | 380 | 66.8 | 136 50 6.6 | .. | - | 24.5 | 27 56 3.3 | - 2.2 |
| 3 | 314 56 | 6.6 | 4.5 | 2.5 | 6.7 | 32 | 875 | 840 | .. | .. | .. | 66.8 | 44 59 23.4 | 61.3 | + | 57.2 | 96 6 41.8 | - 0.2 |
| 4 | 310 58 | 4.9 | 3.7 | 2.2 | 6.0 | 34 | .. | 615 | .. | 490 | .. | 66.8 | 48 55 15.8 | .. | + | 4.5 | 100 2 41.5 | +12.6 |
| 5 | 330 22 | 4.3 | 2.1 | 0.4 | 2.4 | 36 | .. | 820 | .. | 705 | .. | 66.8 | 29 34 21.4 | .. | + | 32.5 | 80 41 15.1 | - 1.2 |
| 6 | 31 46 | 4.1 | 0.0 | 29.9 | 0.5 | 33 | .. | .. | .. | 420 | 370 | 66.8 | 328 9 29.0 | .. | - | 35.6 | 19 15 14.6 | - 2.3 |
| 7 | 309 36 | 8.6 | 5.9 | 4.5 | 8.5 | 29 | .. | .. | .. | 915 | 900 | 66.8 | 50 21 14.1 | .. | + | 1 9.1 | 101 28 44.4 | +15.0 |
| 8 | 309 36 | 8.6 | 5.9 | 4.5 | 8.5 | 31 | .. | .. | .. | 345 | 290 | 66.8 | 50 16 30.0 | .. | + | 1 8.9 | 101 24 0.1 | +15.1 |
| 9 | 75 16 | 5.8 | 1.4 | 29.7 | 2.1 | 37 | 700 | 730 | .. | .. | .. | 66.8 | 284 40 35.5 | 60.3 | - | 3 35.4 | 335 43 21.3 | + 0.5 |
| 10 | 337 0 | 1.1 | 26.0 | 25.1 | 28.7 | 35 | .. | 944 | .. | 890 | .. | 65.9 | 22 56 3.0 | 65.3 | + | 23.9 | 74 2 48.1 | .. |
| 11 | 337 0 | 1.1 | 26.0 | 25.1 | 28.7 | 34 | 240 | .. | .. | .. | 066 | 65.9 | 22 55 31.0 | .. | + | 23.9 | 74 2 21.1 | .. |
| 12 | 312 56 | 6.1 | 2.4 | 1.6 | 6.2 | 34 | .. | 946 | .. | 886 | .. | 65.9 | 46 59 53.9 | 68.0 | + | 1 0.2 | 98 7 15.3 | 0.0 |
| 13 | 345 24 | 3.1 | 28.5 | 26.7 | 1.1 | 38 | .. | 690 | .. | 670 | .. | 65.9 | 14 32 47.5 | .. | + | 14.5 | 65 39 23.2 | - 0.4 |
| 14 | 333 38 | 1.7 | 26.9 | 26.5 | 1.7 | 39 | .. | 640 | .. | 912 | .. | 65.9 | 26 18 51.3 | .. | + | 27.7 | 77 25 40.2 | - 0.2 |
| 15 | 341 30 | 1.4 | 27.0 | 24.1 | 0.3 | 32 | .. | 995 | .. | 955 | .. | 65.9 | 18 25 18.5 | .. | + | 18.7 | 69 31 58.4 | + 0.2 |
| 16 | 331 0 | 2.6 | 27.3 | 27.3 | 2.5 | 37 | .. | .. | .. | 656 | 640 | 65.9 | 28 56 32.6 | .. | + | 31.0 | 80 3 24.8 | + 0.5 |
| 17 | 23 28 | 2.1 | 27.6 | 27.5 | 1.8 | 39 | .. | 598 | .. | .. | .. | 65.9 | 336 29 1.2 | 71.8 | - | 24.3 | 27 34 58.1 | - 1.7 |
| 18 | 323 30 | 9 28.9 | 26.6 | 25.4 | 28.0 | 35 | 088 | 060 | .. | .. | .. | 65.9 | 36 25 49.1 | .. | + | 41.2 | 87 32 51.5 | .. |
| 19 | 321 2 | 10 2.4 | 29.8 | 28.2 | 0.0 | 35 | .. | .. | .. | 120 | 148 | 65.9 | 35 53 53.7 | 71.9 | + | 40.4 | 87 0 55.3 | .. |
| 20 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 21 | 336 28 | 9 14.6 | 10.6 | 7.8 | 12.5 | 40 | .. | 554 | .. | 490 | .. | 64.9 | 23 28 56.2 | 68.6 | + | 24.3 | 74 35 41.7 | .. |
| 22 | 336 28 | 14.6 | 10.6 | 7.8 | 12.5 | 38 | 900 | .. | .. | .. | 892 | 64.9 | 23 28 31.4 | .. | + | 24.3 | 74 35 16.9 | .. |
| 23 | 312 56 | 10 9.8 | 6.6 | 5.2 | 11.4 | 34 | .. | 690 | .. | 558 | .. | 64.9 | 46 59 52.6 | .. | + | 59.9 | 98 7 13.7 | - 1.5 |
| 24 | 70 58 | 10.0 | 4.8 | 2.5 | 6.7 | 33 | .. | .. | .. | 812 | 810 | 64.9 | 288 57 37.5 | .. | - | 2 11.1 | 340 1 17.6 | 0.0 |
| 25 | 347 38 | 5.9 | 1.1 | 0.8 | 6.3 | 35 | .. | 790 | .. | 680 | .. | 64.9 | 12 18 5.1 | .. | + | 12.2 | 68 24 38.5 | - 1.9 |
| 26 | 333 38 | 4.1 | 0.3 | 29.2 | 5.0 | 38 | .. | 795 | .. | 775 | .. | 64.9 | 26 18 50.3 | .. | + | 27.6 | 77 25 39.1 | - 1.7 |
| 27 | 341 30 | 3.6 | 29.0 | 27.2 | 4.1 | 32 | .. | 940 | .. | 876 | .. | 64.9 | 18 25 19.2 | 70.4 | + | 18.6 | 69 31 59.0 | + 0.2 |
| 28 | 52 22 | 7.2 | 2.7 | 3.7 | 6.0 | 34 | 900 | .. | .. | .. | 892 | 64.9 | 307 33 53.1 | 72.6 | - | 1 12.1 | 358 39 2.2 | - 1.8 |
| 29 | 336 18 | 5.1 | 4.8 | 4.1 | 3.3 | 36 | .. | .. | .. | 688 | 620 | 66.6 | 23 38 22.2 | 65.6 | + | 24.7 | 74 45 8.1 | .. |
| 30 | 312 56 | 3.0 | 2.6 | 2.2 | 3.3 | 34 | .. | 900 | .. | 830 | .. | 66.6 | 46 59 52.5 | .. | + | 1 0.3 | 98 7 14.0 | - 1.2 |
| 31 | 345 24 | 1.6 | 0.7 | 0.5 | 0.6 | 38 | .. | 610 | .. | 560 | .. | 66.6 | 14 32 47.7 | .. | + | 14.6 | 65 39 23.5 | - 0.8 |
| 32 | 333 38 | 7.8 | 7.0 | 7.5 | 8.2 | 38 | .. | .. | .. | 375 | 312 | 66.6 | 26 18 51.7 | .. | + | 27.8 | 77 25 40.7 | - 0.2 |
| 33 | 321 34 | 15.0 | 9.2 | 9.4 | 12.2 | 35 | 740 | 790 | .. | .. | .. | 66.6 | 38 22 14.6 | .. | + | 44.0 | 80 29 19.8 | .. |
| 34 | 322 6 | 8.6 | 4.7 | 5.0 | 10.2 | 36 | .. | .. | .. | 112 | 140 | 66.6 | 37 50 16.6 | 72.6 | + | 43.2 | 88 57 21.0 | .. |
| 35 | 52 22 | 3.3 | 0.7 | 3.4 | 28.8 | 34 | 980 | .. | 952 | .. | 956 | 66.6 | 307 33 52.7 | .. | - | 1 12.1 | 358 39 1.8 | - 2.6 |
| 36 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 37 | 340 4 | 2.6 | 0.7 | 0.9 | 0.7 | 36 | .. | 430 | .. | 310 | .. | 66.6 | 19 52 14.1 | 74.0 | + | 20.0 | 70 58 55.3 | + 0.8 |
| 38 | 340 52 | 4.6 | 2.5 | 3.5 | 2.5 | 34 | .. | .. | .. | 281 | 232 | 66.6 | 19 3 44.8 | 72.8 | + | 19.2 | 70 10 25.2 | + 1.9 |
| 39 | 331 22 | 5.6 | 4.0 | 2.0 | 4.8 | 36 | 190 | 186 | .. | .. | .. | 65.6 | 28 34 12.3 | .. | + | 30.7 | 79 41 4.2 | - 1.2 |
| 40 | 329 36 | 5.3 | 4.0 | 1.3 | 3.6 | 36 | .. | 830 | .. | 700 | .. | 65.6 | 30 20 21.4 | 66.0 | + | 33.0 | 81 27 15.6 | - 2.6 |
| 41 | 12 46 | 8.3 | 6.6 | 6.0 | 7.0 | 37 | .. | 276 | .. | 181 | .. | 65.6 | 347 10 32.3 | .. | - | 12.8 | 38 16 40.7 | +17.0 |
| 42 | 25 18 | 9.4 | 5.1 | 5.2 | 7.0 | 29 | .. | .. | .. | 934 | 840 | 65.6 | 334 36 41.2 | .. | - | 26.8 | 25 42 35.6 | +17.5 |
| 43 | 340 18 | 6.6 | 4.0 | 2.9 | 6.6 | 30 | .. | 900 | .. | 832 | .. | 65.6 | 19 36 52.6 | .. | + | 20.1 | 70 43 33.9 | +13.6 |
| 44 | 15 18 | 8.3 | 6.0 | 6.1 | 6.4 | 31 | .. | .. | .. | 780 | 750 | 65.6 | 344 37 9.6 | .. | - | 15.6 | 35 43 15.2 | +18.2 |
| 45 | 15 18 | 8.3 | 6.0 | 6.1 | 6.4 | 30 | 655 | 650 | .. | .. | .. | 65.6 | 344 36 50.8 | .. | - | 15.5 | 35 42 56.5 | +18.3 |
| 46 | 5 52 | 5.3 | 3.9 | 2.3 | 1.3 | 31 | .. | 920 | .. | 840 | .. | 65.6 | 354 3 6.6 | .. | - | 5.9 | 45 9 21.9 | - 2.9 |
| 47 | 1 16 | 9.0 | 7.5 | 6.0 | 6.2 | 32 | .. | 792 | .. | 752 | .. | 65.6 | 358 39 21.2 | .. | - | 1.3 | 49 45 44.1 | +18.5 |
| 48 | 290 28 | 9.6 | 5.6 | 6.3 | 7.8 | 35 | .. | 061 | .. | 955 | .. | 65.6 | 69 27 58.1 | .. | + | 2 30.0 | 120 36 49.3 | + 4.7 |
| 49 | 300 28 | 6.3 | 3.0 | 6.3 | 6.9 | 34 | 440 | 430 | .. | .. | .. | 65.6 | 59 27 46.7 | .. | + | 1 35.8 | 110 35 43.7 | + 8.2 |
| 50 | 300 28 | 6.3 | 3.0 | 6.3 | 6.9 | 30 | .. | 800 | .. | 715 | .. | 65.6 | 59 26 51.4 | .. | + | 1 35.7 | 110 34 48.3 | + 8.3 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " | " | " | " |
| 3 | 37.17 | 64.2 | 10 | - 5.3 | - 13.7 | .. | 19.0 |
| 9 | 30.16 | 62.3 | 11 | - 5.3 | + 13.7 | 0.4 | 8.0 |
| 10 | 29.98 | 66.6 | 18 | - 5.2 | - 15 58.1 | .. | 16 3.3 |
| 12 | 30.00 | 68.8 | 19 | - 5.2 | + 15 58.1 | .. | + 15 52.9 |
| 17 | 30.01 | 72.0 | 21 | - 5.4 | - 12.6 | .. | 18.0 |
| 19 | 30.01 | 71.7 | 22 | - 5.4 | + 12.6 | 0.4 | 6.8 |
| 21 | 29.90 | 67.6 | 29 | - 5.2 | - 12.6 | .. | 17.8 |
| 27 | 29.90 | 69.5 | 33 | - 5.5 | - 15 59.3 | .. | 16 4.8 |
| 28 | 29.97 | 73.0 | 34 | - 5.4 | + 15 59.4 | .. | + 15 54.0 |
| 29 | 29.97 | 64.8 | | | | | |
| 34 | 29.96 | 71.6 | | | | | |
| 37 | 29.95 | 73.5 | | | | | |
| 38 | 29.94 | 73.8 | | | | | |
| 40 | 29.99 | 68.2 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. | | |
|----------|---------|---------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|--------|--------------|--------|----------|---------------------------|----------------|-------|----------------------------|----|----|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock | | Clock adopted. | h. | | m. | s. |
| | | | | | | | | | | | | | | | appar't. | | | | | | |
| 1876. | | | | | | | | | | | | m. | s. | s. | s. | s. | | | | s. | |
| Sept. 20 | 1 | ♂ Aquarii . . . | S. | 20.2 | 22.9 | 24.4 | 30.6 | 32.6 | 34.6 | 40.7 | 42.2 | 45.0 | 25 32.58 | - 1.13 | -26.07 | -26.14 | 21 25 | 5.31 | - 0.04 | | |
| | 2 | Anonymous . . . | S. | 54.7 | 57.2 | 58.7 | 5.0 | 7.1 | 9.2 | 15.3 | 17.0 | 19.5 | 28 7.08 | - 1.18 | . | -26.15 | 21 27 | 39.75 | - 3.64 | | |
| | 3 | Weisse 1314 . . . | S. | 24.2 | 25.8 | 29.8 | 32.0 | 34.3 | 36.3 | 38.4 | 42.4 | 44.2 | 58 34.16 | - 1.20 | . | -26.17 | 21 58 | 6.79 | - 3.75 | | |
| | 4 | Anonymous . . . | S. | 35.7 | 38.2 | 39.6 | 46.1 | 48.2 | 50.2 | 56.4 | 58.2 | 0.7 | 59 48.14 | - 1.20 | . | -26.17 | 21 59 | 20.77 | - 3.75 | | |
| | 5 | Saturn I, S. . . | S. | 34.0 | 36.6 | 38.0 | . | . | . | 54.7 | 56.4 | 59.0 | 22 46.45 | - 1.20 | . | -26.18 | 22 22 | 19.07 | . | | |
| | 6 | Saturn II, N. . . | S. | . | . | 43.7 | 45.9 | 47.9 | 50.0 | 52.0 | . | . | 22 47.91 | - 1.20 | . | -26.18 | 22 22 | 20.53 | . | | |
| | 7 | Pegasi . . . | S. | 34.9 | 37.4 | 39.0 | 45.1 | 47.3 | 49.4 | 55.8 | 57.1 | 59.7 | 35 47.27 | - 0.92 | -26.25 | -26.19 | 22 35 | 20.16 | + 0.12 | | |
| | 8 | ♂ Pegasi . . . | S. | 53.1 | 55.6 | 57.2 | 3.5 | 5.6 | 7.6 | 14.1 | 15.7 | 18.4 | 59 5.64 | - 0.87 | -26.21 | -26.20 | 22 58 | 38.55 | + 0.02 | | |
| 25 | 9 | ♂ Ursæ Minoris. . . | P. | . | . | 49.5 | 25.6 | 58.0 | 33.3 | 42.0 | 7.9 | 50.6 | 12 24.06 | + 9.35 | . | -29.89 | 18 12 | 3.52 | - 0.20 | | |
| | 10 | ♂ Lyrae . . . | P. | 0.7 | 4.0 | 6.0 | 13.7 | 16.4 | 18.9 | 26.9 | 28.9 | 32.1 | 33 16.40 | - 0.44 | -29.87 | -29.91 | 18 32 | 46.05 | - 0.02 | | |
| | 11 | Moon I. . . | P. | 2.1 | 5.1 | 11.6 | 14.1 | 16.4 | 18.7 | 21.3 | 27.8 | 30.8 | 37 16.43 | - 1.45 | . | -29.91 | 18 36 | 45.07 | + 69.81 | | |
| | 12 | ♂ Cephei, S. P. . . | P. | . | . | . | 34.0 | 50.2 | 8.9 | 27.3 | . | . | 42 51.28 | -13.24 | . | -29.92 | 6 42 | 8.13 | + 0.23 | | |
| | 13 | ♂ Lyrae . . . | P. | 47.8 | 50.8 | 52.6 | 57.5 | 4.0 | 2.4 | 4.9 | 7.4 | . | 46 2.43 | - 0.54 | -29.88 | -29.92 | 18 45 | 31.97 | - 0.01 | | |
| | 14 | ♂ Draconis . . . | P. | . | . | . | 49.3 | 57.2 | 5.4 | 21.5 | 27.4 | 37.7 | 50 49.30 | + 1.43 | . | -29.92 | 18 50 | 20.81 | + 0.35 | | |
| | 15 | ♂ Aquilæ . . . | P. | 3.2 | 5.9 | 7.4 | 13.8 | 15.9 | 18.0 | 24.3 | 25.8 | 28.6 | 0 15.88 | - 0.83 | -30.00 | -29.93 | 18 59 | 45.12 | + 0.15 | | |
| | 16 | ♂ Draconis (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | | |
| | 17 | ♂ Draconis . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | | |
| | 18 | ♂ Aquilæ (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | | |
| | 19 | ♂ Aquilæ . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | | |
| | 20 | ♂ Aquilæ (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | | |
| | 21 | ♂ Aquilæ . . . | P. | . | . | . | . | . | . | . | . | . | 47 38.10 | +31.77 | . | -29.96 | 19 47 | 40.21 | + 0.43 | | |
| | 22 | ♂ Ursæ Minoris. . . | P. | . | . | . | 42.5 | 38.8 | 33.5 | 19.4 | . | . | . | . | . | . | . | . | . | | |
| | 23 | ♂ Cephei (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | | |
| | 24 | ♂ Cephei . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | | |
| | 25 | ♂ Cygni . . . | P. | 27.6 | 31.2 | 33.4 | 42.0 | 44.9 | 47.8 | 56.4 | 58.5 | 2.2 | 37 44.89 | - 0.31 | -30.03 | -30.00 | 20 37 | 14.58 | + 0.05 | | |
| | 26 | ♂ Cygni . . . | P. | 38.1 | 41.3 | 43.3 | . | . | . | 4.1 | 6.0 | 9.2 | 1 53.67 | - 0.45 | -30.02 | -30.02 | 21 1 | 23.20 | - 0.04 | | |
| | 27 | ♂ Cygni . . . | P. | . | . | 50.0 | 52.6 | 55.1 | 57.8 | 0.5 | . | . | 1 55.21 | - 0.45 | . | -30.02 | 21 1 | 24.74 | - 2.56 | | |
| | 28 | ♂ Cygni . . . | P. | 58.8 | 1.8 | 3.6 | 10.7 | 13.0 | 15.3 | 22.3 | 24.2 | 27.0 | 8 12.97 | - 0.60 | -30.09 | -30.02 | 21 7 | 42.35 | + 0.08 | | |
| | 29 | ♂ Draconis, S. P. . . | P. | . | . | 22.9 | 8.7 | 55.1 | 40.0 | 20.0 | . | . | 19 54.46 | - 5.13 | . | -30.03 | 9 19 | 19.30 | - 0.01 | | |
| | 30 | ♂ Ursæ Majoris, S. P. . . | P. | 40.9 | 33.4 | 28.8 | 10.5 | 4.4 | 58.4 | 40.3 | 33.5 | 7.28.1 | 24 4.50 | - 2.50 | . | -30.03 | 9 23 | 31.97 | + 0.06 | | |
| | 31 | ♂ Aquarii . . . | P. | 31.3 | 33.8 | 35.4 | 41.5 | 43.6 | 45.7 | 51.9 | 53.5 | 56.0 | 31 43.63 | - 1.12 | -29.96 | -30.03 | 21 31 | 12.48 | - 0.05 | | |
| 26 | 32 | Venus II, S. . . | F. | 16.2 | 18.9 | 20.5 | 26.8 | 28.9 | 31.0 | 37.4 | 38.9 | 41.5 | 23 28.90 | - 0.90 | . | -30.93 | 9 22 | 57.07 | - 0.80 | | |
| | 33 | Venus, N. . . | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | | |
| | 34 | ♂ Leonis . . . | F. | 28.3 | 31.1 | 32.9 | 39.3 | 41.5 | 43.7 | 50.2 | 51.7 | 54.5 | 13 41.47 | - 0.80 | -30.94 | . | . | . | . | | |
| 27 | 35 | ♂ Coronæ Borealis . . . | F. | 45.3 | 48.3 | 50.0 | 57.0 | 59.2 | 1.6 | 8.4 | 10.1 | 13.0 | 29 59.21 | - 0.70 | -30.95 | -30.99 | 15 29 | 27.52 | - 0.04 | | |
| | 36 | ♂ Serpentis . . . | F. | 35.1 | 39.1 | 41.3 | 43.4 | 45.3 | 47.4 | 51.5 | 53.0 | 55.6 | 38 43.30 | - 1.03 | -31.04 | -31.00 | 15 38 | 11.27 | + 0.06 | | |
| | 37 | ♂ Serpentis . . . | F. | 59.6 | 2.1 | 3.6 | 9.8 | 11.9 | 13.0 | 20.0 | 21.6 | 24.1 | 45 11.84 | - 1.06 | -31.00 | -31.00 | 15 44 | 39.78 | 0.00 | | |
| | 38 | Frank. Zones 52, 24 . . . | F. | . | . | 48.0 | 50.4 | 52.7 | 55.0 | 57.4 | . | . | 20 52.71 | - 1.51 | . | -31.16 | 19 29 | 20.04 | - 3.51 | | |
| | 39 | O. Arg. S. 19509 . . . | F. | 38.8 | 41.7 | 43.4 | 50.3 | 52.8 | 54.9 | 1.8 | 3.5 | 6.4 | 31 52.62 | - 1.51 | . | -31.16 | 19 31 | 19.95 | - 3.51 | | |
| | 40 | ♂ Ursæ Minoris . . . | F. | . | . | . | . | 21.0 | 14.0 | . | 5.0 | 23.0 | 47 22.38 | +15.84 | . | -31.17 | 19 47 | 37.05 | + 0.06 | | |
| | 41 | ♂ Ursæ Majoris, S. P. . . | F. | 38.8 | 31.9 | 27.6 | 10.4 | 5.1 | 59.5 | 42.6 | 38.4 | 31.5 | 1 5.09 | - 3.12 | . | -31.17 | 8 0 | 30.80 | - 0.47 | | |
| | 42 | ♂ Capricorni . . . | F. | 33.7 | 36.4 | 38.0 | 44.3 | 46.3 | 48.3 | 54.0 | 56.1 | 59.0 | 11 46.30 | - 1.22 | -31.34 | -31.18 | 20 11 | 13.90 | + 0.20 | | |
| | 43 | ♂ Capricorni . . . | F. | 36.5 | 39.0 | 40.8 | 47.2 | 49.3 | 51.5 | 55.0 | 59.8 | 2.3 | 20 49.38 | - 1.32 | -31.20 | -31.18 | 20 20 | 16.88 | + 0.05 | | |
| | 44 | ♂ Pegasi . . . | F. | 43.0 | 45.8 | 47.4 | 53.9 | 56.0 | 58.1 | 4.7 | 6.3 | 9.0 | 16 56.02 | - 0.66 | -31.27 | -31.22 | 21 16 | 24.14 | 0.00 | | |
| | 45 | Anonymous . . . | F. | . | . | 40.0 | 12.2 | 14.3 | 46.5 | 48.8 | . | . | 19 44.37 | - 1.39 | . | -31.23 | 21 19 | 11.75 | - 3.84 | | |
| | 46 | Weisse 1314 . . . | F. | 26.7 | 29.0 | 30.9 | 37.2 | 39.2 | 41.3 | 47.6 | 49.3 | 51.8 | 58 39.22 | - 1.19 | . | -31.26 | 21 58 | 6.77 | - 3.70 | | |
| | 47 | Anonymous . . . | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | | |
| | 48 | Saturn I, S. . . | F. | 1.5 | 4.0 | 5.6 | . | . | . | 22.4 | 23.7 | 26.4 | 21 13.93 | - 1.20 | . | -31.27 | 22 20 | 41.46 | . | | |
| | 49 | Saturn II, N. . . | F. | . | . | 11.0 | 3.2 | 15.4 | 17.5 | 19.5 | . | . | 21 15.33 | - 1.20 | . | -31.27 | 22 20 | 42.86 | . | | |
| | 50 | Weisse 604 . . . | F. | 35.6 | 38.2 | 39.8 | 46.2 | 48.1 | 50.3 | 56.7 | 58.3 | 0.6 | 30 48.20 | - 1.22 | . | -31.28 | 22 30 | 15.70 | - 3.82 | | |

2, 4, 45, 47. Thread A used.

3, 46. Thread B used.

16. Bisections at threads II and IV.

20. Bisections at threads II and III.

23, 24, 30, 38, 41. Bisections at sets B and D.

29. Bisections at set C.

44. Telescope micrometer reading reduced for 36 revolutions.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. |
| | ° ' " | ° ' " | " " | " " | " " | | | | | | | ° ' " | ° ' " | ° ' " | ° ' " | " " | |
| 1 | 314 56 | 10 6.2 | 3.9 | 3.0 | 6.0 | 32 | 985 | 880 | .. | .. | .. | 65.6 | 44 59 23.0 | .. | + 56.7 | 95 6 40.9 | - 0.9 |
| 2 | 310 58 | 8.3 | 6.8 | 5.9 | 8.7 | 24 | 270 | 282 | .. | .. | .. | 65.6 | 48 55 12.6 | 63.0 | + 1 5.0 | 100 2 38.8 | +12.8 |
| 3 | 309 36 | 6.5 | 4.5 | 4.2 | 6.4 | 30 | .. | 000 | .. | 005 | .. | 65.6 | 50 21 12.0 | .. | + 1 8.5 | 101 28 41.7 | +14.0 |
| 4 | 309 36 | 6.5 | 4.5 | 4.2 | 6.4 | 31 | .. | .. | .. | 650 | 610 | 65.6 | 50 16 32.0 | .. | + 1 8.3 | 101 24 1.5 | +15.0 |
| 5 | 308 52 | 6.0 | 4.5 | 4.2 | 5.8 | 32 | 520 | .. | .. | 280 | .. | 65.6 | 51 3 15.8 | .. | + 1 10.3 | 102 10 47.3 | .. |
| 6 | 308 52 | 6.0 | 4.5 | 4.2 | 5.8 | 31 | .. | 140 | .. | .. | 000 | 65.6 | 51 2 55.8 | .. | + 1 10.3 | 102 10 27.3 | .. |
| 7 | 331 14 | 6.7 | 4.2 | 3.4 | 5.8 | 33 | .. | .. | .. | 980 | 940 | 66.6 | 28 41 40.9 | .. | + 31.2 | 79 48 33.3 | - 0.7 |
| 8 | 335 36 | 5.3 | 1.8 | 1.9 | 4.7 | 37 | .. | 400 | .. | 355 | .. | 66.6 | 24 20 30.7 | 60.8 | + 25.8 | 75 27 17.7 | - 1.0 |
| 9 | 47 38 | 7.0 | 2.0 | 2.4 | 2.6 | 35 | .. | 230 | 205 | 205 | .. | 67.7 | 312 17 59.7 | 68.7 | - 1 1.5 | 3 23 19.4 | - 1.4 |
| 10 | 359 42 | 5.3 | 1.6 | 0.5 | 2.3 | 32 | .. | 510 | .. | 360 | .. | 67.7 | 0 13 16.6 | .. | + 0.2 | 51 19 38.0 | - 1.1 |
| 11 | 292 2 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 12 | 53 46 | 4.5 | 29.3 | 0.1 | 29.2 | 30 | .. | 450 | .. | 440 | .. | 67.7 | 306 8 43.9 | .. | - 1 16.7 | 357 13 48.4 | - 0.5 |
| 13 | 354 16 | 9.0 | 5.3 | 3.4 | 6.4 | 35 | .. | 800 | .. | 670 | .. | 67.7 | 5 40 10.4 | .. | + 5.6 | 56 46 37.2 | - 0.3 |
| 14 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 67.7 | .. | .. | .. |
| 15 | 334 44 | 3.0 | 27.5 | 26.1 | 0.0 | 36 | .. | 545 | .. | 350 | .. | 67.7 | 25 12 14.3 | 67.7 | + 26.4 | 76 19 1.9 | + 0.2 |
| 16 | 151 24 | 2.2 | 0.3 | 29.1 | 1.1 | 38 | .. | 415 | 285 | .. | .. | 67.7 | 208 32 44.2 | .. | + 30.6 | 22 33 6.4 | - 2.1 |
| 17 | 28 28 | 4.2 | 28.6 | 29.0 | 29.4 | 32 | .. | .. | .. | 450 | 375 | 67.7 | 331 27 15.8 | .. | - 30.6 | 22 33 6.4 | - 2.1 |
| 18 | 226 6 | 8.4 | 5.1 | 6.5 | 5.8 | 32 | .. | .. | 340 | .. | .. | 67.7 | 133 49 18.6 | .. | - 58.7 | 97 18 1.3 | + 1.0 |
| 19 | 313 46 | 4.0 | 29.8 | 29.9 | 2.6 | 37 | .. | .. | .. | .. | 930 | 67.7 | 46 10 40.4 | .. | + 58.7 | 97 18 0.3 | 0.0 |
| 20 | 208 30 | 10.4 | 8.3 | 7.0 | 5.5 | 34 | 125 | 090 | .. | .. | .. | 67.7 | 151 25 46.5 | .. | - 30.7 | 79 41 5.4 | + 0.3 |
| 21 | 331 22 | 6.4 | 2.8 | 1.4 | 4.0 | 35 | .. | .. | .. | 970 | 900 | 67.7 | 28 34 11.9 | .. | + 30.7 | 79 41 3.8 | - 1.3 |
| 22 | 49 58 | 5.0 | 29.5 | 29.0 | 29.1 | 37 | .. | 235 | 300 | 320 | .. | 67.7 | 309 58 28.6 | .. | - 1 7.3 | 1 3 42.5 | - 1.2 |
| 23 | 141 30 | 3.1 | 1.1 | 0.3 | 29.7 | 36 | 065 | 070 | .. | .. | .. | 67.7 | 218 26 9.8 | .. | + 44.9 | 12 39 26.5 | - 2.9 |
| 24 | 38 22 | 4.2 | 28.3 | 28.4 | 28.4 | 34 | .. | .. | .. | 885 | 880 | 67.7 | 321 33 51.5 | 63.6 | - 44.9 | 12 39 27.8 | - 1.6 |
| 25 | 5 52 | 7.6 | 4.1 | 3.8 | 3.5 | 31 | .. | 770 | .. | 685 | .. | 67.7 | 354 3 7.9 | 63.7 | - 5.9 | 45 9 23.2 | - 0.7 |
| 26 | 359 10 | 5.1 | 0.3 | 0.0 | 2.1 | 30 | 785 | .. | .. | .. | 615 | 67.7 | 0 44 49.5 | .. | + 0.7 | 51 51 11.4 | + 0.2 |
| 27 | 359 10 | 5.1 | 0.3 | 0.0 | 2.1 | 31 | .. | 345 | .. | 200 | .. | 67.7 | 0 44 58.0 | .. | + 0.7 | 51 51 19.9 | +19.7 |
| 28 | 350 46 | 7.9 | 3.5 | 2.4 | 4.6 | 35 | .. | 265 | .. | 105 | .. | 67.7 | 9 10 0.6 | 63.4 | + 9.1 | 60 16 30.9 | - 0.6 |
| 29 | 59 8 | 6.7 | 1.1 | 1.0 | 2.8 | 32 | 180 | .. | .. | .. | 105 | 67.7 | 300 47 12.0 | .. | - 1 34.7 | 351 51 58.5 | - 2.3 |
| 30 | 70 38 | 3.5 | 28.3 | 26.5 | 27.1 | 37 | 405 | .. | .. | .. | 310 | 67.7 | 289 18 27.7 | .. | - 2 40.1 | 340 22 8.8 | + 0.4 |
| 31 | 312 38 | 4.1 | 0.1 | 29.8 | 2.1 | 31 | .. | .. | 215 | .. | 095 | 67.7 | 47 16 55.5 | 63.6 | + 1 1.3 | 98 24 18.0 | - 1.4 |
| 32 | 335 0 | 9 21.5 | 14.3 | 15.5 | 18.6 | 41 | .. | 190 | .. | 148 | .. | 68.6 | 24 57 15.8 | .. | + 26.8 | 76 4 3.8 | .. |
| 33 | 335 0 | 21.5 | 14.3 | 15.5 | 18.6 | 39 | 650 | .. | .. | .. | 572 | 68.6 | 24 56 52.1 | 55.5 | + 26.8 | 76 3 40.1 | .. |
| 34 | 341 30 | 10 4.5 | 26.6 | 27.0 | 2.2 | 32 | .. | .. | .. | 704 | 680 | 68.6 | 18 25 19.6 | .. | + 19.1 | 69 31 59.9 | - 0.1 |
| 35 | 348 10 | 10.5 | 1.6 | 3.8 | 7.4 | 33 | .. | 160 | .. | 070 | .. | 68.6 | 11 45 30.9 | 59.8 | + 11.9 | 62 52 4.0 | + 0.5 |
| 36 | 327 52 | 15.0 | 9.1 | 16.4 | 14.0 | 35 | .. | .. | .. | 010 | 974 | 68.6 | 32 4 6.7 | .. | + 35.8 | 83 11 3.7 | - 1.0 |
| 37 | 325 54 | 8.2 | 1.2 | 1.6 | 7.5 | 35 | .. | 064 | .. | 990 | .. | 68.6 | 34 1 58.9 | 60.0 | + 38.5 | 85 8 58.6 | + 0.3 |
| 38 | 293 18 | 13.8 | 7.9 | 8.2 | 13.8 | 33 | .. | .. | .. | 910 | 888 | 69.9 | 66 37 49.5 | .. | + 2 13.7 | 117 46 24.4 | - 3.9 |
| 39 | 293 26 | 11.0 | 5.1 | 5.0 | 10.0 | 36 | 606 | 550 | .. | .. | .. | 69.9 | 66 30 26.0 | .. | + 2 12.9 | 117 39 0.1 | - 3.7 |
| 40 | 49 58 | 11.0 | 3.2 | 4.2 | 6.2 | 36 | .. | .. | 975 | 985 | 965 | 69.9 | 309 58 31.8 | 51.6 | - 1 9.3 | 1 3 43.7 | + 0.3 |
| 41 | 72 10 | 9.6 | 0.9 | 1.4 | 5.7 | 37 | .. | 504 | .. | 478 | .. | 69.9 | 287 46 37.6 | .. | - 2 59.7 | 338 49 59.1 | + 2.4 |
| 42 | 308 8 | 13.7 | 8.9 | 8.5 | 13.5 | 34 | .. | 470 | .. | 430 | .. | 69.9 | 51 47 57.8 | 51.0 | + 1 13.9 | 102 55 32.9 | - 1.1 |
| 43 | 302 26 | 12.2 | 5.8 | 5.4 | 9.9 | 30 | .. | 956 | .. | 870 | .. | 69.9 | 57 29 0.8 | .. | + 1 31.2 | 108 36 53.2 | - 1.9 |
| 44 | 340 20 | 10.9 | 5.9 | 5.8 | 10.3 | 34 | .. | 760 | .. | 716 | .. | 69.9 | 19 36 30.1 | .. | + 20.8 | 70 43 12.1 | + 1.4 |
| 45 | 299 54 | 11.5 | 5.6 | 7.9 | 11.7 | 43 | .. | .. | .. | 800 | 814 | 69.9 | 60 1 46.5 | .. | + 1 40.9 | 111 9 48.6 | + 8.8 |
| 46 | 309 36 | 11.7 | 5.6 | 6.5 | 11.4 | 29 | .. | 458 | .. | 422 | .. | 69.9 | 50 21 11.2 | .. | + 1 10.5 | 101 28 42.9 | +14.7 |
| 47 | 309 36 | 11.7 | 5.6 | 6.5 | 11.4 | 30 | .. | .. | .. | 948 | 950 | 69.9 | 50 16 29.4 | .. | + 1 10.3 | 101 24 0.9 | +14.9 |
| 48 | 308 44 | 8.6 | 2.6 | 4.0 | 9.2 | 34 | 416 | .. | .. | .. | .. | 69.9 | 51 11 51.7 | .. | + 1 12.6 | 102 10 25.5 | .. |
| 49 | 308 44 | 8.6 | 2.6 | 4.0 | 9.2 | 35 | .. | 828 | .. | 760 | .. | 69.9 | 51 12 13.4 | .. | + 1 12.6 | 102 19 47.2 | .. |
| 50 | 308 2 | 9.6 | 4.0 | 6.0 | 9.8 | 32 | .. | 878 | .. | 846 | .. | 69.9 | 51 53 29.7 | .. | + 1 14.5 | 103 1 5.4 | +17.1 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|--------|
| | in. | ° | | " " | " " | " " | " " |
| 2 | 30.00 | 65.8 | 5 | - 0.8 | - | 10.0 | - 10.8 |
| 8 | 30.02 | 63.7 | 6 | - 0.8 | + | 10.0 | + 9.2 |
| 9 | 29.97 | 68.9 | 32 | - 5.0 | - | 12.1 | - 17.1 |
| 14 | 29.97 | 67.9 | 33 | - 5.0 | + | 12.1 | + 6.6 |
| 15 | 29.97 | 67.9 | 48 | - 0.8 | + | 10.8 | + 10.0 |
| 24 | 29.97 | 65.3 | 49 | - 0.8 | - | 10.8 | - 11.6 |
| 25 | 29.96 | 64.1 | | | | | |
| 28 | 29.95 | 64.2 | | | | | |
| 31 | 29.95 | 64.6 | | | | | |
| 33 | 29.96 | 55.5 | | | | | |
| 35 | 29.98 | 61.0 | | | | | |
| 37 | 29.98 | 61.2 | | | | | |
| 40 | 30.06 | 55.0 | | | | | |
| 42 | 30.07 | 54.0 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. | | | |
|-------------------|---------|---------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|--------|----|----------------------------|--------|--------|--|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | m. | s. | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| 1876. Sept. 27 | 1 | Piscium | F. | 20.3 | 22.7 | 24.3 | 28.4 | 30.5 | | | | | 53 | 32.54 | — 0.89 | —31.33 | —31.33 | 23 | 53 | 0.32 | + 0.01 | | |
| | 2 | Andromedæ | F. | 20.1 | 23.2 | 24.9 | 31.9 | 34.2 | 36.4 | 43.7 | 45.3 | 48.2 | 2 | 34.21 | — 0.49 | —31.34 | —31.34 | 0 | 2 | 2.38 | + 0.02 | | |
| | 3 | Pegasi | F. | | | | | | | | | | | | | | | | | | | | |
| | 4 | Amphitrite | F. | | | | | | | | | | | | | | | | | | | | |
| | 5 | Eugenia | F. | 19.5 | 24.0 | 27.8 | 30.0 | 32.0 | 34.0 | 36.0 | 40.0 | 44.2 | 26 | 31.94 | — 1.06 | | —31.35 | 0 | 25 | 59.53 | | | |
| | 6 | Cybele | F. | | | | | | | | | | | | | | | | | | | | |
| | 7 | Galatæa | F. | 39.3 | 42.0 | 43.5 | 49.7 | 51.7 | 53.7 | 59.9 | 1.4 | 4.0 | 2 | 51.69 | — 0.87 | | —31.38 | 1 | 2 | 19.44 | | | |
| | 8 | Polaris | F. | | | | 33.0 | 59.0 | 25.0 | 52.0 | | | 13 | 58.32 | +36.03 | | —31.39 | 1 | 14 | 3.46 | — 0.92 | | |
| | 9 | Ceti | F. | 13.3 | 16.0 | 17.6 | 23.7 | 25.8 | 27.9 | 34.0 | 35.7 | 38.2 | 18 | 25.80 | — 1.14 | —31.38 | —31.39 | 1 | 17 | 53.27 | + 0.01 | | |
| | 10 | Venus II, S. . . . | S. | 21.4 | 23.9 | 25.6 | 31.9 | 34.0 | 36.1 | 42.5 | 44.0 | 46.6 | 27 | 34.00 | — 0.90 | | —31.24 | 9 | 27 | 1.86 | — 0.79 | | |
| | 11 | Leonis | S. | 9.0 | 11.9 | 13.5 | 20.2 | 22.5 | 24.6 | 31.3 | 33.0 | 35.9 | 39 | 22.43 | — 0.71 | —31.20 | —31.24 | 9 | 38 | 50.48 | — 0.01 | | |
| | 12 | Leonis | S. | 7.2 | 9.9 | 11.4 | 17.8 | 19.9 | 22.0 | 28.3 | 29.8 | 32.4 | 2 | 19.86 | — 0.93 | —31.27 | —31.25 | 10 | 1 | 47.68 | — 0.02 | | |
| | 13 | Leonis | S. | 28.7 | 31.5 | 33.0 | 39.6 | 41.8 | 44.0 | 50.6 | 52.2 | 54.9 | 13 | 41.81 | — 0.78 | —31.28 | —31.25 | 10 | 13 | 9.78 | + 0.01 | | |
| | 14 | Ursæ Majoris (R.) | S. | | | | | | | | | | | | | | | | | | | | |
| | 15 | Ursæ Majoris . . | S. | | | | | | | | | | | | | | | | | | | | |
| 28 | 16 | Sun I, S. | S. | 53.3 | 55.9 | 57.5 | 3.7 | 5.7 | 7.8 | 13.9 | 15.3 | 18.0 | 21 | 5.68 | — 1.21 | | —31.29 | 12 | 20 | 33.18 | | | |
| | 17 | Sun II, N. | S. | 1.9 | 4.5 | 6.0 | 11.7 | 13.9 | 16.0 | 22.3 | 23.7 | 26.2 | 23 | 14.02 | — 1.21 | | —31.29 | 12 | 22 | 41.52 | | | |
| | 18 | Polaris, S. P. . . | S. | | | | 5.0 | 38.0 | 9.5 | 44.0 | 17.5 | | 15 | 10.34 | —35.84 | | —31.30 | 1 | 14 | 3.20 | — 1.27 | | |
| | 19 | Mercury I, N. . . | S. | 18.0 | 20.7 | 22.4 | 28.5 | 30.7 | 32.8 | 39.0 | 40.7 | 43.3 | 42 | 30.68 | — 1.43 | | —31.31 | 13 | 41 | 57.94 | + 0.30 | | |
| | 20 | Boötis | S. | 20.6 | 23.2 | 25.0 | 31.4 | 33.6 | 35.8 | 42.3 | 43.9 | 46.6 | 10 | 33.60 | — 0.84 | —31.22 | —31.32 | 14 | 10 | 1.44 | — 0.10 | | |
| | 21 | Boötis | S. | 53.6 | 56.6 | 58.3 | 3.5 | 5.3 | 7.6 | 9.9 | 16.8 | 18.5 | 21.4 | 40 | 7.56 | — 0.69 | —31.38 | —31.33 | 14 | 39 | 35.54 | + 0.03 | |
| | 22 | Libræ | S. | 22.8 | 25.4 | 27.0 | 33.5 | 35.5 | 37.0 | 44.0 | 45.6 | 48.3 | 44 | 35.52 | — 1.46 | —31.38 | —31.33 | 14 | 44 | 2.73 | + 0.04 | | |
| | 23 | Aquilæ | S. | 37.9 | 40.4 | 42.0 | 48.1 | 50.1 | 52.1 | 58.2 | 59.9 | 2.4 | 19 | 50.12 | — 1.16 | —31.51 | —31.42 | 19 | 19 | 17.54 | + 0.14 | | |
| | 24 | Aquilæ | S. | 44.5 | 47.2 | 48.8 | 54.8 | 57.0 | 59.0 | 5.2 | 6.8 | 9.5 | 40 | 56.98 | — 1.05 | —31.41 | —31.43 | 19 | 40 | 24.50 | + 0.01 | | |
| | 25 | Aquilæ | S. | 6.7 | 9.5 | 10.9 | 17.1 | 19.2 | 21.4 | 27.6 | 29.0 | 31.7 | 45 | 19.23 | — 1.08 | —31.43 | —31.43 | 19 | 44 | 46.72 | + 0.04 | | |
| | 26 | Ursæ Minoris . . | S. | | | | | | | 13.5 | 5.0 | | 47 | 24.55 | +12.08 | | —31.43 | 19 | 47 | 35.20 | — 0.43 | | |
| | 27 | B. A. C. 6913 . . | S. | 1.0 | 7.2 | 10.7 | 24.8 | 29.4 | 34.2 | 48.6 | 51.7 | 57.9 | 1 | 29.50 | + 0.54 | | —31.44 | 20 | 0 | 58.60 | — 1.03 | | |
| | 28 | B. A. C. 6948 . . | S. | 31.0 | 33.9 | 35.8 | 42.9 | 45.3 | 47.5 | 54.7 | 56.5 | 59.4 | 8 | 45.22 | — 1.78 | | —31.44 | 20 | 8 | 12.00 | — 3.81 | | |
| | 29 | B. A. C. 7935 . . | S. | 1.2 | 5.8 | 8.5 | 19.0 | 22.5 | 25.8 | 36.2 | 38.9 | 43.6 | 20 | 22.39 | — 0.02 | | —31.45 | 20 | 19 | 50.92 | — 1.75 | | |
| | 30 | B. A. C. 7955 . . | S. | 31.9 | 36.3 | 39.0 | 49.3 | 52.9 | 56.4 | 6.9 | 9.4 | 13.9 | 22 | 52.89 | — 0.02 | | —31.45 | 20 | 22 | 21.42 | — 1.77 | | |
| | 31 | O. Arg. S. 20578 . | S. | 19.3 | 22.0 | 23.7 | 30.4 | 32.7 | 34.8 | 41.8 | 43.4 | 46.3 | 25 | 32.71 | — 1.67 | | —31.45 | 20 | 24 | 59.59 | — 3.73 | | |
| | 32 | B. A. C. 7171 . . | S. | 45.8 | 49.1 | 51.2 | 59.2 | 2.0 | 4.7 | 12.8 | 14.8 | 18.3 | 38 | 1.99 | — 0.44 | | —31.45 | 20 | 37 | 30.10 | — 2.28 | | |
| | 33 | B. A. C. 7234 . . | S. | 57.5 | 0.8 | 2.7 | 10.8 | 13.5 | 16.2 | 24.4 | 26.2 | 29.8 | 46 | 13.54 | — 2.03 | | —31.45 | 20 | 45 | 40.06 | — 4.43 | | |
| | 34 | B. A. C. 7256 . . | S. | 51.7 | 54.8 | 56.9 | 5.0 | 7.5 | 10.2 | 18.0 | 20.0 | 23.2 | 55 | 7.48 | — 2.01 | | —31.46 | 20 | 54 | 34.01 | — 4.41 | | |
| | 35 | B. A. C. 7292 . . | S. | 24.3 | 27.6 | 29.5 | 37.4 | 39.9 | 42.6 | 50.5 | 52.5 | 55.7 | 55 | 40.00 | — 2.00 | | —31.46 | 20 | 55 | 6.54 | — 4.42 | | |
| | 36 | Moon I, S. | S. | 14.8 | 17.5 | 19.3 | 25.9 | 28.0 | 30.3 | 37.0 | 38.7 | 41.2 | 14 | 28.08 | — 1.55 | | —31.46 | 21 | 13 | 55.07 | +65.41 | | |
| | 37 | B. A. C. 7477 . . | S. | 59.6 | 54.2 | 56.2 | 4.7 | 7.4 | 10.3 | 18.6 | 20.8 | 24.4 | 25 | 7.47 | — 0.36 | | —31.47 | 21 | 24 | 35.64 | — 2.56 | | |
| | 38 | O. Arg. S. 21542 . | S. | 35.5 | 38.2 | 39.8 | 46.0 | 48.2 | 50.4 | 56.8 | 58.4 | 1.0 | 32 | 48.26 | — 1.48 | | —31.47 | 21 | 32 | 15.31 | — 3.73 | | |
| | 39 | B. A. C. 7589 . . | S. | 4.9 | 9.2 | 11.6 | 21.6 | 24.8 | 28.0 | 37.8 | 40.3 | 44.6 | 41 | 24.76 | — 0.09 | | —31.47 | 21 | 40 | 53.20 | — 2.54 | | |
| | 40 | B. A. C. 7612 . . | S. | 53.0 | 57.2 | 59.9 | 9.6 | 13.0 | 16.0 | 26.0 | 28.7 | 32.8 | 46 | 12.91 | — 0.07 | | —31.47 | 21 | 45 | 41.37 | — 2.57 | | |
| | 41 | B. A. C. 7646 . . | S. | 23.2 | 27.3 | 29.6 | 39.9 | 43.2 | 46.6 | 56.7 | 59.3 | 3.6 | 51 | 43.27 | — 0.05 | | —31.48 | 21 | 51 | 11.74 | — 2.61 | | |
| | 42 | B. A. C. 7718 . . | S. | 9.8 | 14.7 | 17.5 | 29.2 | 33.0 | 37.0 | 48.5 | 51.4 | 56.2 | 3 | 33.97 | + 0.20 | | —31.48 | 22 | 3 | 1.79 | — 2.65 | | |
| | 43 | Mural Zones 207, 70 | S. | 3.4 | 5.9 | 7.6 | 11.8 | 14.0 | 16.1 | | | | 11 | 16.11 | — 1.48 | | —31.48 | 22 | 10 | 43.15 | — 3.86 | | |
| | 44 | Mural Zones 207, 71 | S. | | | | 20.9 | 23.2 | 25.2 | 29.5 | 31.2 | 33.9 | 11 | 21.01 | — 1.48 | | —31.48 | 22 | 10 | 48.05 | — 3.86 | | |
| | 45 | B. A. C. 7962 . . | S. | 5.2 | 8.6 | 10.6 | 18.5 | 21.5 | 24.1 | 32.3 | 34.3 | 37.7 | 45 | 21.42 | — 0.42 | | —31.50 | 22 | 44 | 49.50 | — 3.13 | | |
| | 46 | B. A. C. 8013 . . | S. | 15.2 | 20.3 | 23.1 | 34.9 | 39.0 | 42.9 | 55.0 | 57.9 | 3.0 | 54 | 39.03 | + 0.26 | | —31.50 | 22 | 54 | 7.79 | — 3.18 | | |
| | 47 | B. A. C. 8054 . . | S. | 33.5 | 38.6 | 41.6 | 53.1 | 57.0 | 1.0 | 12.8 | 15.7 | 20.6 | 1 | 57.10 | + 0.23 | | —31.50 | 23 | 1 | 25.83 | — 3.25 | | |
| | 48 | B. A. C. 8107 . . | S. | 18.2 | 22.3 | 24.8 | 35.2 | 38.3 | 41.7 | 51.8 | 54.2 | 58.4 | 11 | 38.32 | — 0.06 | | —31.50 | 23 | 11 | 6.76 | — 3.30 | | |
| | 49 | Nemesis | S. | 7.2 | 9.8 | 11.5 | 17.8 | 20.0 | 22.0 | 28.2 | 29.9 | 32.3 | 17 | 19.86 | — 1.46 | | —31.51 | 23 | 16 | 46.89 | | | |
| | 50 | Electra | S. | 12.3 | 15.0 | 16.5 | 23.7 | 25.5 | 27.8 | | | | 25 | 25.55 | — 1.57 | | —31.51 | 23 | 24 | 52.47 | | | |

4, 5, 6, 7, 34, 44, 49, 50. Thread A used.
14. Bisections at set C.
15, 35. Thread B used.
18. Bisections at threads B₁, B₂, and B₃.
36. Bisections at sets B and D.
39. Telescope micrometer reading decreased one revolution in reduction.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | | " | " | " | " | | | | | | | | | | | | | |
| 1 | 327 14 | 10 11.9 | 6.1 | 7.0 | 10.2 | 34 | 714 | 686 | .. | .. | .. | 69.9 | 32 41 58.5 | .. | + | 37.7 | 83 48 57.4 | - 1.3 |
| 2 | 349 26 | 12.8 | 6.3 | 8.2 | 11.6 | 29 | .. | 660 | .. | 596 | .. | 69.9 | 10 28 42.8 | 48.4 | + | 10.9 | 61 35 14.9 | + 0.4 |
| 3 | 335 32 | 6.9 | 0.8 | 1.8 | 4.7 | 31 | .. | 730 | .. | 645 | .. | 69.9 | 24 23 8.1 | .. | + | 26.6 | 75 29 55.9 | - 0.4 |
| 4 | 324 38 | 11.1 | 4.7 | 4.6 | 10.6 | 36 | .. | .. | .. | 158 | .. | 69.9 | 35 15 48.0 | .. | + | 41.5 | 86 22 50.7 | - 3.6 |
| 5 | 317 16 | 10.2 | 4.2 | 4.8 | 10.9 | 41 | .. | 714 | .. | 710 | .. | 69.9 | 42 39 12.0 | .. | + | 54.1 | 93 46 27.3 | - 3.2 |
| 6 | 322 10 | 7.2 | 1.1 | 2.6 | 5.9 | 39 | .. | .. | .. | 630 | 638 | 69.9 | 37 44 37.8 | .. | + | 45.4 | 88 51 44.4 | - 2.2 |
| 7 | 328 32 | 10.3 | 4.1 | 4.8 | 8.4 | 36 | .. | 880 | .. | 870 | .. | 69.9 | 31 21 57.3 | .. | + | 35.8 | 82 28 54.3 | - 4.0 |
| 8 | 49 40 | 7.2 | 28.8 | 1.2 | 2.0 | 33 | .. | 750 | 740 | 738 | 730 | 69.9 | 310 15 38.3 | .. | - 1 | 9.3 | 1 20 50.2 | - 2.5 |
| 9 | 312 14 | 12.9 | 7.4 | 6.5 | 14.1 | 32 | 845 | 835 | .. | .. | .. | 69.9 | 47 41 31.4 | 47.5 | + | 4.5 | 98 48 57.1 | - 0.3 |
| 10 | 334 46 | 9.7 | 6.0 | 6.9 | 7.3 | 36 | .. | 460 | .. | 470 | .. | 68.4 | 25 10 23.6 | 55.6 | + | 27.3 | 76 17 12.1 | .. |
| 11 | 345 24 | 4.4 | 1.2 | 2.0 | 2.7 | 38 | .. | 430 | .. | 310 | .. | 68.4 | 14 32 48.0 | .. | + | 15.0 | 65 39 24.2 | - 1.3 |
| 12 | 333 38 | 9.4 | 6.0 | 8.5 | 9.7 | 38 | .. | 290 | .. | 100 | .. | 68.4 | 26 18 51.0 | .. | + | 28.6 | 77 25 40.8 | - 0.9 |
| 13 | 341 30 | 2.1 | 28.2 | 29.2 | 0.2 | 32 | .. | 890 | .. | 776 | .. | 68.4 | 18 25 20.5 | .. | + | 19.2 | 69 32 0.9 | + 0.8 |
| 14 | 156 24 | 5.9 | 3.9 | 6.7 | 6.0 | 30 | .. | 782 | .. | .. | 710 | 68.4 | 203 30 54.2 | .. | + | 24.9 | 27 35 2.1 | - 2.1 |
| 15 | 23 28 | 6.8 | 2.8 | 6.6 | 6.6 | 29 | .. | .. | .. | 238 | 260 | 68.4 | 336 29 5.6 | 62.1 | - | 24.9 | 27 35 1.9 | - 2.3 |
| 16 | 318 26 | 12.0 | 7.6 | 8.8 | 13.5 | 32 | 240 | 046 | .. | .. | .. | 68.4 | 41 29 20.0 | .. | + | 50.4 | 92 36 31.6 | .. |
| 17 | 318 58 | 12.1 | 7.1 | 9.2 | 13.1 | 32 | .. | .. | .. | 122 | 974 | 68.4 | 40 57 19.2 | 64.1 | + | 49.5 | 92 4 29.9 | .. |
| 18 | 52 22 | 7.3 | 3.2 | 6.0 | 4.3 | 35 | 220 | 110 | 040 | .. | .. | 68.4 | 307 33 58.1 | .. | - 1 | 13.8 | 358 39 5.5 | - 2.0 |
| 19 | 306 38 | 8.6 | 5.3 | 8.0 | 8.7 | 37 | .. | 120 | .. | 050 | .. | 68.4 | 53 18 33.1 | .. | + | 16.1 | 104 26 10.4 | .. |
| 20 | 340 52 | 8.6 | 4.5 | 6.5 | 7.7 | 34 | .. | 080 | .. | 942 | .. | 68.4 | 19 3 45.4 | .. | + | 19.6 | 70 10 26.2 | + 1.5 |
| 21 | 348 38 | 10.6 | 7.6 | 8.9 | 9.8 | 33 | .. | 620 | .. | 428 | .. | 68.4 | 11 17 40.4 | .. | + | 11.3 | 62 24 12.9 | - 0.1 |
| 22 | 305 32 | 8.8 | 5.2 | 7.4 | 9.8 | 35 | .. | 240 | .. | 090 | .. | 68.4 | 54 24 3.9 | 66.2 | + | 19.0 | 105 31 44.1 | + 1.0 |
| 23 | 323 56 | 12.0 | 8.0 | 8.5 | 11.8 | 37 | .. | 360 | .. | 290 | .. | 69.2 | 36 0 40 2 | 57.0 | + | 41.9 | 87 7 43.3 | - 1.3 |
| 24 | 331 22 | 9.5 | 6.2 | 6.5 | 8.5 | 35 | .. | 524 | .. | 456 | .. | 69.2 | 28 34 9.7 | .. | + | 31.4 | 79 41 2.3 | - 2.7 |
| 25 | 329 36 | 11.0 | 8.0 | 6.5 | 9.0 | 36 | 152 | 105 | .. | .. | .. | 69.2 | 30 20 19.6 | .. | + | 33.8 | 81 27 14.6 | - 3.2 |
| 26 | 49 58 | 9.2 | 2.9 | 5.6 | 6.3 | 36 | .. | .. | .. | 880 | 860 | 69.2 | 309 58 29.5 | .. | - 1 | 8.8 | 1 3 41.9 | - 1.4 |
| 27 | 25 18 | 14.8 | 8.7 | 10.6 | 10.9 | 29 | .. | 450 | .. | 430 | .. | 69.2 | 334 36 41.3 | .. | - | 28.0 | 25 42 34.5 | +18.9 |
| 28 | 290 42 | 8.5 | 1.5 | 7.0 | 6.6 | 34 | .. | .. | .. | 868 | 958 | 69.2 | 69 14 0.4 | .. | + | 31.2 | 120 22 52.8 | - 1.1 |
| 29 | 15 18 | 11.0 | 7.1 | 9.5 | 9.5 | 31 | 570 | 520 | .. | .. | .. | 69.2 | 344 37 10.7 | .. | - | 15.9 | 35 43 16.0 | +19.6 |
| 30 | 15 18 | 11.0 | 7.1 | 9.5 | 9.5 | 30 | .. | 210 | .. | 110 | .. | 69.2 | 344 36 50.1 | .. | - | 15.9 | 35 42 55.4 | +19.7 |
| 31 | 275 48 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 32 | 2 18 | 13.6 | 8.9 | 11.4 | 11.9 | 30 | .. | .. | .. | 500 | 360 | 69.2 | 357 36 57.3 | .. | - | 2.4 | 48 43 16.1 | -19.4 |
| 33 | 280 50 | 6.8 | 3.2 | 3.7 | 6.3 | 31 | .. | 590 | .. | 470 | .. | 69.2 | 79 5 6.1 | .. | + | 51.3 | 130 16 18.6 | - 0.3 |
| 34 | 282 4 | 11.4 | 6.5 | 9.0 | 10.7 | 36 | 450 | 550 | .. | .. | .. | 69.2 | 77 49 51.9 | .. | + | 22.2 | 129 0 35.3 | + 1.0 |
| 35 | 282 4 | 11.4 | 6.5 | 9.0 | 10.7 | 40 | .. | .. | .. | 615 | 622 | 69.2 | 77 56 2.8 | 54.3 | + | 24.4 | 129 6 48.4 | + 1.1 |
| 36 | 300 56 | 10.5 | 5.7 | 6.5 | 8.0 | 34 | 010 | .. | 900 | .. | 710 | 69.2 | 58 59 44.9 | .. | + | 36.1 | 110 7 42.2 | .. |
| 37 | 4 50 | 5.8 | 1.1 | 4.6 | 4.0 | 33 | .. | 570 | .. | 360 | .. | 69.2 | 35 5 35.2 | .. | - | 5.0 | 46 11 51.4 | +21.7 |
| 38 | 305 2 | 10.6 | 5.3 | 6.3 | 9.1 | 28 | .. | 670 | .. | 570 | .. | 69.2 | 54 52 24.5 | .. | + | 22.2 | 106 0 7.9 | +11.3 |
| 39 | 12 41 | 8.2 | 4.4 | 5.7 | 6.6 | 34 | .. | 600 | .. | 550 | .. | 69.2 | 347 11 39.3 | .. | - | 13.2 | 38 17 47.3 | +22.6 |
| 40 | 13 10 | 4.6 | 0.9 | 2.9 | 2.6 | 36 | .. | 700 | .. | 620 | .. | 69.2 | 346 46 23.1 | .. | - | 13.6 | 37 52 30.7 | +22.7 |
| 41 | 13 42 | 8.5 | 3.0 | 5.5 | 6.5 | 35 | .. | .. | .. | 530 | 475 | 69.2 | 346 14 9.6 | 54.0 | - | 14.2 | 37 20 16.6 | +22.8 |
| 42 | 19 16 | 10.8 | 6.4 | 9.0 | 9.0 | 32 | .. | .. | .. | 350 | 280 | 69.2 | 340 39 23.9 | .. | - | 20.4 | 31 45 24.7 | +23.0 |
| 43 | 304 24 | 9.0 | 3.5 | 4.1 | 7.5 | 32 | 370 | 425 | .. | .. | .. | 69.2 | 55 31 19.6 | .. | + | 24.2 | 106 39 5.0 | +14.6 |
| 44 | 304 24 | 9.0 | 3.5 | 4.1 | 7.5 | 28 | .. | .. | .. | 655 | 575 | 69.2 | 55 27 50.1 | .. | + | 24.0 | 106 35 35.3 | +14.7 |
| 45 | 2 20 | 6.3 | 2.6 | 3.9 | 3.8 | 32 | .. | 900 | .. | 855 | .. | 69.2 | 357 35 26.4 | .. | - | 2.4 | 48 41 45.2 | +23.6 |
| 46 | 20 10 | 5.9 | 1.2 | 3.7 | 4.3 | 29 | .. | 460 | .. | 420 | .. | 69.2 | 339 44 33.7 | .. | - | 21.4 | 30 50 53.5 | +23.3 |
| 47 | 19 46 | 13.0 | 7.5 | 9.5 | 10.2 | 29 | .. | 270 | .. | 150 | .. | 69.2 | 340 8 36.4 | .. | - | 21.0 | 31 14 36.6 | +23.2 |
| 48 | 13 34 | 9.5 | 5.5 | 7.2 | 7.4 | 30 | .. | 050 | .. | 890 | .. | 69.2 | 346 20 45.3 | .. | - | 14.1 | 37 26 52.4 | +23.5 |
| 49 | 305 14 | 16.8 | 10.9 | 11.7 | 14.0 | 32 | 930 | 870 | .. | .. | .. | 69.2 | 54 39 1.0 | .. | + | 21.6 | 105 46 43.8 | - 4.9 |
| 50 | 298 48 | 10.2 | 5.7 | 7.4 | 10.0 | 33 | 010 | 920 | .. | .. | .. | 69.2 | 61 4 56.9 | .. | + | 44.7 | 112 13 2.8 | - 3.9 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|---------|
| | in. | ° | | " | " | " | " |
| 2 | 30.12 | 52.0 | 10 | - 5.0 | - 11.6 | .. | 16.6 |
| 9 | 30.12 | 51.0 | 16 | - 5.8 | - 16 0.8 | .. | 16 6.6 |
| 10 | 30.21 | 54.8 | 17 | - 5.7 | + 16 0.8 | .. | 15 55.1 |
| 17 | 30.20 | 62.9 | 19 | - 8.7 | + 4.1 | .. | 4.6 |
| 22 | 30.15 | 66.2 | 36 | - 46 46.4 | - 14 56.6 | .. | 61 43.0 |
| 23 | 30.10 | 59.8 | | | | | |
| 35 | 30.09 | 56.8 | | | | | |
| 41 | 30.08 | 56.0 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. | |
|-------------------|---------|-----------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|----------|--------------|--------|----------------|---------------------------|-------------|----------------------------|---|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | | |
| | | | | | | | | | | | | | | | | | | | |
| 1876. Sept. 28 | 1 | Euphrosyne | S. | 17.0 | 19.9 | 21.3 | 28.7 | 31.0 | 33.5 | 40.6 | 42.5 | 45.5 | 40 31.11 | - 1.74 | . | -31.51 | 23 39 57.86 | . | . |
| | 2 | Aegle | S. | 16.0 | 18.6 | 20.0 | 26.3 | 28.6 | 30.7 | 37.0 | 38.5 | 41.2 | 45 28.54 | - 0.94 | . | -31.52 | 23 44 56.06 | . | . |
| | 3 | Andromedæ | S. | 20.7 | 23.6 | 25.4 | 32.3 | 34.5 | 36.7 | 43.9 | 45.5 | 48.7 | 2 34 59 | - 0.70 | -3.50 | -31.52 | 0 2 2.37 | 0.00 | . |
| | 4 | Pegasi | S. | 14.5 | 17.1 | 18.7 | 25.0 | 27.1 | 29.2 | 35.6 | 37.1 | 39.8 | 7 27.12 | - 0.95 | -31.46 | -31.52 | 0 6 54.65 | - 0.06 | . |
| | 5 | Amphitrite | S. | 39.9 | 42.2 | 43.8 | 50.0 | 52.0 | 54.0 | 0.2 | 1.8 | 4.2 | 16 52.01 | - 1.12 | . | -31.52 | 0 16 19.37 | . | . |
| | 6 | Eugenia | S. | 33.0 | 35.7 | 37.5 | 43.2 | 45.2 | 47.3 | 53.4 | 54.9 | 57.7 | 25 45.32 | - 1.25 | . | -31.53 | 0 25 12.54 | . | . |
| | 7 | Ceti. | S. | 45.9 | 48.6 | 50.2 | 56.7 | 58.9 | 1.0 | 7.4 | 9.0 | 11.9 | 37 58.84 | - 1.50 | -31.52 | -31.53 | 0 37 25.81 | + 0.04 | . |
| | 8 | Weisse 753 | S. | 5.9 | 7.6 | 11.8 | 13.7 | 15.7 | 17.8 | 20.0 | 24.0 | 25.6 | 45 15.79 | - 1.14 | . | -31.54 | 0 44 43.11 | - 3.69 | . |
| | 9 | B. A. C. 237 | S. | . | 27.4 | 29.6 | 31.7 | 33.8 | 35.7 | 39.7 | 41.3 | 43.9 | 45 31.63 | - 1.14 | . | -31.54 | 0 44 58.95 | - 3.69 | . |
| | 10 | Schjellerup 537 | S. | 21.5 | 23.0 | 27.0 | 29.1 | 31.2 | 33.2 | 35.3 | 39.3 | 40.9 | 52 31.17 | - 1.12 | . | -31.54 | 0 51 58.51 | - 3.69 | . |
| | 11 | Durch 3, 133 | S. | 45.0 | 46.4 | 50.6 | 52.7 | 54.6 | 56.6 | 58.7 | 2.9 | 4.4 | 52 54.66 | - 1.12 | . | -31.54 | 0 52 22.00 | - 3.69 | . |
| | 12 | Galatæa. | S. | 0.0 | 2.5 | 4.2 | 10.3 | 12.4 | 14.4 | 20.7 | 22.2 | 24.6 | 2 12.37 | - 1.05 | . | -31.54 | 1 1 39.78 | . | . |
| | 13 | Polaris. | S. | . | . | 5.5 | 36.5 | 1.0 | 25.0 | 33.0 | . | . | 14 0.66 | +34.22 | . | -31.54 | 1 14 3.34 | - 1.22 | . |
| | 14 | β Arietis. | S. | 10.7 | 13.2 | 14.9 | 21.5 | 23.6 | 25.9 | 32.3 | 33.9 | 36.7 | 48 23.63 | - 0.84 | -31.54 | -31.55 | 1 47 51.24 | + 0.01 | . |
| | 15 | α Arietis. | S. | 34.0 | 36.8 | 38.5 | 44.9 | 47.2 | 49.5 | 56.1 | 57.8 | 0.6 | 0 47.27 | - 0.79 | -31.59 | -31.56 | 2 0 14.92 | + 0.04 | . |
| | 16 | Neptune | S. | 17.2 | 19.9 | 21.5 | 27.6 | 29.7 | 31.7 | 38.0 | 39.5 | 42.0 | 12 20.68 | - 0.99 | . | -31.56 | 2 11 57.13 | . | . |
| | 17 | Venus II, N. | P. | 28.0 | 30.4 | 32.2 | 38.5 | 40.7 | 42.7 | 48.9 | 50.5 | 53.3 | 31 40.58 | - 0.84 | . | -32.04 | 9 31 7.70 | - 0.78 | . |
| | 18 | Venus S. | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 19 | ε Leonis. | P. | 9.7 | 12.6 | 14.3 | 21.0 | 23.2 | 25.4 | 32.2 | 33.8 | 36.6 | 39 23.20 | - 0.64 | -32.02 | -32.05 | 9 38 50.51 | - 0.09 | . |
| | 20 | μ Leonis. | P. | 3.3 | 6.3 | 8.0 | 14.8 | 17.0 | 19.4 | 26.1 | 27.8 | 30.7 | 46 17.04 | - 0.60 | -32.02 | -32.05 | 9 45 44.39 | - 0.04 | . |
| | 21 | B. A. C. 3453 | P. | . | . | 4.5 | 6.5 | 8.8 | 10.9 | 15.0 | . | . | 1 5.75 | - 0.77 | . | -32.05 | 10 0 35.93 | - 1.76 | . |
| | 22 | α Leonis. | P. | 8.0 | 10.7 | 12.3 | 18.4 | 20.7 | 22.7 | 28.9 | 30.4 | 33.0 | 2 20.57 | - 0.85 | -32.04 | -32.05 | 10 1 47.67 | - 0.05 | . |
| | 23 | γ Leonis. | P. | 29.7 | 32.3 | 34.0 | 40.3 | 42.6 | 44.7 | 51.2 | 52.9 | 55.6 | 13 42.59 | - 0.72 | -32.10 | -32.06 | 10 13 9.81 | + 0.02 | . |
| | 24 | α Ursæ Majoris (R.) | P. | . | . | . | . | 41.0 | 45.4 | 54.5 | 55.0 | 3.2 | 56 36.76 | + 0.62 | . | -32.07 | 10 56 5.31 | + 0.02 | . |
| | 25 | α Ursæ Majoris. | P. | . | . | . | . | . | . | . | . | . | . | . | . | -32.07 | 11 24 2.67 | + 0.34 | . |
| | 26 | λ Draconis. | P. | 57.7 | 5.0 | 9.5 | 27.7 | 33.4 | 39.4 | 57.6 | 1.6 | 9.2 | 24 33.46 | + 1.29 | . | -32.07 | 11 24 2.67 | + 0.34 | . |
| | 27 | γ Ursæ Majoris. | P. | 30.5 | 34.9 | 37.3 | 47.8 | 51.5 | 54.9 | 5.4 | 8.0 | 12.5 | 47 51.42 | + 0.16 | . | -32.09 | 11 47 19.49 | + 0.13 | . |
| | 28 | Sun I, S. | P. | 30.8 | 33.5 | 34.9 | 41.0 | 43.2 | 45.3 | 51.4 | 52.9 | 55.3 | 24 43.14 | - 1.14 | . | -32.10 | 12 24 9.90 | . | . |
| | 29 | Sun II, N. | P. | 39.3 | 41.8 | 43.4 | 49.4 | 51.5 | 53.6 | 59.8 | 1.3 | 3.8 | 26 51.54 | - 1.14 | . | -32.10 | 12 26 18.30 | . | . |
| | 30 | Polaris, S. P. | P. | . | . | 57.0 | . | . | . | . | . | . | 15 9.90 | -35.04 | . | -32.12 | 1 14 2.74 | - 1.90 | . |
| | 31 | η Ursæ Majoris. | P. | 53.0 | 57.0 | . | . | . | 25.0 | . | 31.3 | 43 12.17 | - 0.03 | . | . | -32.13 | 13 42 40.01 | + 0.04 | . |
| | 32 | α Bootis. | P. | 21.4 | 24.2 | 25.8 | 32.3 | 34.5 | 36.6 | 43.2 | 44.7 | 47.5 | 10 34.47 | - 0.76 | -32.18 | -32.13 | 14 10 1.58 | + 0.05 | . |
| | 33 | ε Bootis. | P. | 54.4 | 57.3 | 59.0 | 5.9 | 8.2 | 10.6 | 17.5 | 19.2 | 21.8 | 40 8.21 | - 0.61 | -32.13 | -32.14 | 14 39 35.47 | - 0.03 | . |
| | 34 | α Libræ. | P. | 23.4 | 27.7 | 31.9 | 34.0 | 36.1 | 38.3 | 40.4 | 44.7 | 49.0 | 44 36.17 | - 1.38 | -32.12 | -32.14 | 14 44 2.65 | - 0.03 | . |
| | 35 | δ Aquilæ. | P. | 38.5 | 41.0 | 42.6 | 48.5 | 50.6 | 52.8 | 58.6 | 0.5 | 3.0 | 19 50.71 | - 1.09 | -32.19 | -32.16 | 19 19 17.46 | + 0.08 | . |
| | 36 | γ Aquilæ. | P. | 45.0 | 47.8 | 49.3 | 55.5 | 57.6 | 59.7 | 6.0 | 7.5 | 10.1 | 40 57.61 | - 0.98 | -32.13 | -32.16 | 19 40 24.47 | 0.00 | . |
| | 37 | α Aquilæ. | P. | 7.4 | 9.9 | 11.5 | 17.7 | 19.8 | 21.9 | 28.0 | 29.6 | 32.3 | 45 19.79 | - 1.00 | -32.09 | -32.16 | 19 44 46.63 | - 0.03 | . |
| | 38 | γ Ursæ Minoris. | P. | . | . | . | . | . | 5.5 | 44.1 | 7.7 | 26.5 | 47 24.70 | +40.85 | . | -32.16 | 19 47 33.39 | - 0.92 | . |
| | 39 | 3 Ursæ Majoris, S. P. | P. | . | . | 17.9 | 11.9 | 6.0 | 0.8 | 55.2 | . | . | 1 6.33 | - 2.98 | . | -32.16 | 8 0 31.19 | - 0.22 | . |
| | 40 | κ Cephei (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | -32.16 | 20 13 1.59 | + 0.46 | . |
| | 41 | κ Cephei. | P. | . | . | . | 31.3 | 40.5 | 50.0 | 8.4 | 15.7 | 27.4 | 13 31.32 | + 2.43 | . | -32.16 | 20 13 1.59 | + 0.46 | . |
| | 42 | ε Delphini (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 43 | ε Delphini. | P. | . | . | . | . | . | . | . | . | . | . | . | . | -32.16 | 20 39 14.00 | - 1.79 | . |
| | 44 | B. A. C. 7189 | P. | 23 7 | 28.5 | 31.0 | 42.3 | 46.0 | 49.6 | 0.8 | 3.8 | 8.5 | 39 46.02 | + 0.14 | . | -32.16 | 20 39 14.00 | - 1.79 | . |
| | 45 | μ Aquarii (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | -32.16 | 20 46 1.25 | + 0.06 | . |
| | 46 | μ Aquarii. | P. | . | . | . | . | . | 42.9 | 44.5 | 47.2 | 49 34.70 | - 1.29 | -32.15 | -32.16 | 20 46 1.25 | + 0.06 | . | |
| | 47 | Anonymous(?) | P. | 28.9 | 31.9 | 33.5 | 37.9 | 40.2 | 42.3 | 44.6 | 46.8 | . | 10 42.39 | - 1.57 | . | -32.16 | 21 10 8.66 | - 3.87 | . |
| | 48 | Anonymous(?) | P. | . | . | . | . | 52.6 | 55.0 | 59.5 | 1.1 | 3.8 | 10 50.48 | - 1.57 | . | -32.16 | 21 10 16.75 | - 3.87 | . |
| | 49 | β Cephei (R.) | P. | . | . | . | . | . | . | . | 0.2 | 4.4 | 11.9 | + 1.01 | . | -32.17 | 21 27 4.96 | - 0.01 | . |
| | 50 | β Cephei. | P. | . | . | . | . | . | . | . | . | . | . | . | . | -32.17 | 21 27 4.96 | - 0.01 | . |

1, 2, 5, 6, 8, 10, 12, 47, 48. Thread A used.

9, 11, 49. Thread B used.

26, 39, 40, 41, 44, 49, 50. Bisections at sets B and D.

38. Bisections at threads C₅, D₅, and D₃.

47, 48. One of these stars may be Rhodope, (166).

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|---------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | | |
| | | " | " | " | " | " | " | " | " | " | | | | | | | " | | |
| 1 | 290 56 | 10.2 | 5.4 | 7.4 | 7.5 | 42 | 820 | 860 | .. | .. | .. | 69.2 | 68 59 27.4 | .. | + | 2 | 30.0 | 120 8 18.6 | - 3.6 |
| 2 | 335 46 | 10.8 | 5.5 | 6.0 | 7.9 | 39 | 240 | 205 | .. | .. | .. | 69.2 | 24 8 32.3 | .. | + | 26.0 | 75 15 19.5 | - 1.5 | |
| 3 | 349 26 | 10.8 | 5.2 | 6.9 | 8.3 | 29 | 782 | 775 | .. | .. | .. | 69.2 | 10 28 41.7 | .. | + | 10.7 | 61 35 13.6 | - 0.7 | |
| 4 | 335 32 | 10.5 | 5.2 | 6.0 | 7.3 | 31 | .. | 510 | .. | 325 | .. | 69.2 | 24 23 7.0 | 52.2 | + | 26.3 | 75 29 54.5 | - 1.3 | |
| 5 | 324 36 | 10.5 | 6.0 | 6.0 | 10.8 | 40 | 440 | 400 | .. | .. | .. | 69.2 | 35 18 51.3 | .. | + | 41.2 | 86 25 53.7 | - 3.6 | |
| 6 | 317 10 | 6.3 | 1.9 | 3.3 | 5.4 | 44 | .. | 570 | .. | 660 | .. | 69.2 | 42 45 52.4 | .. | + | 53.7 | 93 53 7.3 | - 3.2 | |
| 7 | 302 24 | 9.0 | 4.5 | 6.6 | 8.0 | 33 | .. | .. | .. | 730 | 780 | 69.2 | 57 31 43.1 | .. | + | 31.1 | 108 39 35.4 | - 2.0 | |
| 8 | 323 48 | 11.1 | 7.0 | 6.6 | 10.0 | 31 | 960 | 912 | .. | .. | .. | 69.2 | 36 4 41.8 | .. | + | 42.4 | 87 11 45.4 | + 25.6 | |
| 9 | 323 48 | 11.1 | 7.0 | 6.6 | 10.0 | 31 | .. | .. | .. | 632 | 602 | 69.2 | 36 9 44.7 | .. | + | 42.5 | 87 16 48.4 | + 25.6 | |
| 10 | 324 38 | 12.8 | 8.3 | 7.6 | 9.3 | 32 | 760 | 750 | .. | .. | .. | 69.2 | 35 14 55.1 | .. | + | 41.1 | 86 21 57.4 | + 25.7 | |
| 11 | 324 38 | 12.8 | 8.3 | 7.6 | 9.3 | 33 | .. | .. | .. | 880 | 940 | 69.2 | 35 20 20.6 | .. | + | 41.2 | 86 27 23.0 | + 25.8 | |
| 12 | 328 26 | 10.1 | 5.9 | 5.7 | 8.1 | 40 | .. | 710 | .. | 630 | .. | 69.2 | 31 28 55.3 | .. | + | 35.6 | 82 35 52.1 | - 4.1 | |
| 13 | 49 40 | 4.0 | 28.0 | 0.0 | 28.4 | 33 | 900 | .. | 930 | .. | 920 | 69.2 | 310 15 38.2 | 51.1 | - | 8.6 | 1 20 50.8 | - 1.5 | |
| 14 | 341 14 | 7.2 | 2.8 | 2.9 | 5.5 | 30 | 340 | 465 | .. | .. | .. | 69.2 | 18 40 48.0 | .. | + | 19.7 | 60 47 28.9 | - 2.1 | |
| 15 | 343 56 | 9.7 | 5.7 | 6.6 | 8.1 | 36 | .. | 620 | .. | 515 | .. | 69.2 | 16 0 26.1 | .. | + | 16.7 | 67 7 4.0 | - 1.6 | |
| 16 | 332 24 | 8.0 | 4.2 | 4.4 | 5.0 | 33 | .. | 460 | .. | 310 | .. | 69.2 | 27 31 35.2 | 51.0 | + | 30.3 | 78 38 26.7 | .. | |
| 17 | 334 32 | 7.4 | 2.6 | 4.0 | 4.9 | 33 | 720 | .. | .. | .. | 550 | 68.1 | 25 23 37.4 | 58.2 | + | 27.2 | 76 30 25.8 | .. | |
| 18 | 334 32 | 7.4 | 2.6 | 4.0 | 4.9 | 33 | .. | 170 | .. | 110 | .. | 68.1 | 25 24 0.3 | .. | + | 27.2 | 76 30 48.7 | .. | |
| 19 | 345 24 | 7.5 | 2.8 | 3.9 | 5.0 | 38 | 380 | 350 | .. | 230 | 200 | 68.1 | 14 32 48.8 | .. | + | 14.8 | 65 39 24.8 | - 0.9 | |
| 20 | 347 38 | 8.0 | 3.0 | 4.5 | 6.6 | 35 | 610 | 600 | .. | 510 | 515 | 68.1 | 12 18 7.7 | .. | + | 12.5 | 63 24 41.4 | - 0.6 | |
| 21 | 338 24 | 12.2 | 8.1 | 8.1 | 9.4 | 32 | 310 | 240 | .. | .. | .. | 68.1 | 21 31 20.4 | .. | + | 22.5 | 72 38 4.1 | - 4.9 | |
| 22 | 333 38 | 10.7 | 6.8 | 7.0 | 9.0 | 38 | .. | .. | .. | 250 | 210 | 68.1 | 26 18 52.1 | .. | + | 28.2 | 77 25 41.5 | - 0.3 | |
| 23 | 341 30 | 2.9 | 28.5 | 29.1 | 1.4 | 32 | 850 | 865 | .. | 720 | 715 | 68.1 | 18 25 20.2 | 61.4 | + | 19.0 | 69 32 0.4 | + 0.1 | |
| 24 | 156 24 | 7.0 | 5.0 | 6.9 | 5.7 | 30 | 860 | 830 | .. | .. | .. | 68.1 | 203 30 51.0 | 63.8 | + | 21.6 | 27 35 2.6 | - 1.9 | |
| 25 | 23 28 | 7.1 | 3.1 | 6.0 | 6.4 | 39 | .. | .. | .. | 310 | 215 | 68.1 | 336 29 6.2 | .. | - | 24.6 | 27 35 2.8 | - 1.7 | |
| 26 | 31 2 | 9.5 | 5.1 | 6.6 | 6.7 | 33 | 290 | 200 | .. | 180 | 175 | 68.1 | 328 53 33.1 | 65.3 | - | 34.1 | 19 59 20.2 | - 3.3 | |
| 27 | 15 26 | 9.4 | 6.0 | 9.1 | 9.0 | 39 | 115 | 080 | .. | 020 | 035 | 68.1 | 344 31 4.7 | 66.4 | - | 15.6 | 35 37 10.3 | - 0.4 | |
| 28 | 318 4 | 7.8 | 3.0 | 5.9 | 10.4 | 37 | 750 | 770 | .. | .. | .. | 68.1 | 41 52 42.0 | .. | + | 50.3 | 92 59 53.5 | .. | |
| 29 | 318 36 | 11.7 | 7.1 | 9.2 | 11.8 | 37 | .. | .. | .. | 590 | 470 | 68.1 | 41 20 42.4 | 68.0 | + | 49.4 | 92 27 53.0 | .. | |
| 30 | 52 22 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 31 | 10 58 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 32 | 340 52 | 0.2 | 6.0 | 5.6 | 7.1 | 34 | 110 | 100 | .. | 970 | 940 | 68.1 | 19 3 45.7 | 71.6 | + | 19.2 | 70 10 26.1 | + 1.4 | |
| 33 | 348 38 | 10.3 | 7.3 | 7.3 | 8.3 | 33 | .. | 690 | .. | 600 | .. | 68.1 | 11 17 41.1 | 71.1 | + | 11.1 | 62 24 13.4 | + 0.2 | |
| 34 | 305 32 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 35 | 323 56 | 11.0 | 10.2 | 8.6 | 12.2 | 37 | .. | 480 | .. | 340 | .. | 68.8 | 35 59 42.2 | 64.4 | + | 40.9 | 87 6 44.3 | - 0.3 | |
| 36 | 331 22 | 9.6 | 6.7 | 5.1 | 7.5 | 35 | .. | 760 | .. | 615 | .. | 68.8 | 28 34 11.8 | .. | + | 30.8 | 79 41 3.8 | - 1.2 | |
| 37 | 329 36 | 11.4 | 9.2 | 7.1 | 8.6 | 36 | .. | 325 | .. | 190 | .. | 68.8 | 30 20 22.4 | 61.8 | + | 33.1 | 81 27 16.7 | - 1.1 | |
| 38 | 49 58 | 13.5 | 9.3 | 8.5 | 9.4 | 36 | .. | .. | 630 | 450 | 290 | 68.8 | 309 58 29.0 | 61.4 | - | 1 7.5 | 1 3 42.7 | - 0.5 | |
| 39 | 72 10 | 11.0 | 6.0 | 5.0 | 6.8 | 37 | 005 | 020 | .. | .. | .. | 68.8 | 287 46 31.6 | .. | - | 2 55.0 | 335 49 57.8 | + 1.4 | |
| 40 | 141 30 | 5.9 | 4.4 | 3.5 | 5.1 | 35 | 830 | 825 | .. | .. | .. | 68.8 | 218 26 10.8 | .. | + | 45.0 | 12 39 25.4 | - 2.6 | |
| 41 | 38 22 | 13.6 | 7.6 | 7.9 | 9.0 | 34 | .. | .. | .. | 200 | 140 | 68.8 | 321 33 51.4 | .. | - | 45.0 | 12 39 27.6 | - 0.4 | |
| 42 | 207 56 | 15.7 | 13.7 | 12.5 | 10.9 | 34 | 795 | 775 | .. | .. | .. | 68.8 | 152 0 2.9 | .. | - | 30.2 | 79 6 48.5 | + 1.2 | |
| 43 | 331 56 | 10.9 | 7.7 | 6.1 | 9.0 | 34 | .. | .. | .. | 415 | 365 | 68.8 | 27 59 54.1 | .. | + | 30.2 | 79 6 45.5 | - 1.8 | |
| 44 | 17 58 | 11.8 | 8.0 | 8.9 | 9.8 | 31 | 740 | .. | .. | .. | 670 | 68.8 | 341 57 13.3 | .. | - | 18.5 | 33 3 16.0 | + 20.8 | |
| 45 | 228 16 | 15.0 | 10.5 | 11.2 | 10.5 | 37 | 580 | 555 | .. | .. | .. | 68.8 | 131 40 44.3 | .. | - | 1 3.8 | 99 26 40.7 | + 0.8 | |
| 46 | 311 36 | 13.0 | 9.0 | 8.1 | 11.3 | 31 | .. | .. | .. | 690 | 670 | 68.8 | 48 19 14.3 | 59.5 | + | 1 3.8 | 99 26 39.3 | - 0.2 | |
| 47 | 297 4 | 11.0 | 8.6 | 7.0 | 10.0 | 37 | .. | 980 | .. | 020 | .. | 68.8 | 62 50 15.5 | .. | + | 1 50.6 | 113 58 27.3 | + 7.0 | |
| 48 | 297 4 | 11.0 | 8.6 | 7.0 | 10.0 | 30 | .. | .. | .. | .. | 650 | 68.8 | 62 48 23.9 | .. | + | 1 50.4 | 113 56 35.5 | + 7.0 | |
| 49 | 148 50 | 5.9 | 4.1 | 3.8 | 4.4 | 29 | 740 | 760 | .. | .. | .. | 68.8 | 211 7 10.1 | .. | + | 3.4 | 19 58 36.7 | - 2.8 | |
| 50 | 31 2 | 10.0 | 6.3 | 5.5 | 5.6 | 30 | .. | .. | .. | 345 | .. | 68.8 | 325 52 49.9 | .. | - | 34.4 | 19 50 36.7 | - 2.8 | |

| No. | Barom. | At. Ther. |
|-----|--------|-----------|
| | in. | ° |
| 4 | 30.04 | 54.2 |
| 13 | 30.03 | 53.2 |
| 17 | 29.98 | 57.7 |
| 23 | 29.97 | 60.5 |
| 24 | 29.97 | 62.7 |
| 26 | 29.96 | 64.3 |
| 27 | 29.95 | 65.3 |
| 29 | 29.94 | 66.5 |
| 32 | 29.90 | 70.0 |
| 33 | 29.89 | 69.7 |
| 35 | 29.85 | 65.5 |
| 37 | 29.85 | 63.5 |
| 38 | 29.85 | 63.5 |
| 46 | 29.85 | 62.7 |

For summary of the elements of reduction see page 3.

| No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|-----------|------------|-------------------------|-----------|
| | " | " | " | " |
| 16 | - 0.1 | .. | .. | - 0.1 |
| 17 | - 5.0 | + 11.7 | - 0.5 | + 6.2 |
| 18 | - 5.0 | - 11.7 | .. | - 16.7 |
| 28 | - 5.9 | - 16 0.2 | .. | - 16 6.1 |
| 29 | - 5.8 | + 16 0.2 | .. | + 15 54.4 |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. | | | | |
|----------|---------|--|-------------------|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|------------|--------------|----------------|----------------|---------------------------|----------------------------|------------|-----|--|--|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | | | | | |
| 1876. | | | | | | | | | | | | | m. | s. | | | | | | | | |
| Sept. 29 | 1 | B. A. C. 7544 . . . | P. | 37.7 | 41.3 | 43.4 | 51.6 | 54.4 | 57.1 | 5.6 | 7.6 | 11.0 | 35 | 54.41 | - 0.37 | . . | -32.17 | 21 35 21.87 | - 2.64 | | | |
| | 2 | 11 Cephei | P. | . . . | . . . | . . . | . . . | . . . | . . . | 4.0 | 8.7 | 16.0 | 40 | 39.11 | + 1.13 | . . | -32.17 | 21 40 8.07 | + 0.66 | | | |
| | 3 | 79 Draconis | P. | 10.4 | 18.9 | 24.3 | 15.7 | 52.7 | 59.7 | 20.8 | 26.0 | 34.9 | 51 | 52.60 | + 1.46 | . . | -32.17 | 21 51 21.89 | + 0.38 | | | |
| | 4 | Weisse 1314 | P. | 27.8 | 30.4 | 31.9 | 33.3 | 40.3 | 42.4 | 18.5 | 50.4 | 52.8 | 58 | 40.31 | - 1.36 | . . | -32.17 | 21 58 6.78 | - 3.69 | | | |
| | 5 | Anonymous | P. | 41.7 | . . . | 45.7 | 52.0 | 54.2 | 56.4 | 58.3 | 2.5 | 4.0 | 59 | 54.16 | - 1.35 | . . | -32.17 | 21 59 20.64 | - 3.69 | | | |
| | 6 | Moon I, S. | P. | . . . | . . . | 35.5 | 37.7 | 39.8 | 42.0 | 44.3 | . . . | . . . | 2 | 39.87 | - 1.41 | . . | -32.17 | 22 2 6.29 | + 64.18 | | | |
| | 7 | 42 Aquarii | P. | 34.5 | 37.0 | 38.7 | 44.9 | 47.0 | 49.0 | 55.5 | 56.9 | 59.5 | 10 | 47.00 | - 1.38 | . . | -32.17 | 22 10 13.45 | - 3.77 | | | |
| | 8 | Weisse 22 ¹ | P. | 5.0 | 7.7 | 9.3 | . . . | . . . | . . . | . . . | . . . | . . . | 4 | 17.49 | - 1.31 | . . | -32.17 | 23 3 44.01 | - 3.78 | | | |
| | 9 | Weisse 22 ² | P. | . . . | . . . | 13.2 | 15.4 | 17.4 | 19.5 | 21.5 | . . . | . . . | 4 | 17.41 | - 1.31 | . . | -32.17 | 23 3 43.93 | - 3.78 | | | |
| | 10 | Weisse 23 | P. | . . . | . . . | . . . | . . . | . . . | . . . | 25.7 | 27.4 | 30.0 | 4 | 17.55 | - 1.31 | . . | -32.17 | 23 3 44.07 | - 3.78 | | | |
| | 11 | Nemesis | P. | 26.0 | 28.8 | 30.4 | 34.7 | 38.6 | 43.0 | 47.4 | 19.0 | 51.6 | 16 | 38.83 | - 1.43 | . . | -32.17 | 23 16 5.23 | . . | | | |
| | 12 | Clio | P. | 9.0 | 11.4 | 13.0 | 19.3 | 21.3 | 23.4 | 29.5 | 31.1 | 33.7 | 20 | 21.30 | - 1.05 | . . | -32.17 | 23 19 48.08 | . . | | | |
| | 13 | Electra | P. | 41.3 | 43.9 | 45.6 | 52.4 | . . . | . . . | . . . | . . . | . . . | 24 | 54.48 | - 1.55 | . . | -32.17 | 23 24 20.76 | . . | | | |
| | 14 | Aegle | P. | 27.5 | . . . | 37.9 | 40.0 | 42.1 | 44.1 | 48.6 | 50.2 | 52.9 | 44 | 40.08 | - 0.66 | . . | -32.17 | 23 44 6.95 | . . | | | |
| | 15 | a Andromedæ | P. | 21.4 | 24.3 | 26.0 | 32.9 | 35.2 | 37.5 | 44.6 | 46.3 | 49.2 | 2 | 35.27 | - 0.74 | -32.14 | -32.17 | 0 2 2.36 | - 0.01 | | | |
| | 16 | γ Pegasi | P. | 15.2 | 17.8 | 19.5 | 25.7 | 27.8 | 29.9 | 36.4 | 37.9 | 40.5 | 7 | 27.86 | - 0.97 | -32.18 | -32.17 | 0 6 54.72 | + 0.01 | | | |
| | 17 | Amphitrite | P. | 43.5 | 46.0 | 47.6 | 53.6 | 55.7 | 57.8 | 3.9 | 5.5 | 8.0 | 15 | 55.73 | - 1.14 | . . | -32.17 | 0 15 22.42 | . . | | | |
| | 18 | κ Draconis, S. P. | P. | 22.9 | 15.2 | 10.5 | 52.1 | 46.2 | 10.0 | 21.7 | 17.3 | 9.4 | 28 | 46.18 | - 3.14 | . . | -32.17 | 12 28 10.87 | - 0.14 | | | |
| | 19 | β Ceti | P. | 46.5 | 49.2 | 50.8 | 57.4 | 59.6 | 1.7 | 8.2 | 9.8 | 12.4 | 37 | 59.51 | - 1.46 | -32.20 | -32.17 | 0 37 25.85 | + 0.08 | | | |
| | 20 | 32 ¹ Camelopard., S. P. | P. | . . . | . . . | . . . | 0.9 | 40.4 | 21.5 | 1.0 | . . . | . . . | 48 | 40.85 | - 8.22 | . . | -32.17 | 12 48 0.46 | + 5.83 | | | |
| | 21 | 32 ² Camelopard., S. P. | P. | . . . | . . . | . . . | 7.6 | 48.4 | 29.3 | 8.5 | . . . | . . . | 48 | 43.35 | - 8.22 | . . | -32.17 | 12 48 7.96 | - 0.35 | | | |
| | 22 | ε Piscium | P. | 55.3 | 57.8 | 59.3 | 5.5 | 7.6 | 9.6 | 15.8 | 17.3 | 19.9 | 57 | 7.57 | - 1.08 | -32.26 | -32.18 | 0 56 34.31 | + 0.01 | | | |
| | 23 | Galatæa | P. | 20.6 | 23.0 | 24.6 | 30.9 | 33.0 | 35.0 | 41.2 | 42.8 | 45.1 | 1 | 32.91 | - 1.08 | . . | -32.18 | 1 0 59.65 | . . | | | |
| | 24 | Polaris | P. | 12.5 | 19.0 | . . . | 35.6 | 6.3 | 33.7 | 58.4 | . . . | . . . | 14 | 5.73 | + 30.11 | . . | -32.18 | 1 14 3.66 | - 1.06 | | | |
| | 25 | B. A. C. 495 | P. | 58.5 | 1.3 | 2.8 | 9.1 | 11.3 | 13.4 | 19.9 | 21.4 | 24.0 | 33 | 11.30 | - 0.96 | . . | -32.18 | 1 32 38.16 | - 3.68 | | | |
| | 26 | o Piscium (R.) | P. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | | | |
| | 27 | o Piscium | P. | . . . | . . . | . . . | . . . | . . . | . . . | 36.0 | 37.6 | 40.2 | 3 | 27.79 | - 1.07 | -32.20 | -32.18 | 1 38 54.54 | - 0.01 | | | |
| Oct. 1 | 28 | Venus II, S. | S. | 52.4 | 54.9 | 56.5 | 2.9 | 5.0 | 7.1 | 13.3 | 14.8 | 17.6 | 44 | 4.94 | - 0.86 | . . | -33.50 | 9 43 30.58 | - 0.76 | | | |
| | 29 | a Leonis | S. | 9.6 | 12.0 | 13.7 | 20.0 | 22.1 | 24.2 | 30.4 | 32.0 | 34.6 | 2 | 22.07 | - 0.87 | -33.46 | -33.51 | 10 1 47.69 | - 0.09 | | | |
| | 30 | γ ¹ Leonis | S. | 31.0 | 33.8 | 35.5 | 42.0 | 44.2 | 46.3 | 52.8 | 54.5 | 57.0 | 13 | 44.12 | - 0.72 | -33.55 | -33.51 | 10 13 9.85 | + 0.02 | | | |
| | 31 | a Ursæ Majoris | S. | . . . | 29.4 | 34.0 | 35.4 | 42.8 | 47.3 | 55.8 | 59.0 | 4.9 | 56 | 38.33 | + 0.60 | . . | -33.52 | 10 56 5.41 | + 0.04 | | | |
| | 32 | δ Leonis | S. | 53.4 | 56.0 | 57.8 | 4.3 | 6.6 | 8.7 | 15.3 | 16.9 | 19.6 | 8 | 6.51 | - 0.73 | -33.45 | -33.52 | 11 7 32.26 | - 0.10 | | | |
| | 33 | β Leonis | S. | 7.1 | 9.9 | 11.4 | 17.7 | 19.8 | 21.9 | 28.3 | 29.9 | 32.5 | 43 | 19.83 | - 0.83 | -33.55 | -33.53 | 11 42 45.47 | + 0.93 | | | |
| | 2 | 34 | Sun I, S. | S. | 24.5 | 26.9 | 28.5 | 34.7 | 36.7 | 38.8 | 45.0 | 46.4 | 49.0 | 35 | 36.72 | - 1.16 | . . | -33.54 | 12 35 2.02 | . . | | |
| | 35 | Sun II, N. | S. | 33.0 | 35.8 | 37.4 | 43.5 | 45.6 | 47.5 | 53.7 | 55.3 | 57.8 | 37 | 45.51 | - 1.16 | . . | -33.54 | 12 37 10.81 | . . | | | |
| | 36 | 12 Canum Venat. | S. | 32.9 | 36.0 | 38.0 | 46.0 | 48.6 | 51.2 | 59.1 | 1.1 | 4.3 | 50 | 48.58 | - 0.37 | -33.54 | -33.54 | 12 50 14.67 | 0.00 | | | |
| | 37 | Polaris, S. P. | S. | . . . | . . . | 8.0 | . . . | 12.0 | 49.0 | 20.0 | . . . | . . . | 15 | 13.25 | - 35.43 | . . | -33.55 | 1 14 4.27 | - 0.90 | | | |
| | 38 | ε Bootis | S. | 55.9 | 58.7 | 0.4 | 7.3 | 9.6 | 11.9 | 18.9 | 20.5 | 23.4 | 40 | 9.62 | - 0.61 | -33.55 | -33.57 | 14 39 35.43 | - 0.04 | | | |
| | 39 | δ Aquilæ | S. | 39.9 | 42.4 | 44.0 | 50.1 | 52.2 | 54.2 | 0.2 | 1.7 | 4.3 | 19 | 52.11 | - 1.03 | -33.70 | -33.63 | 19 19 17.45 | + 0.12 | | | |
| | 40 | B. A. C. 6693 | S. | 34.0 | 37.0 | 38.8 | 46.2 | 48.5 | 50.9 | 58.0 | 59.8 | 2.8 | 27 | 48.11 | - 1.6 | . . | -33.63 | 19 27 13.12 | - 3.54 | | | |
| | 41 | γ Aquilæ | S. | 46.3 | 48.9 | 50.6 | 57.0 | 59.1 | 1.3 | 7.2 | 8.8 | 11.5 | 40 | 58.97 | - 0.9 | -33.61 | -33.63 | 19 40 24.44 | + 0.01 | | | |
| | 42 | a Aquilæ | S. | 8.8 | 11.4 | 12.9 | 19.0 | 21.1 | 23.1 | 29.6 | 31.0 | 33.6 | 45 | 21.17 | - 0.93 | -33.59 | -33.63 | 19 44 46.61 | 0.00 | | | |
| | 43 | λ Ursæ Minoris | S. | . . . | . . . | . . . | . . . | . . . | 9 | 55.7 | . . . | . . . | 47 | 18.55 | + 13.86 | . . | -33.64 | 19 47 28.71 | + 0.11 | | | |
| | 44 | B. A. C. 6918 | S. | 0.8 | 4.7 | 7.2 | 17.0 | 20.4 | 23.6 | 33.6 | 36.0 | 40.0 | 2 | 29.37 | + 0.06 | . . | -33.64 | 20 1 46.79 | - 1.58 | | | |
| | 45 | B. A. C. 6948 | S. | 33.1 | 36.0 | 37.7 | 44.7 | 47.4 | 49.7 | 56.7 | 58.4 | 1.6 | 8 | 47.26 | - 1.64 | . . | -33.64 | 20 8 11.98 | - 3.74 | | | |
| | 46 | B. A. C. 6985 | S. | 23.4 | 27.3 | 29.7 | 39.0 | 42.0 | 45.5 | 55.3 | 57.3 | 1.6 | 12 | 42.34 | 0.00 | . . | -33.64 | 20 12 8.75 | - 1.74 | | | |
| | 47 | B. A. C. 7035 | S. | 3.3 | 7.6 | 10.4 | 20.8 | 24.5 | 27.6 | 38.0 | 40.8 | 45.0 | 20 | 21.22 | + 0.17 | . . | -33.64 | 20 19 50.75 | - 1.62 | | | |
| | 48 | B. A. C. 7055 | S. | 33.9 | 38.4 | 41.0 | 51.3 | 55.0 | 58.4 | 8.8 | 11.4 | 15.9 | 22 | 54.90 | + 0.17 | . . | -33.64 | 20 22 21.43 | - 1.65 | | | |
| | 49 | B. A. C. 7234 | S. | 59.6 | 2.9 | 5.0 | 13.0 | 15.7 | 18.4 | 26.3 | 28.4 | 31.6 | 46 | 15.66 | - 1.90 | . . | -33.64 | 20 45 40.12 | - 4.36 | | | |
| | 50 | B. A. C. 7260 | S. | 4.7 | 8.0 | 10.0 | 18.0 | 20.8 | 23.5 | 31.6 | 33.4 | 36.7 | 50 | 20.74 | - 0.30 | . . | -33.65 | 20 49 46.79 | - 2.31 | | | |

2, 3, 18, 20, 21. Bisections at sets B and D.
 4, 10. Thread B used.
 5, 8, 9, 11, 12, 13, 14, 17, 23. Thread A used.
 6. Bisections at threads II-VI.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | |
| 1 | 3 44 | 10 12.5 | 10.0 | 9.6 | 10.5 | 29 | 420 | 400 | .. | 245 | 235 | 68.8 | 356 10 38.2 | .. | 3.8 | 47 16 55.6 |
| 2 | 31 46 | 11.1 | 7.3 | 7.0 | 8.7 | 32 | .. | .. | .. | 445 | 455 | 68.8 | 328 9 24.0 | .. | 35.4 | 19 15 0.8 |
| 3 | 34 8 | 14 9 | 9.1 | 7.9 | 10.1 | 30 | 640 | 660 | .. | 620 | 635 | 68.8 | 325 46 57.9 | .. | 38.8 | 16 52 40.3 |
| 4 | 309 36 | 15.5 | 11.4 | 10.9 | 13.0 | 29 | .. | .. | .. | 255 | 315 | 68.8 | 50 21 12.4 | .. | 8.9 | 101 28 42.5 |
| 5 | 309 36 | 15.5 | 11.4 | 10.9 | 13.0 | 30 | .. | .. | .. | 875 | 880 | 68.8 | 50 16 31.0 | .. | 8.7 | 101 24 0.9 |
| 6 | 306 0 | 9.5 | 5.4 | 4.5 | 8.5 | 33 | 690 | 445 | 235 | 975 | 845 | 68.8 | 53 55 34.0 | .. | 18.3 | 105 3 13.5 |
| 7 | 307 36 | 12.0 | 8.6 | 7.4 | 11.2 | 31 | .. | 160 | .. | 090 | .. | 68.8 | 52 19 4.4 | 57.5 | 13.9 | 103 26 39.5 |
| 8 | 312 16 | 13.4 | 9.8 | 8.5 | 11.5 | 31 | .. | 915 | .. | .. | .. | 68.8 | 47 36 43.2 | 59.5 | 2.3 | 98 44 6.7 |
| 9 | 312 16 | 13.4 | 9.8 | 8.5 | 11.5 | 31 | .. | 525 | .. | 420 | .. | 68.8 | 47 36 37.3 | .. | 2.3 | 98 44 0.8 |
| 10 | 312 16 | 13.4 | 9.8 | 8.5 | 11.5 | 32 | .. | .. | .. | 025 | .. | 68.8 | 47 41 52.6 | .. | 2.5 | 98 49 16.3 |
| 11 | 305 12 | 12.5 | 8.0 | 7.0 | 10.5 | 32 | .. | 680 | .. | 460 | .. | 68.8 | 54 40 52.7 | .. | 20.2 | 105 48 34.1 |
| 12 | 329 2 | 10.2 | 6.5 | 5.0 | 8.0 | 36 | .. | 560 | .. | 405 | .. | 68.8 | 30 51 50.7 | .. | 34.0 | 81 58 45.9 |
| 13 | 298 38 | 11.4 | 7.3 | 6.9 | 10.5 | 30 | .. | 970 | .. | 030 | .. | 68.8 | 61 14 25.2 | .. | 43.4 | 112 22 32.8 |
| 14 | 335 42 | 8.3 | 4.9 | 2.6 | 5.8 | 36 | .. | 370 | .. | 115 | .. | 68.8 | 24 11 45.0 | .. | 25.6 | 75 18 31.8 |
| 15 | 349 26 | 12.6 | 8.3 | 7.4 | 11.5 | 29 | 720 | 690 | .. | 615 | 550 | 68.8 | 10 28 42.2 | 59.0 | 10.5 | 61 35 13.9 |
| 16 | 335 32 | 11.7 | 7.1 | 6.1 | 9.5 | 31 | 620 | 580 | .. | 450 | 430 | 68.8 | 24 23 9.4 | .. | 25.8 | 75 29 56.4 |
| 17 | 324 32 | 10.0 | 6.1 | 4.8 | 8.6 | 37 | .. | 935 | .. | 885 | .. | 68.8 | 35 21 57.9 | .. | 40.5 | 86 28 59.6 |
| 18 | 70 32 | 9.7 | 4.0 | 2.4 | 4.8 | 36 | 565 | 580 | .. | 480 | 520 | 68.8 | 289 24 22.6 | .. | 2 40.4 | 340 28 3.4 |
| 19 | 302 24 | 9.9 | 6.0 | 5.4 | 9.0 | 34 | 075 | 060 | .. | 910 | 885 | 68.8 | 57 31 45.8 | .. | 1 29.4 | 108 39 36.4 |
| 20 | 56 56 | 9.5 | 5.2 | 6.3 | 6.2 | 36 | .. | .. | .. | 370 | .. | 68.8 | 303 0 21.7 | .. | 1 27.7 | 354 5 15.2 |
| 21 | 56 56 | 9.5 | 5.2 | 6.3 | 6.2 | 33 | .. | .. | .. | 160 | .. | 68.8 | 303 0 3.2 | .. | 1 27.7 | 354 4 56.7 |
| 22 | 328 16 | 14.0 | 10.5 | 8.5 | 12.4 | 31 | .. | 905 | .. | 795 | .. | 68.8 | 31 39 17.2 | .. | 35.2 | 82 46 13.6 |
| 23 | 328 18 | 13.3 | 9.0 | 7.1 | 10.6 | 37 | .. | 130 | .. | 965 | .. | 68.8 | 31 36 1.9 | .. | 35.1 | 82 42 58.2 |
| 24 | 40 40 | 9.0 | 4.2 | 4.0 | 4.7 | 33 | 520 | 470 | 470 | 530 | 510 | 68.8 | 310 15 36.7 | 57.5 | 7.4 | 1 20 50.5 |
| 25 | 337 2 | 9.9 | 7.0 | 4.5 | 8.1 | 31 | .. | 420 | .. | 290 | .. | 68.8 | 22 53 5.7 | .. | 24.1 | 73 59 51.0 |
| 26 | 210 18 | 16.6 | 15.1 | 13.9 | 12.6 | 39 | 700 | 670 | .. | .. | .. | 68.8 | 149 39 19.3 | .. | 33.5 | 81 27 35.4 |
| 27 | 329 36 | 11.0 | 7.0 | 5.1 | 7.7 | 37 | .. | .. | .. | 440 | 330 | 68.8 | 30 20 39.2 | 57.4 | 33.5 | 81 27 33.9 |
| 28 | 333 48 | 8.7 | 4.8 | 6.0 | 8.0 | 32 | .. | 908 | .. | 862 | .. | 68.0 | 26 7 27.8 | 52.1 | 28.5 | 77 14 17.5 |
| 29 | 333 38 | 8.7 | 5.7 | 6.5 | 7.6 | 38 | .. | 332 | .. | 210 | .. | 68.0 | 26 18 50.5 | .. | 28.7 | 77 25 40.4 |
| 30 | 341 30 | 1.7 | 28.5 | 29.0 | 29.0 | 32 | .. | 890 | .. | 820 | .. | 68.0 | 18 25 20.1 | .. | 19.3 | 69 32 0.6 |
| 31 | 23 28 | 9.8 | 6.8 | 9.3 | 8.9 | 39 | .. | .. | .. | 272 | 148 | 68.0 | 336 29 8.3 | .. | 25.1 | 27 35 4.4 |
| 32 | 342 14 | 7.8 | 5.6 | 6.4 | 6.7 | 32 | .. | 210 | .. | 135 | .. | 68.0 | 17 41 16.7 | .. | 18.4 | 68 47 56.3 |
| 33 | 336 18 | 8.9 | 5.6 | 6.4 | 7.3 | 32 | .. | 990 | .. | 790 | .. | 68.0 | 23 37 27.4 | .. | 25.2 | 74 44 13.8 |
| 34 | 316 54 | 11.6 | 5.2 | 7.2 | 12.5 | 36 | 930 | 980 | .. | .. | .. | 68.0 | 43 2 31.9 | 58.9 | 53.4 | 94 9 46.5 |
| 35 | 317 26 | 9.6 | 5.6 | 6.8 | 11.5 | 36 | .. | .. | .. | 830 | 820 | 68.0 | 42 30 29.9 | .. | 52.5 | 93 37 43.6 |
| 36 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 37 | 52 22 | 6.3 | 0.9 | 5.2 | 3.0 | 35 | 240 | .. | 160 | .. | 150 | 68.0 | 307 33 59.7 | .. | 14.3 | 358 39 6.6 |
| 38 | 348 38 | 9.8 | 4.9 | 7.9 | 8.8 | 33 | .. | 818 | .. | 754 | .. | 68.0 | 11 17 42.7 | 59.0 | 11.4 | 62 24 15.3 |
| 39 | 323 56 | 14.6 | 10.4 | 10.0 | 13.6 | 37 | .. | 378 | .. | 206 | .. | 68.5 | 36 0 41.0 | 53.0 | 42.0 | 87 7 44.2 |
| 40 | 289 12 | 11.6 | 8.6 | 9.9 | 13.0 | 32 | .. | .. | .. | 460 | 500 | 68.5 | 70 43 26.5 | .. | 44.0 | 121 52 31.7 |
| 41 | 331 22 | 9.0 | 5.1 | 5.3 | 7.8 | 35 | .. | 670 | .. | 618 | .. | 68.5 | 28 34 10.5 | .. | 31.6 | 79 41 3.3 |
| 42 | 329 36 | 10.6 | 6.7 | 7.4 | 8.4 | 36 | .. | 270 | .. | 100 | .. | 68.5 | 30 20 20.2 | .. | 33.9 | 81 27 15.3 |
| 43 | 49 58 | 10.4 | 6.0 | 7.4 | 7.2 | 36 | .. | .. | 830 | .. | 880 | 68.5 | 309 58 30.2 | .. | 9.0 | 1 3 42.4 |
| 44 | 12 32 | 10.4 | 6.1 | 7.4 | 8.5 | 36 | .. | 860 | .. | 730 | .. | 68.5 | 347 24 29.3 | .. | 13.0 | 38 30 37.5 |
| 45 | 290 42 | 10.7 | 6.0 | 9.4 | 10.5 | 34 | .. | 910 | .. | 750 | .. | 68.5 | 69 14 0.1 | .. | 32.0 | 120 22 53.3 |
| 46 | 10 54 | 10.2 | 7.8 | 8.8 | 7.8 | 36 | .. | 400 | .. | 230 | .. | 68.5 | 349 2 22.9 | .. | 11.3 | 40 8 32.8 |
| 47 | 15 18 | 12.5 | 7.8 | 11.5 | 11.3 | 31 | .. | .. | .. | 330 | 310 | 68.5 | 344 37 9.8 | .. | 16.0 | 35 43 15.0 |
| 48 | 15 18 | 12.5 | 7.8 | 11.5 | 11.3 | 30 | 170 | 205 | .. | .. | .. | 68.5 | 344 36 50.7 | .. | 16.0 | 35 42 55.9 |
| 49 | 280 50 | 6.1 | 2.9 | 5.7 | 7.9 | 31 | .. | 520 | .. | 490 | .. | 68.5 | 79 5 5.6 | .. | 53.2 | 130 16 20.0 |
| 50 | 1 16 | 12.0 | 7.2 | 8.6 | 10.2 | 32 | 530 | 460 | .. | .. | .. | 68.5 | 358 39 24.5 | .. | 1.4 | 49 45 44.3 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| 7 | 29.87 | 57.8 | 6 | -44 27.4 | - 15 4.1 | .. | - 59 31.5 |
| 8 | 29.86 | 60.8 | 28 | - 5.0 | - 11.1 | .. | - 16.1 |
| 15 | 29.89 | 60.8 | 34 | - 6.0 | - 16 1.4 | .. | - 16 7.4 |
| 24 | 29.87 | 59.6 | 35 | - 6.0 | + 16 1.4 | .. | + 15 55.4 |
| 27 | 29.88 | 59.4 | | | | | |
| 28 | 30.04 | 51.9 | | | | | |
| 34 | 30.01 | 58.3 | | | | | |
| 38 | 29.97 | 60.2 | | | | | |
| 39 | 29.96 | 55.2 | | | | | |

For summary of the elements of reduction see page 3.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. | |
|--------|---------|----------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|---------|------------|--------------|----------------|----------------|---------------------------|----------------------------|---------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | | |
| | | | | | | | | | | | | | | | | | | | |
| 1876. | | | | | | | | | | | | | m. | s. | s. | s. | h. m. | s. | s. |
| Oct. 2 | 1 | B. A. C. 7286 . . . | S. | 53.7 | 56.8 | 59.0 | 4.0 | 6.9 | 9.5 | 12.2 | 14.8 | 17.5 | 55 | 9.46 | - 1.87 | . | -33.65 | 20 54 33.94 | - 4.34 |
| | 2 | B. A. C. 7292 . . . | S. | 29.5 | 31.3 | 36.6 | 39.4 | 41.9 | 44.5 | 47.3 | 52.5 | 54.4 | 55 | 41.93 | - 1.87 | . | -33.65 | 20 55 6.41 | - 4.35 |
| | 3 | O. Arg. S. 21249 . . | S. | . | 21.6 | 23.9 | 26.0 | 28.2 | 30.5 | 33.8 | 36.5 | 39.4 | 9 | 26.08 | - 1.46 | . | -33.65 | 21 8 50.97 | - 3.77 |
| | 4 | B. A. C. 7447 . . . | S. | 38.6 | 41.4 | 43.0 | 49.7 | 51.8 | 54.0 | 0.7 | 2.2 | 5.0 | 20 | 51.82 | - 1.46 | . | -33.65 | 21 20 16.71 | - 3.81 |
| | 5 | B. A. C. 7544 . . . | S. | 39.0 | 42.7 | 44.6 | 53.0 | 55.5 | 58.7 | 6.7 | 8.7 | 12.4 | 35 | 55.70 | - 0.21 | . | -33.65 | 21 35 21.84 | - 2.59 |
| | 6 | B. A. C. 7593 . . . | S. | 41.0 | 44.7 | 46.8 | 55.5 | 57.7 | 0.4 | 8.7 | 11.0 | 14.2 | 41 | 57.72 | - 0.22 | . | -33.65 | 21 41 23.85 | - 2.64 |
| | 7 | B. A. C. 7612 . . . | S. | 55.0 | 59.0 | 1.7 | 11.6 | 15.0 | 18.3 | 28.5 | 30.8 | 34.8 | 46 | 14.97 | + 0.12 | . | -33.65 | 21 45 41.44 | - 2.50 |
| | 8 | a Gruis | S. | 47.5 | 51.2 | 53.5 | 2.5 | 5.5 | 8.6 | 17.5 | 19.9 | 23.6 | 1 | 5.53 | - 2.15 | . | -33.66 | 22 0 29.72 | + 0.01 |
| | 9 | Mural Zones 207, 70 | S. | 5.4 | 8.2 | 9.7 | 13.9 | 16.1 | 18.2 | . | . | . | 11 | 18.22 | - 1.35 | . | -33.66 | 22 10 43.21 | - 3.83 |
| | 10 | Mural Zones 207, 71 | S. | . | . | . | 22.9 | 25.0 | 27.0 | 31.5 | 33.2 | 35.9 | 11 | 22.95 | - 1.35 | . | -33.66 | 22 10 47.94 | - 3.83 |
| | 11 | Saturn I, S. | S. | 1.5 | 4.1 | 5.7 | . | . | . | 22.5 | 24.0 | 26.7 | 20 | 14.08 | - 1.27 | . | -33.66 | 22 19 39.15 | . |
| | 12 | Saturn II, N. | S. | . | . | 11.3 | 13.3 | 15.4 | 17.6 | 19.7 | . | . | 20 | 15.47 | - 1.27 | . | -33.66 | 22 19 40.54 | . |
| | 13 | B. A. C. 7931 ¹ . . . | S. | 51.0 | 54.2 | 56.2 | 4.0 | 6.6 | 9.3 | 17.0 | 19.2 | 22.1 | 39 | 6.62 | - 0.32 | . | -33.66 | 22 38 32.64 | - 3.08 |
| | 14 | B. A. C. 7962 . . . | S. | 7.3 | 10.6 | 12.7 | 20.7 | 23.5 | 26.0 | 34.4 | 36.4 | 39.8 | 45 | 23.49 | - 0.26 | . | -33.66 | 22 44 49.57 | - 3.10 |
| | 15 | B. A. C. 7987 . . . | S. | . | . | . | 44.5 | 46.8 | 49.3 | 54.1 | 55.8 | 59.0 | 49 | 44.37 | - 1.72 | . | -33.66 | 22 49 8.99 | - 4.41 |
| | 16 | B. A. C. 8013 . . . | S. | 22.0 | 25.2 | 23.2 | 37.2 | 41.2 | 45.0 | 49.0 | 56.9 | 0.1 | 54 | 41.09 | + 0.44 | . | -33.66 | 22 54 7.87 | - 3.13 |
| | 17 | B. A. C. 8054 . . . | S. | 35.7 | 40.6 | 43.5 | 51.3 | 55.2 | 59.3 | 2.4 | 7.0 | . | 1 | 59.20 | + 0.43 | . | -33.67 | 23 1 25.96 | - 3.21 |
| | 18 | Clio | S. | 50.0 | 52.5 | 54.2 | 0.0 | 2.1 | 4.4 | 10.3 | 11.9 | 14.4 | 18 | 2.20 | - 0.91 | . | -33.67 | 23 17 27.62 | . |
| | 19 | B. A. C. 8277 ¹ . . . | S. | . | . | 5.8 | 10.6 | 15.5 | 20.0 | 24.6 | . | . | 43 | 15.32 | + 0.80 | . | -33.67 | 23 42 42.45 | - 3.79 |
| | 20 | B. A. C. 8277 ² . . . | S. | 47.6 | 54.0 | 57.4 | . | . | . | 35.0 | 38.3 | 44.3 | 43 | 16.10 | + 0.80 | . | -33.67 | 23 42 43.23 | - 3.79 |
| | 21 | B. A. C. 8326 . . . | S. | 9.2 | 13.0 | 15.7 | 24.9 | 28.0 | 31.0 | 40.6 | 43.2 | 47.0 | 52 | 28.07 | + 0.02 | . | -33.67 | 23 51 54.42 | - 3.59 |
| | 22 | a Andromedæ | S. | 22.6 | 25.5 | 27.3 | 34.1 | 36.6 | 38.9 | 46.0 | 47.8 | 50.6 | 2 | 36.60 | - 0.55 | -33.65 | -33.68 | 0 2 2.37 | - 0.01 |
| | 23 | γ Pegasi | S. | 16.5 | 19.1 | 20.9 | 27.2 | 29.3 | 31.4 | 37.7 | 39.4 | 41.6 | 7 | 29.27 | - 0.81 | -33.74 | -33.68 | 0 6 54.75 | + 0.06 |
| | 24 | Amphitrite | S. | 55.5 | 58.0 | 59.5 | 5.7 | 7.6 | 9.7 | 15.8 | 17.3 | 19.8 | 13 | 7.66 | - 0.99 | . | -33.68 | 0 12 32.99 | . |
| | 25 | Moon I, S. | S. | 4.3 | 6.9 | 8.5 | 14.7 | 16.8 | 18.8 | 25.1 | 26.7 | 29.4 | 23 | 16.80 | - 0.99 | . | -33.68 | 0 22 42.13 | + 64.30 |
| | 26 | Moon II | S. | 12.9 | 15.5 | 17.0 | 23.3 | 25.4 | 27.5 | 33.7 | 35.2 | 37.9 | 25 | 25.38 | - 0.99 | . | -33.68 | 0 24 50.71 | - 64.28 |
| | 27 | β Ceti | S. | 48.0 | 50.6 | 52.2 | 58.6 | 0.9 | 3.0 | 9.5 | 11.1 | 13.7 | 35 | 0.84 | - 1.36 | -33.64 | -33.68 | 0 37 25.80 | + 0.01 |
| | 28 | Polaris | S. | . | . | 35.5 | 4.8 | 28.5 | 54.5 | . | . | . | 11 | 2.30 | + 35.80 | . | -33.69 | 1 14 4.50 | - 0.78 |
| | 29 | Venus II, N. | P. | 1.9 | 4.4 | 6.1 | 12.4 | 14.4 | 16.5 | 22.8 | 24.3 | 27.0 | 48 | 14.42 | - 0.91 | . | -33.90 | 9 47 39.61 | - 0.75 |
| | 30 | Venus S. | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 31 | a Leonis | P. | . | . | 22.5 | 24.6 | 26.7 | 30.8 | 32.4 | 35.0 | 2 22.45 | - 0.91 | -33.81 | -33.90 | 10 1 47.67 | - 0.13 | | |
| | 32 | γ ¹ Leonis | P. | 31.5 | 34.1 | 35.8 | 42.4 | 44.4 | 46.6 | 53.2 | 54.9 | 57.7 | 13 | 44.51 | - 0.76 | -33.89 | -33.90 | 10 13 9.85 | - 0.03 |
| | 33 | 9 Draconis | P. | 22.6 | 29.0 | . | 55.5 | 4.0 | 12.5 | 20.7 | 35.0 | 45.0 | 25 | 3.87 | + 2.59 | . | -33.90 | 10 24 32.56 | - 0.12 |
| | 34 | a Ursæ Majoris (R.) | P. | . | . | . | . | . | . | 56.2 | 59.8 | 5.2 | 56 | 38.72 | + 0.62 | . | -33.90 | 10 56 5.44 | + 0.04 |
| | 35 | a Ursæ Majoris . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 36 | δ Leonis (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 37 | δ Leonis | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 38 | λ Draconis | P. | 7.3 | 11.5 | . | 35.4 | . | 47.5 | 59.3 | 3.8 | 24 | 35.48 | + 1.35 | . | -33.90 | 11 24 2.93 | + 0.50 | |
| | 39 | ν Leonis | P. | 0.1 | 2.7 | 4.2 | 10.3 | 12.5 | 14.4 | 20.5 | 22.0 | 24.6 | 31 | 12.37 | - 1.14 | -33.92 | -33.90 | 11 30 37.33 | - 0.02 |
| | 40 | γ Cephei, S. P. . . . | P. | 53.9 | 42.3 | 35.7 | 7.6 | 58.6 | . | . | . | . | 34 | 59.16 | - 4.77 | . | -33.90 | 23 34 20.49 | - 0.24 |
| | 41 | β Leonis | P. | 7.5 | 10.2 | 11.7 | 18.2 | 20.3 | 22.4 | 28.7 | 30.3 | 33.0 | 43 | 20.26 | - 0.87 | -33.96 | -33.90 | 11 42 45.49 | + 0.04 |
| | 42 | γ Ursæ Majoris . . . | P. | 32.4 | 36.8 | 39.4 | 49.0 | 53.3 | 56.9 | 7.4 | 10.0 | 14.5 | 47 | 53.40 | + 0.16 | . | -33.90 | 11 47 19.66 | + 0.24 |
| | 43 | 4 Draconis | P. | 4.0 | 12.1 | 32.0 | 42.0 | 52.1 | 2.1 | 12.4 | 32.9 | . | 6 | 52.21 | + 3.18 | . | -33.90 | 12 6 21.49 | - 0.10 |
| | 44 | κ Draconis | P. | 7.0 | 14.5 | 19.1 | 37.4 | . | 49.9 | 7.9 | 13.1 | 20.3 | 25 | 43.65 | + 1.42 | . | -33.90 | 12 28 11.17 | + 0.14 |
| 3 | 45 | Sun I, N. | P. | 2.7 | 5.3 | 6.9 | 13.0 | 15.1 | 17.2 | 23.3 | 24.9 | 27.5 | 39 | 15.10 | - 1.22 | . | -33.90 | 12 38 39.98 | . |
| | 46 | Sun II, S. | P. | 11.7 | 14.2 | 15.7 | 21.8 | 23.9 | 26.0 | 32.0 | 33.7 | 36.3 | 41 | 23.92 | - 1.22 | . | -33.90 | 12 40 48.80 | . |
| | 47 | Polaris, S. P. . . . | P. | 57.6 | 13.4 | 4.0 | 45.6 | 12.5 | 55.6 | 31.3 | 26.5 | 35.0 | 15 | 17.93 | - 37.29 | . | -33.90 | 1 14 6.74 | + 1.33 |
| | 48 | Mercury I, N. . . . | P. | 50.0 | 52.7 | 54.3 | 0.6 | 2.6 | 4.8 | 11.0 | 12.7 | 15.3 | 42 | 2.67 | - 1.41 | . | -33.90 | 13 41 27.36 | + 0.32 |
| | 49 | a Bootis (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 50 | a Bootis | P. | . | . | . | . | . | . | 44.8 | 46.5 | 49.2 | 10 | 36.17 | - 0.81 | -33.85 | -33.90 | 14 10 1.46 | - 0.05 |

1, 17, 25, 33, 38, 40, 43, 44. Bisections at sets B and D.

1, 10, 16, 18, 24. Thread A used.

2, 3. Thread B used.

10. Both bisections near thread VI.

20. Both bisections near thread VII.

34. Bisections at threads II and III.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------|----|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| 1 | 282 4 | 10 9.0 | 3.5 | 7.0 | 9.2 | 36 | .. | .. | .. | 480 | 470 | 68.5 | 77 49 50.4 | .. | + 4 23.8 | 129 0 35.4 | + 0.6 | |
| 2 | 282 4 | 9.0 | 3.5 | 7.0 | 9.2 | 40 | .. | .. | .. | 790 | 740 | 68.5 | 77 56 2.1 | .. | + 4 26.2 | 129 6 49.5 | + 0.6 | |
| 3 | 299 10 | 5.1 | 29.2 | 2.2 | 5.5 | 36 | .. | .. | .. | 795 | 730 | 68.5 | 60 48 56.8 | 48.8 | + 1 44.1 | 111 57 2.1 | + 7.2 | |
| 4 | 299 20 | 9.5 | 4.6 | 8.0 | 9.6 | 33 | .. | 600 | .. | 430 | .. | 68.5 | 60 35 38.8 | .. | + 1 43.2 | 111 43 43.2 | + 8.4 | |
| 5 | 3 44 | 8.3 | 4.6 | 7.0 | 6.8 | 29 | .. | .. | .. | 610 | 550 | 68.5 | 356 10 39.0 | .. | - 3.9 | 47 16 56.3 | +22.8 | |
| 6 | 3 32 | 13.0 | 8.4 | 8.5 | 11.0 | 34 | .. | 990 | .. | 880 | .. | 68.5 | 356 24 3.3 | .. | - 3.7 | 47 30 20.8 | +23.0 | |
| 7 | 13 10 | 4.6 | 1.1 | 3.5 | 2.8 | 36 | .. | 830 | .. | 710 | .. | 68.5 | 346 46 24.3 | .. | - 13.8 | 37 52 31.7 | +23.6 | |
| 8 | 273 40 | 11.9 | 8.1 | 10.6 | 10.2 | 30 | .. | 585 | .. | 332 | .. | 68.5 | 86 14 54.1 | 47.1 | + 12 22.6 | 137 33 37.9 | + 6.6 | |
| 9 | 304 24 | 9.5 | 4.5 | 7.0 | 9.0 | 32 | 390 | 320 | .. | .. | .. | 68.5 | 55 31 19.7 | .. | + 1 25.1 | 106 39 6.0 | +14.4 | |
| 10 | 304 24 | 9.5 | 4.5 | 7.0 | 9.0 | 28 | .. | .. | .. | 600 | 575 | 68.5 | 55 27 50.4 | .. | + 1 24.9 | 106 35 36.5 | +14.4 | |
| 11 | 308 38 | 13.8 | 8.5 | 10.5 | 12.5 | 33 | .. | 885 | .. | 840 | .. | 68.5 | 51 17 47.6 | .. | + 1 13.0 | 102 25 21.8 | .. | |
| 12 | 308 38 | 13.8 | 8.5 | 10.5 | 12.5 | 32 | 760 | .. | .. | .. | 530 | 68.5 | 51 17 28.9 | .. | + 1 13.0 | 102 25 3.1 | .. | |
| 13 | 359 52 | 8.0 | 4.0 | 5.9 | 7.1 | 36 | .. | 092 | .. | 026 | .. | 68.5 | 0 4 16.5 | .. | + 0.1 | 51 10 37.8 | +24.3 | |
| 14 | 2 20 | 3.1 | 28.5 | 2.0 | 1.6 | 33 | .. | 140 | .. | 070 | .. | 68.5 | 357 35 26.3 | .. | - 2.5 | 48 41 45.0 | +24.5 | |
| 15 | 287 54 | 9.2 | 5.3 | 8.9 | 10.0 | 36 | .. | .. | .. | 885 | 875 | 68.5 | 72 2 31.4 | .. | + 2 59.0 | 123 11 51.6 | +14.3 | |
| 16 | 20 10 | 4.1 | 29.5 | 3.1 | 3.0 | 39 | .. | .. | .. | 685 | 635 | 68.5 | 339 44 36.0 | .. | - 21.6 | 30 50 35.6 | +24.5 | |
| 17 | 19 46 | 12.9 | 7.5 | 10.6 | 10.0 | 29 | .. | .. | .. | 312 | 262 | 68.5 | 340 8 36.9 | .. | - 21.2 | 31 14 36.9 | +24.5 | |
| 18 | 329 4 | 9.8 | 4.5 | 5.2 | 7.4 | 42 | .. | .. | .. | .. | 050 | 68.5 | 30 51 16.3 | 46.0 | + 35.0 | 81 58 12.5 | - 5.2 | |
| 19 | 25 14 | 8.0 | 4.1 | 7.9 | 6.6 | 36 | .. | .. | .. | 670 | 615 | 68.5 | 334 42 26.9 | .. | - 27.7 | 25 48 20.4 | +23.5 | |
| 20 | 25 14 | 8.0 | 4.1 | 7.9 | 6.6 | 33 | .. | .. | .. | 300 | 320 | 68.5 | 334 41 37.0 | .. | - 27.8 | 25 47 30.4 | +23.5 | |
| 21 | 10 46 | 12.6 | 7.3 | 9.8 | 9.7 | 28 | .. | 912 | .. | 850 | .. | 68.5 | 349 8 30.3 | .. | - 11.3 | 40 14 40.2 | +24.4 | |
| 22 | 349 26 | 12.0 | 6.5 | 8.5 | 10.3 | 29 | .. | 780 | .. | 595 | .. | 68.5 | 10 28 41.9 | .. | + 10.9 | 61 35 14.0 | + 0.5 | |
| 23 | 335 32 | 8.0 | 3.4 | 5.4 | 5.4 | 31 | .. | 650 | .. | 560 | .. | 68.5 | 24 23 7.4 | .. | + 26.6 | 75 29 55.2 | - 0.2 | |
| 24 | 324 22 | 10.7 | 5.4 | 6.9 | 10.0 | 33 | 915 | 830 | .. | .. | .. | 68.5 | 35 31 10.3 | .. | + 41.9 | 86 38 13.4 | - 3.6 | |
| 25 | 324 32 | 10.7 | 5.6 | 6.2 | 9.6 | 39 | 440 | .. | 020 | .. | 925 | 68.5 | 35 25 5.0 | .. | + 41.8 | 86 32 8.0 | .. | |
| 26 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 27 | 302 24 | 12.4 | 7.0 | 10.0 | 12.1 | 33 | .. | 610 | .. | 570 | .. | 68.5 | 57 31 42.4 | 44.9 | + 1 32.1 | 108 39 35.7 | - 2.0 | |
| 28 | 49 40 | 4.6 | 28.6 | 1.5 | 29.0 | 33 | 940 | .. | 960 | .. | 940 | 68.5 | 310 15 38.8 | 44.0 | - 1 9.4 | 1 20 50.6 | - 0.3 | |
| 29 | 333 34 | 10.6 | 5.0 | 7.1 | 8.8 | 36 | 870 | .. | .. | .. | 790 | 69.0 | 26 22 30.3 | 49.5 | + 28.9 | 77 29 20.4 | .. | |
| 30 | 333 34 | 10.6 | 5.0 | 7.1 | 8.8 | 38 | .. | 245 | .. | 195 | .. | 69.0 | 26 22 51.5 | .. | + 28.9 | 77 29 41.6 | .. | |
| 31 | 333 38 | 5.5 | 1.1 | 2.7 | 5.1 | 38 | .. | .. | .. | 500 | 485 | 69.0 | 26 18 51.4 | .. | + 28.7 | 77 25 41.3 | - 1.1 | |
| 32 | 341 30 | 6.2 | 1.3 | 2.0 | 5.1 | 32 | .. | 650 | .. | 545 | .. | 69.0 | 18 25 21.2 | 51.7 | + 19.3 | 69 32 1.7 | + 0.8 | |
| 33 | 37 22 | 8.0 | 1.5 | 5.0 | 5.2 | 33 | 750 | .. | .. | .. | 685 | 69.0 | 322 33 39.9 | 52.6 | - 44.3 | 13 39 16.8 | - 1.3 | |
| 34 | 156 24 | 6.0 | 3.9 | 5.0 | 2.1 | 30 | 845 | 810 | .. | .. | .. | 69.0 | 203 30 53.7 | 55.0 | + 25.1 | 27 35 2.4 | - 3.5 | |
| 35 | 23 28 | 6.5 | 2.1 | 5.2 | 5.0 | 39 | .. | .. | .. | 500 | 395 | 69.0 | 336 29 9.0 | .. | - 25.1 | 27 35 5.1 | - 0.8 | |
| 36 | 197 36 | 9.8 | 9.5 | 9.5 | 7.6 | 29 | 625 | 615 | .. | .. | .. | 69.0 | 162 18 39.9 | .. | - 18.4 | 68 47 59.7 | + 1.4 | |
| 37 | 342 14 | 8.0 | 3.5 | 5.0 | 8.5 | 32 | .. | .. | .. | 170 | 070 | 69.0 | 17 41 17.5 | .. | + 18.4 | 68 47 57.1 | - 1.1 | |
| 38 | 31 2 | 6.0 | 1.0 | 2.7 | 4.5 | 33 | 655 | .. | .. | .. | 580 | 69.0 | 328 53 36.8 | 58.1 | - 34.5 | 19 59 23.5 | - 1.5 | |
| 39 | 320 54 | 6.5 | 3.5 | 4.3 | 7.4 | 32 | .. | .. | .. | 300 | 265 | 69.0 | 39 1 18.9 | .. | + 46.4 | 90 8 26.5 | - 1.1 | |
| 40 | 64 4 | 7.1 | 2.0 | 4.1 | 4.4 | 36 | 800 | 815 | .. | .. | .. | 69.0 | 295 52 25.8 | .. | - 1 57.3 | 346 56 49.7 | + 1.8 | |
| 41 | 336 18 | 9.1 | 5.5 | 6.2 | 8.2 | 32 | 890 | 890 | .. | 780 | 750 | 69.0 | 23 37 28.4 | .. | + 25.0 | 74 44 14.6 | + 1.2 | |
| 42 | 15 26 | 6.0 | 2.1 | 5.5 | 6.5 | 39 | .. | 455 | .. | 325 | .. | 69.0 | 344 31 6.9 | .. | - 15.8 | 35 37 12.3 | + 0.3 | |
| 43 | 39 20 | 5.8 | 0.3 | 3.1 | 2.0 | 36 | 750 | .. | .. | .. | 545 | 69.0 | 320 36 22.7 | 59.7 | - 46.8 | 11 41 57.1 | - 3.4 | |
| 44 | 31 30 | 7.6 | 2.4 | 4.8 | 4.7 | 35 | 720 | .. | .. | .. | 665 | 69.0 | 328 26 9.9 | .. | - 35.0 | 19 31 56.1 | - 2.5 | |
| 45 | 317 2 | 8.4 | 2.0 | 3.4 | 7.1 | 34 | 945 | 940 | .. | .. | .. | 69.0 | 42 53 43.6 | .. | + 52.9 | 94 0 57.7 | .. | |
| 46 | 316 30 | 4.5 | 0.1 | 0.3 | 4.4 | 34 | .. | .. | .. | 155 | 090 | 69.0 | 43 25 43.8 | 60.6 | + 53.9 | 94 32 58.9 | .. | |
| 47 | 52 22 | 6.2 | 0.6 | 3.2 | 1.2 | 35 | 220 | 185 | 180 | 175 | 210 | 69.0 | 307 33 59.8 | 61.9 | - 1 13.6 | 358 39 7.4 | - 1.9 | |
| 48 | 306 46 | 7.7 | 4.9 | 5.2 | 8.3 | 38 | 445 | 395 | .. | 225 | 215 | 69.0 | 53 10 51.5 | 63.4 | + 1 15.4 | 104 18 28.1 | .. | |
| 49 | 199 0 | 7.0 | 6.5 | 4.7 | 0.7 | 36 | 065 | 025 | .. | .. | .. | 69.0 | 160 56 13.9 | 65.0 | - 10.5 | 70 10 26.8 | + 1.5 | |
| 50 | 340 52 | 5.4 | 1.9 | 1.8 | 3.0 | 34 | .. | .. | .. | 115 | 050 | 69.0 | 19 3 44.3 | .. | + 19.5 | 70 10 25.0 | - 0.3 | |

| No. | Barom. | At. Ther. |
|-----|--------|-----------|
| | in. | ° |
| 3 | 29.96 | 51.0 |
| 8 | 29.96 | 49.8 |
| 18 | 29.96 | 48.8 |
| 27 | 29.94 | 47.2 |
| 28 | 29.94 | 47.5 |
| 29 | 29.97 | 50.3 |
| 32 | 29.97 | 52.1 |
| 33 | 29.97 | 53.1 |
| 34 | 29.97 | 54.7 |
| 38 | 29.95 | 57.4 |
| 43 | 29.94 | 58.7 |
| 46 | 29.96 | 59.8 |
| 47 | 29.91 | 60.8 |
| 48 | 29.90 | 61.8 |
| 49 | 29.89 | 63.0 |

For summary of the elements of reduction see page 3.

| No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|-----------|------------|-------------------------|---------|
| 11 | 0.8 | 9.4 | .. | 10.2 |
| 12 | 0.8 | 9.4 | .. | 8.6 |
| 25 | 32 49.4 | 15 33.0 | .. | 48 22.4 |
| 29 | 5.0 | 10.9 | 0.6 | 5.3 |
| 30 | 5.0 | 10.9 | .. | 15.9 |
| 45 | 6.0 | 16 0.6 | .. | 15 54.6 |
| 46 | 6.1 | 16 0.6 | .. | 16 6.7 |
| 48 | 9.7 | 4.6 | .. | 5.1 |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. | | | |
|--------|---------|-----------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|---------|--------------|----------|----------------|---------------------------|----------------------------|----------------|-------|------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | | | Clock adopted. | | |
| | | | | | | | | | | | m. | s. | | s. | s. | s. | h. | m. | s. | s. |
| 1876. | | | | | | | | | | | | | | | | | | | | |
| Oct. 3 | 1 | θ Bootis | P. | 12.8 | 16.8 | 19.6 | 29.5 | 32.9 | 36.2 | 46.3 | 48.8 | 52.9 | 21 32.87 | + 0.04 | . | -33.90 | 14 20 59.01 | + | 0.08 | |
| | 2 | B. A. C. 4812 . . . | P. | 24.6 | 27.8 | 29.8 | 37.6 | 40.3 | 42.9 | 50.9 | 52.8 | 56.0 | 27 40.30 | - 0.40 | . | -33.90 | 14 27 6.60 | - | 0.92 | |
| | 3 | α^2 Bootis | P. | 56.2 | 59.0 | 0.8 | 7.7 | 9.9 | 12.3 | 19.3 | 21.0 | 23.8 | 40 10.00 | - 0.66 | -33.90 | -33.90 | 14 39 35.44 | - | 0.02 | |
| | 4 | α^2 Libræ | P. | 25.3 | 27.9 | 29.6 | 36.0 | 38.1 | 40.2 | 46.5 | 48.1 | 50.6 | 44 38.03 | - 1.44 | -33.95 | -33.90 | 14 44 2.69 | + | 0.04 | |
| | 5 | β Bootis | P. | . | . | 48 | 9.51 | 5.54 | 2.57 | 0.2 | 4.4 | 7.8 | 57 51.57 | - 0.35 | . | -33.90 | 14 57 17.32 | - | 0.02 | |
| | 6 | β Libræ | P. | 44.5 | 46.9 | 48.6 | 54.8 | 56.9 | 59.0 | 5.0 | 6.8 | 9.3 | 10 56.87 | - 1.31 | -33.89 | -33.90 | 15 10 21.66 | - | 0.01 | |
| | 7 | γ Aquilæ | P. | 46.8 | 49.5 | 51.0 | 57.3 | 59.4 | 1.4 | 7.7 | 9.3 | 11.8 | 40 59.36 | - 0.92 | -34.00 | -33.98 | 19 40 24.46 | + | 0.05 | |
| | 8 | α Aquilæ | P. | 9.2 | 11.8 | 13.4 | 19.6 | 21.6 | 23.7 | 29.9 | 31.5 | 34.0 | 45 21.63 | - 0.95 | -34.04 | -33.98 | 19 44 46.70 | + | 0.10 | |
| | 9 | γ Ursæ Minoris . . | P. | . | . | . | . | . | 1.7 | 40.6 | 58.5 | . | 47 19.03 | +47.56 | . | -33.98 | 19 47 32.61 | - | 3.20 | |
| | 10 | γ Aquilæ | P. | 30.3 | 32.9 | 34.4 | 40.6 | 42.7 | 44.7 | 50.9 | 52.4 | 55.0 | 58 42.66 | - 0.98 | -34.00 | -33.99 | 19 58 7.69 | + | 0.03 | |
| | 11 | 3 Ursæ Majoris, S. P. | P. | 42.3 | 35.5 | 31.4 | 14.3 | 8.4 | 2.6 | 45.7 | 41.6 | 34.6 | 1 8.49 | - 3.31 | . | -33.99 | 8 0 31.19 | - | 0.52 | |
| | 12 | α^2 Capricorni . . . | P. | 36.5 | 39.0 | 40.7 | 46.9 | 49.0 | 51.4 | 57.4 | 59.0 | 1.5 | 11 49.01 | - 1.33 | -34.04 | -33.99 | 20 11 13.69 | + | 0.09 | |
| | 13 | Anonymous | P. | 34.0 | 36.9 | 38.5 | 44.8 | 47.3 | 49.3 | 55.8 | 57.5 | 0.5 | 19 47.18 | - 1.50 | . | -34.01 | 21 19 11.67 | - | 3.77 | |
| | 14 | ζ Pegasi (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 15 | ζ Pegasi | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 16 | α Piscis Australis . | P. | 13.7 | 16.6 | 18.4 | 25.5 | 27.8 | 30.0 | 37.0 | 38.9 | 42.0 | 51 27.77 | - 1.70 | -34.00 | -34.03 | 22 50 52.04 | + | 0.01 | |
| | 17 | α Ursæ Majoris, S. P. | P. | 8.4 | 2.8 | 59.5 | 46.4 | 42.0 | 37.8 | 24.0 | 21.0 | 15.6 | 56 41.94 | - 2.71 | . | -34.03 | 10 56 5.20 | - | 0.21 | |
| | 18 | Weisse 22 ¹ | P. | 6.8 | 9.4 | 10.9 | . | . | . | . | . | . | 4 19.19 | - 1.25 | . | -34.03 | 23 3 43.81 | - | 3.77 | |
| | 19 | Weisse 22 ² | P. | . | . | 15.2 | 17.3 | 19.1 | 21.3 | 23.4 | . | . | 4 19.27 | - 1.25 | . | -34.03 | 23 3 43.99 | - | 3.77 | |
| | 20 | Weisse 23 | P. | . | . | . | . | . | . | 27.6 | 29.2 | 31.6 | 4 19.31 | - 1.25 | . | -34.03 | 23 3 44.03 | - | 3.77 | |
| | 21 | η^1 Aquarii | P. | 50.4 | 53.0 | 54.6 | 0.8 | 2.8 | 4.8 | 11.0 | 12.5 | 15.3 | 10 2.80 | - 1.27 | . | -34.03 | 23 9 27.50 | - | 3.80 | |
| | 22 | Chio | P. | 6.7 | 9.3 | 10.8 | 17.0 | 19.1 | 21.2 | 27.4 | 28.8 | 31.4 | 17 19.08 | - 0.95 | . | -34.04 | 23 16 44.09 | . | . | |
| | 23 | γ Draconis, S. P. . | P. | 15.5 | 8.3 | 3.5 | 45.7 | 40.0 | 33.9 | 16.2 | 11.6 | 4.0 | 24 39.86 | - 3.49 | . | -34.04 | 11 24 2.33 | - | 0.11 | |
| | 24 | Euphrosyne | P. | 29.5 | 32.0 | 34.0 | 38.6 | 41.2 | 43.6 | . | 52.9 | . | 35 43.46 | - 1.69 | . | -34.04 | 23 35 7.73 | . | . | |
| | 25 | Aegle | P. | 17.7 | 20.0 | 28.0 | 30.1 | 32.4 | 34.4 | 38.6 | . | 42.7 | 41 30.20 | - 0.84 | . | -34.04 | 23 10 55.32 | . | . | |
| | 26 | Groombridge 4163 . | P. | 42.3 | 51.4 | 56.6 | 18.7 | 26.0 | 33.2 | 54.8 | 0.8 | 9.6 | 49 25.93 | + 2.11 | . | -34.04 | 23 48 55.00 | + | 0.34 | |
| | 27 | α Andromedæ (R.) . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 28 | α Andromedæ . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 29 | 4 Draconis, S. P. . | P. | 0.7 | 48.0 | 41.0 | 10.5 | 0.5 | 50.0 | 20.0 | 12.4 | 0.0 | 7 0.34 | - 5.35 | . | -34.05 | 12 6 21.94 | - | 0.66 | |
| | 30 | Amphitrite | P. | 59.9 | 2.6 | 1.0 | 10.2 | 12.3 | 14.3 | 20.4 | 22.0 | 24.5 | 12 12.24 | - 1.04 | . | -34.05 | 0 11 37.15 | . | . | |
| | 31 | Eugenia | P. | 41.8 | 44.5 | 46.3 | 52.1 | 54.2 | 56.2 | 2.3 | 3.7 | 6.5 | 21 54.18 | - 1.17 | . | -34.05 | 0 21 18.96 | . | . | |
| | 32 | Cybele | P. | 33.9 | 36.5 | 37.9 | 44.0 | 46.0 | 48.0 | 54.3 | 55.9 | 58.3 | 30 46.09 | - 1.08 | . | -34.05 | 0 30 10.96 | . | . | |
| | 33 | α Cassiopeæ (R.) . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 34 | α Cassiopeæ | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 35 | 32 ¹ Camelopard, S. P. | P. | . | . | 23.4 | 3.4 | 43.5 | 23.6 | . | . | . | 48 43.42 | - 9.72 | . | -34.06 | 0 47 59.64 | + | 5.89 | |
| | 36 | 33 ² Camelopard, S. P. | P. | . | . | 31.0 | 10.6 | 51.5 | 31.0 | 10.8 | . | . | 48 50.86 | - 9.72 | . | -34.06 | 12 48 7.08 | - | 1.16 | |
| | 37 | Galatæa | P. | 37.4 | 40.0 | 41.5 | 47.6 | 49.7 | 51.7 | 57.8 | 59.5 | 1.9 | 58 49.68 | - 0.98 | . | -34.06 | 0 58 14.64 | . | . | |
| | 38 | Polaris | P. | 25.6 | 7.9 | 18.5 | 0.3 | . | . | . | . | . | 14 3.80 | +37.30 | . | -34.07 | 1 14 7.03 | + | 1.48 | |
| | 39 | Moon I, N. | P. | 10.7 | 13.2 | 14.9 | 18.9 | 21.0 | 23.3 | 25.4 | 27.6 | . | 12 23.34 | - 0.91 | . | -34.07 | 1 11 48.36 | + | 65.28 | |
| | 40 | Moon II | P. | . | . | . | . | 37.0 | 39.0 | 43.4 | 44.9 | 47.6 | 14 34.76 | - 0.91 | . | -34.07 | 1 13 59.78 | - | 66.14 | |
| | 41 | Polaris | P. | . | . | . | . | 58.9 | 48.6 | 55.5 | 44.2 | 14 3.10 | +37.30 | . | . | -34.07 | 1 14 6.33 | + | 0.78 | |
| | 42 | η Piscium | P. | 17.0 | 19.6 | 21.4 | 27.4 | 29.5 | 31.6 | 38.0 | 39.7 | 42.4 | 25 29.62 | - 0.83 | -34.07 | -34.07 | 1 24 54.72 | + | 0.07 | |
| | 43 | B. A. C. 501 | P. | 35.7 | 39.2 | 41.3 | 49.6 | 52.5 | 55.2 | 3.5 | 5.7 | 9.0 | 33 52.41 | - 0.21 | . | -34.07 | 1 33 18.13 | - | 4.03 | |
| | 44 | α Piscium (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 45 | α Piscium | P. | . | . | . | . | . | . | 37.8 | 39.4 | 42.0 | 39 29.59 | - 0.94 | -34.08 | -34.07 | 1 38 54.58 | - | 0.02 | |
| | 46 | β Arietis | P. | 12.9 | 15.8 | 17.5 | 24.0 | 26.1 | 28.3 | 34.9 | 36.5 | 39.3 | 48 26.14 | - 0.73 | -34.08 | -34.08 | 1 47 51.33 | + | 0.02 | |
| | 47 | 50 Cassiopeæ (R.) . | P. | . | . | . | . | . | . | 44.8 | 58.0 | 2.9 | 11.0 | 53 31.75 | + 1.76 | . | -34.08 | 1 52 59.43 | + | 0.34 |
| | 48 | 50 Cassiopeæ | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 49 | α Arietis | P. | 36.5 | 39.2 | 40.8 | 47.5 | 49.8 | 52.0 | 58.6 | 0.2 | 3.0 | 0 49.73 | - 0.68 | -34.07 | -34.08 | 2 0 14.97 | 0.00 | . | |
| | 50 | ζ^1 Ceti | P. | 52.0 | 54.8 | 56.3 | 2.5 | 4.6 | 6.6 | 12.7 | 14.3 | 16.8 | 7 4.51 | - 0.95 | -34.14 | -34.08 | 2 6 29.48 | + | 0.10 | |

1, 11, 23, 26, 29, 35, 36, 43. Bisections at set C.

9. Bisections at threads C₅ and D₁.

14. Bisections at threads II and III.

18, 19, 21, 22, 23, 24, 25, 26, 31, 32, 33, 34, 37. Thread A used.

18, 19. These micrometer readings have been increased one revolution in reduction.

20. Thread B used.

33, 47, 48. Bisections at sets B and D.

38. Bisections at threads B₁, B₂, and B₃.

39. Bisections at threads II-VI.

41. Bisections at threads D₁, D₂, D₃.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | | | | | |
| 1 | 13 28 | 10 8.7 | 6.1 | 7.5 | 7.3 | 37 | 015 | .. | .. | .. | 950 | 69.0 | 346 28 32.0 | .. | 13.6 | 37 34 39.6 | + 0.2 |
| 2 | 359 54 | 6.3 | 3.8 | 4.5 | 3.6 | 37 | 745 | 730 | .. | 635 | 545 | 69.0 | 0 2 40.0 | 64.5 | + 0.1 | 51 9 1.3 | - 7.5 |
| 3 | 348 38 | 10.1 | 6.8 | 6.5 | 7.6 | 33 | 730 | 740 | .. | 640 | 605 | 69.0 | 11 17 42.0 | .. | + 11.3 | 62 24 14.5 | + 0.5 |
| 4 | 305 32 | 7.7 | 4.5 | 5.5 | 7.5 | 35 | .. | 290 | .. | 210 | .. | 69.0 | 54 24 4.3 | .. | + 1 18.6 | 105 31 44.1 | + 1.1 |
| 5 | 1 54 | 6.1 | 3.1 | 4.0 | 4.1 | 30 | .. | .. | .. | 910 | 845 | 69.0 | 358 0 56.8 | .. | - 2.0 | 49 7 16.0 | + 0.6 |
| 6 | 312 8 | 10.1 | 7.6 | 8.0 | 9.0 | 35 | .. | 745 | .. | 645 | .. | 69.0 | 47 48 13.5 | 64.3 | + 1 2.1 | 98 55 36.8 | - 0.1 |
| 7 | 331 22 | 10.2 | 5.5 | 4.5 | 8.6 | 35 | .. | 690 | .. | 585 | .. | 69.7 | 28 34 12.0 | 56.4 | + 31.2 | 79 41 4.4 | - 0.6 |
| 8 | 329 36 | 10.6 | 5.3 | 4.8 | 7.1 | 36 | .. | 360 | .. | 205 | .. | 69.7 | 30 20 21.6 | .. | + 33.5 | 81 27 16.3 | - 1.4 |
| 9 | 49 58 | 10.3 | 4.8 | 4.8 | 5.7 | 36 | .. | .. | .. | 830 | 695 | 69.7 | 309 58 29.7 | .. | - 1 8.2 | 1 3 42.7 | 0.0 |
| 10 | 327 58 | 10.2 | 5.5 | 5.0 | 8.4 | 31 | .. | 350 | .. | 240 | .. | 69.7 | 31 57 5.6 | .. | + 35.8 | 83 4 2.6 | - 0.7 |
| 11 | 72 10 | 7.4 | 1.6 | 0.4 | 1.6 | 37 | 240 | .. | .. | .. | 400 | 69.7 | 287 46 33.2 | .. | - 2 56.9 | 338 49 57.5 | + 1.7 |
| 12 | 308 8 | 12.0 | 7.6 | 6.3 | 10.7 | 34 | .. | 740 | .. | 640 | .. | 69.7 | 51 47 59.3 | 55.0 | + 1 12.8 | 102 55 33.3 | - 0.8 |
| 13 | 299 54 | 11.3 | 6.0 | 6.8 | 9.1 | 33 | .. | .. | .. | 940 | 910 | 69.7 | 60 1 47.5 | 53.6 | + 1 39.4 | 111 9 48.1 | + 8.4 |
| 14 | 208 33 | 13.5 | 10.2 | 10.3 | 8.7 | 35 | 970 | 925 | .. | .. | .. | 69.7 | 151 18 19.6 | .. | - 31.6 | 79 48 33.2 | + 0.3 |
| 15 | 331 14 | 11.0 | 5.8 | 5.5 | 5.9 | 33 | .. | .. | .. | 450 | 440 | 69.7 | 28 41 39.2 | 52.7 | + 31.6 | 79 48 32.0 | - 0.9 |
| 16 | 290 48 | 11.9 | 7.0 | 7.1 | 10.9 | 33 | .. | 330 | .. | 200 | .. | 69.7 | 69 7 37.4 | 52.7 | + 2 30.1 | 120 16 28.7 | + 0.3 |
| 17 | 78 32 | 11.0 | 5.0 | 3.7 | 6.4 | 31 | .. | 865 | .. | 750 | .. | 69.7 | 281 23 12.0 | .. | - 4 38.6 | 332 24 54.6 | + 0.6 |
| 18 | 312 16 | 11.7 | 8.0 | 7.2 | 10.2 | 30 | 870 | .. | .. | .. | .. | 69.7 | 47 36 41.5 | .. | + 1 3.1 | 98 44 5.8 | + 20.1 |
| 19 | 312 16 | 11.7 | 8.0 | 7.2 | 10.2 | 30 | .. | 460 | .. | .. | .. | 69.7 | 47 36 35.7 | .. | + 1 3.1 | 98 44 0.0 | + 20.1 |
| 20 | 312 16 | 11.7 | 8.0 | 7.2 | 10.2 | 32 | .. | .. | .. | 045 | 055 | 69.7 | 47 41 52.3 | .. | + 1 3.3 | 98 49 16.8 | + 20.1 |
| 21 | 311 16 | 12.5 | 7.5 | 8.0 | 10.2 | 36 | .. | 920 | .. | 830 | .. | 69.7 | 48 37 59.7 | .. | + 1 5.4 | 99 45 26.3 | + 20.4 |
| 22 | 329 4 | 9.2 | 4.5 | 4.0 | 6.0 | 41 | .. | 865 | .. | 670 | .. | 69.7 | 30 51 11.1 | .. | + 34.5 | 81 58 6.8 | - 5.2 |
| 23 | 70 58 | 9.4 | 3.0 | 2.5 | 4.4 | 41 | 215 | .. | .. | .. | 300 | 69.7 | 288 57 2.1 | .. | - 2 46.3 | 340 0 37.0 | + 2.2 |
| 24 | 291 12 | 12.0 | 7.6 | 7.9 | 10.8 | 42 | .. | 510 | .. | 395 | .. | 69.7 | 68 43 25.0 | .. | + 2 27.1 | 119 52 13.3 | - 3.5 |
| 25 | 335 30 | 5.8 | 1.4 | 0.6 | 4.6 | 40 | .. | 655 | .. | 545 | .. | 69.7 | 24 24 50.4 | .. | + 26.2 | 75 31 37.8 | - 1.4 |
| 26 | 34 44 | 8.9 | 4.0 | 5.5 | 5.2 | 39 | 915 | .. | .. | .. | 875 | 69.7 | 325 10 42.4 | 52.5 | - 40.1 | 16 16 23.5 | - 1.5 |
| 27 | 190 24 | 12.0 | 10.1 | 10.0 | 7.6 | 32 | 120 | 075 | .. | .. | .. | 69.7 | 169 31 19.3 | .. | - 10.7 | 61 35 12.6 | - 0.8 |
| 28 | 340 26 | 8.5 | 3.0 | 4.5 | 7.0 | 29 | .. | .. | .. | 760 | 710 | 69.7 | 10 28 41.3 | .. | + 10.7 | 61 35 13.2 | - 0.2 |
| 29 | 62 42 | 9.0 | 3.5 | 5.2 | 5.2 | 33 | 150 | .. | .. | .. | 153 | 69.7 | 297 13 32.4 | .. | - 1 51.6 | 348 18 2.0 | + 2.7 |
| 30 | 324 22 | 10.4 | 5.4 | 4.9 | 8.5 | 35 | .. | 990 | .. | 840 | .. | 69.7 | 35 34 16.3 | .. | + 41.3 | 86 41 18.8 | - 3.6 |
| 31 | 316 38 | 10.2 | 4.9 | 6.0 | 10.1 | 46 | .. | 000 | .. | 710 | .. | 69.7 | 43 18 15.5 | .. | + 54.4 | 94 25 31.1 | - 3.2 |
| 32 | 321 42 | 9.0 | 4.0 | 4.0 | 7.7 | 46 | .. | 460 | .. | 240 | .. | 69.7 | 38 14 21.5 | .. | + 45.5 | 89 21 28.2 | - 2.2 |
| 33 | 162 58 | 10.6 | 8.8 | 8.3 | 8.2 | 44 | .. | .. | .. | 240 | 175 | 69.7 | 196 57 51.7 | .. | + 17.6 | 34 8 11.9 | - 0.2 |
| 34 | 16 54 | 10.0 | 4.3 | 6.5 | 8.5 | 45 | .. | .. | .. | .. | 240 | 69.7 | 343 2 7.9 | .. | - 17.6 | 34 8 11.5 | - 0.6 |
| 35 | 56 56 | 10.2 | 4.5 | 6.0 | 6.2 | 36 | 335 | .. | .. | .. | 295 | 69.7 | 303 0 21.8 | .. | - 1 28.6 | 354 5 14.4 | + 17.0 |
| 36 | 56 56 | 10.2 | 4.5 | 6.0 | 6.2 | 35 | 125 | .. | .. | .. | 125 | 69.7 | 303 0 3.5 | .. | - 1 28.6 | 354 4 56.1 | + 1.9 |
| 37 | 327 50 | 6.5 | 2.3 | 2.0 | 6.0 | 41 | .. | 235 | .. | 260 | .. | 69.7 | 32 5 1.4 | 51.9 | + 36.2 | 83 11 58.8 | - 4.2 |
| 38 | 49 40 | 5.8 | 29.8 | 0.5 | 0.6 | 33 | 445 | 525 | 575 | .. | .. | 99.7 | 310 15 35.9 | .. | - 1 8.1 | 1 20 49.0 | - 1.5 |
| 39 | 331 30 | 6.5 | 1.5 | 0.9 | 2.4 | 34 | 905 | 730 | 420 | 265 | 005 | 69.7 | 28 25 49.6 | .. | + 31.3 | 79 32 42.1 | .. |
| 40 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 41 | 49 40 | 5.1 | 28.7 | 0.0 | 28.6 | 33 | .. | .. | 680 | 600 | 560 | 69.7 | 310 15 36.9 | .. | - 1 8.1 | 1 20 50.0 | - 0.5 |
| 42 | 335 46 | 12.0 | 5.7 | 5.8 | 8.7 | 36 | .. | 525 | .. | 395 | .. | 69.7 | 24 10 25.5 | .. | + 25.9 | 75 17 12.6 | + 0.7 |
| 43 | 3 42 | 11.0 | 5.7 | 7.7 | 8.2 | 31 | 570 | .. | .. | .. | 505 | 69.7 | 356 13 10.1 | .. | - 3.8 | 47 19 27.5 | + 22.1 |
| 44 | 210 18 | 12.2 | 10.9 | 10.5 | 9.6 | 39 | .. | 880 | .. | .. | .. | 69.7 | 149 39 19.8 | .. | - 33.8 | 81 27 35.2 | - 0.1 |
| 45 | 329 36 | 10.1 | 5.2 | 5.1 | 7.8 | 37 | .. | .. | .. | 395 | 375 | 69.7 | 30 20 39.5 | .. | + 33.8 | 81 27 34.5 | - 0.8 |
| 46 | 341 14 | 9.5 | 3.9 | 4.0 | 8.3 | 30 | 395 | 375 | .. | .. | .. | 69.7 | 18 40 50.0 | .. | + 19.6 | 69 47 30.8 | + 0.2 |
| 47 | 147 0 | 7.3 | 5.4 | 5.0 | 6.2 | 31 | 915 | 830 | .. | .. | .. | 69.7 | 212 55 12.6 | .. | + 37.4 | 18 10 31.2 | - 1.9 |
| 48 | 32 50 | 5.5 | 29.0 | 0.1 | 3.3 | 30 | .. | .. | .. | 375 | 340 | 69.7 | 327 4 46.4 | .. | - 37.4 | 18 10 30.2 | - 2.9 |
| 49 | 343 50 | 10.5 | 6.1 | 5.7 | 7.7 | 36 | 610 | 645 | .. | .. | .. | 69.7 | 16 0 26.8 | .. | + 16.4 | 67 7 4.4 | - 0.5 |
| 50 | 329 18 | 10.9 | 5.8 | 5.1 | 8.0 | 30 | .. | 075 | .. | 950 | .. | 69.7 | 30 36 46.1 | .. | + 34.2 | 81 43 41.5 | - 1.9 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " | " | " | " |
| 2 | 29.88 | 62.7 | 39 | - 27 12.0 | + 15 42.5 | .. | - 11 29.4 |
| 6 | 29.87 | 64.6 | | | | | |
| 7 | 29.85 | 57.6 | | | | | |
| 12 | 29.85 | 56.5 | | | | | |
| 13 | 29.84 | 55.4 | | | | | |
| 15 | 29.85 | 54.4 | | | | | |
| 16 | 29.85 | 54.4 | | | | | |
| 26 | 29.85 | 53.9 | | | | | |
| 37 | 29.84 | 53.4 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|--------|---------|------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | |
| 1876. | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| Oct. 3 | 1 | Neptune | P. | 51.7 | 54.0 | 55.7 | 2.0 | 4.1 | 6.2 | 12.3 | 13.9 | 16.6 | 12 4.06 | — 0.90 | . | —34.08 | 2 11 29.08 | . |
| | 2 | Cassiopee (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 3 | Cassiopee | P. | . | . | 20.7 | 26.3 | 31.0 | 36.5 | 41.7 | . | . | 19 31.27 | + 1.10 | . | —34.08 | 2 18 58.20 | + 0.42 |
| | 4 | Ursæ Minoris, S. P. | P. | 15.6 | 4.9 | 58.4 | 32.5 | 24.5 | 15.5 | 49.6 | 43.2 | 32.5 | 28 24.08 | — 4.68 | . | —34.09 | 14 27 45.31 | — 0.35 |
| | 5 | Venus II, S. | S. | 34.5 | 37.0 | 38.6 | 45.0 | . | 49.1 | 55.4 | 57.0 | 59.6 | 0 47.02 | — 1.01 | . | —34.61 | 10 0 11.40 | — 0.73 |
| | 6 | Leonis | S. | 32.2 | 34.8 | 36.7 | 43.0 | 45.4 | 47.6 | 54.0 | 55.7 | 58.3 | 13 45.30 | — 0.85 | —34.52 | —34.61 | 10 13 9.84 | — 0.11 |
| | 7 | Leonis | S. | 8.3 | 11.0 | 12.6 | 18.7 | 21.0 | 23.1 | 29.7 | 31.3 | 33.8 | 43 21.66 | — 0.86 | —34.73 | —34.64 | 11 42 45.56 | — 0.07 |
| | 8 | Sun I, S. | S. | 51.7 | 2.5 | 3.8 | 9.9 | 12.1 | 14.0 | 20.2 | 21.8 | 24.5 | 50 12.06 | — 1.32 | . | —34.66 | 12 49 35.06 | . |
| | 9 | Sun II, N. | S. | 9.0 | 11.5 | 13.0 | 19.2 | 21.2 | 23.3 | 29.4 | 31.0 | 33.6 | 52 21.24 | — 1.32 | . | —34.66 | 12 51 45.26 | . |
| | 10 | Polaris, S. P. | S. | . | . | 10.0 | 41.0 | 14.0 | 47.5 | 20.0 | . | . | 15 14.04 | —33.57 | . | —34.66 | 1 14 5.81 | — 0.47 |
| | 11 | Bootis | S. | 21.0 | 26.9 | 28.4 | 35.0 | 37.0 | 39.3 | 45.8 | 47.4 | 50.0 | 10 37.09 | — 0.92 | —34.67 | —34.68 | 14 10 1.49 | — 0.01 |
| | 12 | Bootis | S. | 57.0 | 59.8 | 1.7 | 8.6 | 11.0 | 13.2 | 20.3 | 21.9 | 24.7 | 40 10.91 | — 0.79 | —34.70 | —34.69 | 14 39 35.43 | — 0.01 |
| | 13 | Libre | S. | . | . | . | 38.9 | 41.0 | 43.0 | 47.3 | 49.0 | 51.5 | 44 38.85 | — 1.53 | —34.69 | —34.69 | 14 44 2.63 | — 0.01 |
| | 14 | Venus II, N. | P. | 47.0 | 49.6 | 51.2 | 57.4 | 59.6 | 1.6 | 7.9 | 9.4 | 12.0 | 4 59.52 | — 0.86 | . | —35.32 | 10 4 23.31 | — 0.72 |
| | 15 | Venus S. | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 16 | Leonis | P. | 32.9 | 35.7 | 37.3 | 43.9 | 46.0 | 48.1 | 54.7 | 56.3 | 59.0 | 13 45.09 | — 0.70 | —35.34 | —35.32 | 10 13 9.97 | 0.00 |
| | 17 | Leonis | P. | 55.0 | 58.0 | 59.7 | 6.3 | 8.5 | 10.6 | 17.2 | 18.8 | 21.5 | 8 8.40 | — 0.69 | —35.32 | —35.33 | 11 7 32.38 | — 0.07 |
| | 18 | Sun I, S. | P. | 39.6 | 42.2 | 43.8 | 49.8 | 52.0 | 54.0 | 0.1 | 1.7 | 4.3 | 53 51.94 | — 1.15 | . | —35.35 | 12 53 15.44 | . |
| | 19 | Sun II, N. | P. | 45.9 | 51.5 | 52.9 | 59.0 | 1.2 | 3.3 | 9.5 | 11.0 | 13.6 | 56 1.21 | — 1.15 | . | —35.35 | 12 55 24.71 | . |
| | 20 | Polaris, S. P. | P. | . | . | 14.6 | 43.5 | 19.5 | 53.0 | 22.6 | . | 35.5 | 15 18.48 | —36.94 | . | —35.35 | 1 14 6.19 | — 0.36 |
| | 21 | Bootis | P. | 57.5 | 0.5 | 2.2 | 9.0 | 11.4 | 13.7 | 20.6 | 22.3 | 25.1 | 40 11.37 | — 0.56 | —35.40 | —35.37 | 14 39 35.44 | + 0.01 |
| | 22 | Bootis | P. | 36.8 | 40.2 | 42.4 | 50.3 | 53.0 | 55.7 | 3.8 | 5.9 | 9.0 | 57 53.01 | — 0.26 | . | —35.37 | 14 57 17.38 | + 0.09 |
| | 23 | Libre | P. | 45.7 | 48.5 | 49.9 | 56.0 | 58.2 | 0.4 | 6.1 | 8.0 | 10.6 | 10 58.19 | — 1.21 | —35.34 | —35.37 | 15 10 21.61 | — 0.03 |
| | 24 | Venus II, N. | P. | 12.5 | 15.2 | 16.9 | 23.0 | 25.2 | 27.3 | 33.4 | 35.0 | 37.6 | 13 25.12 | — 0.77 | . | —35.92 | 10 12 48.43 | — 0.07 |
| | 25 | Venus S. | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 26 | Draconis | P. | 14.9 | 25.0 | 31.3 | 57.3 | 6.0 | 14.6 | 10.2 | 46.9 | 57.9 | 25 6.01 | + 2.70 | . | —35.95 | 10 24 32.76 | — 0.33 |
| | 27 | Ursæ Majoris (R.) . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 28 | Ursæ Majoris | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 29 | Leonis | P. | 55.8 | 58.4 | 0.1 | 6.6 | 9.0 | 11.1 | 17.6 | 19.3 | 22.2 | 8 8.90 | — 0.59 | —35.88 | —35.94 | 11 7 32.37 | — 0.12 |
| | 30 | Draconis | P. | 1.3 | 8.9 | 13.3 | 31.3 | 37.3 | 43.3 | 1.0 | 5.6 | 13.0 | 24 37.19 | + 1.51 | . | —35.93 | 11 24 2.77 | + 0.15 |
| | 31 | Cephei, S. P. | P. | 55.7 | 44.0 | 37.4 | . | 10.3 | 1.3 | 51.9 | . | . | 35 1.20 | — 4.57 | . | —35.93 | 23 34 20.70 | + 0.12 |
| | 32 | Leonis | P. | 9.5 | 12.0 | 13.7 | 20.0 | 22.2 | 24.4 | 30.7 | 32.3 | 35.0 | 43 22.20 | — 0.70 | —35.99 | —35.93 | 11 42 45.57 | + 0.04 |
| | 33 | Ursæ Majoris | P. | . | . | 51.8 | 55.4 | 58.7 | 2.2 | 9.3 | 11.8 | 16.3 | 47 55.25 | + 0.30 | . | —35.93 | 11 47 19.62 | + 0.10 |
| | 34 | Sun I, N. | P. | 0.6 | 3.1 | 4.7 | 10.8 | 12.9 | 15.0 | 21.2 | 22.6 | 25.3 | 1 12.91 | — 1.07 | . | —35.91 | 13 0 35.93 | . |
| | 35 | Sun II, S. | P. | 10.0 | 12.6 | 13.9 | 20.4 | 22.5 | 24.5 | 30.6 | 32.6 | 34.8 | 3 22.43 | — 1.07 | . | —35.91 | 13 2 45.45 | . |
| | 36 | Polaris, S. P. | P. | 2.7 | 13.5 | 9.4 | 47.4 | 20.7 | 54.4 | 35.5 | 39.5 | 37.3 | 15 21.26 | —37.22 | . | —35.91 | 1 14 8.13 | + 1.12 |
| | 37 | Ursæ Majoris (R.) . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 38 | Ursæ Majoris | P. | . | . | . | 15.7 | . | 22.0 | 28.4 | 30.6 | 34.7 | 13 15.66 | + 0.10 | . | —35.91 | 13 42 39.85 | — 0.07 |
| | 39 | Draconis | P. | 7.6 | 13.6 | 17.2 | 31.6 | 36.4 | 41.2 | 55.7 | 59.3 | 5.6 | 1 36.47 | + 0.93 | . | —35.90 | 14 1 1.50 | — 0.09 |
| | 40 | Bootis (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 41 | Bootis | P. | . | . | . | . | . | . | 46.8 | 48.3 | 51.0 | 10 38.04 | — 0.64 | —35.91 | —35.90 | 14 10 1.50 | + 0.01 |
| | 42 | B. A. C. 4812 | P. | 26.3 | 29.4 | 31.5 | 39.4 | . | 44.7 | 52.5 | 54.5 | 57.6 | 27 41.99 | — 0.23 | . | —35.90 | 14 27 5.86 | — 0.87 |
| | 43 | Bootis | P. | 57.8 | 0.8 | 2.5 | 9.6 | 11.9 | 14.0 | 20.9 | 22.6 | 25.7 | 40 11.76 | — 0.49 | —35.87 | —35.89 | 14 39 35.38 | — 0.04 |
| | 44 | Ursæ Minoris | P. | 49.3 | 59.3 | 5.3 | 28.0 | 35.8 | 43.1 | 6.6 | 12.4 | 22.2 | 51 35.78 | + 2.19 | . | —35.89 | 14 51 2.08 | — 0.21 |
| | 45 | Bootis | P. | 9.9 | . | 15.0 | 22.8 | . | 28.0 | 35.8 | . | 40.9 | 20 25.40 | — 0.27 | —35.88 | —35.89 | 15 19 49.21 | — 0.02 |
| | 46 | Coronæ Borealis . . . | P. | 50.0 | 52.9 | 54.6 | 1.5 | 3.8 | 6.0 | 13.0 | 14.6 | 17.5 | 30 3.77 | — 0.51 | —35.85 | —35.88 | 15 29 27.38 | — 0.03 |
| | 47 | Serpentis | P. | 35.6 | 38.2 | 39.7 | 45.8 | 47.9 | 50.0 | 56.2 | 57.6 | 0.3 | 38 47.02 | — 0.87 | —35.94 | —35.88 | 15 38 11.17 | + 0.08 |
| | 48 | Ursæ Minoris, S. P. | P. | . | . | 57.5 | 24.4 | 48.3 | 13.6 | 39.0 | . | . | 12 48.54 | —15.66 | . | —36.03 | 18 11 56.69 | — 0.71 |
| | 49 | Geminorum | P. | 54.2 | 57.0 | 58.6 | 5.3 | 7.3 | 9.6 | 16.4 | 18.0 | 20.7 | 16 7.46 | — 0.56 | —36.01 | —36.04 | 6 15 30.86 | — 0.07 |

3, 31. Bisections at sets B and D.
 4, 10, 26, 27, 30, 39, 44. Bisection at set C.
 28, 33. Thread B used.

| Number. | Circle Division | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom't. | Refraction. | Apparent North-Polar Distance. | Miscellan'us Corrections. | |
|---------|-----------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|---------------------------|-------------|
| | | V. | VI. | VII. | VIII. | Rev | 1. | 2. | 3. | 4. | | | | | | | 5. |
| 1 | 332 22 | 10 8.8 | 4.3 | 4.3 | 6.5 | 35 | .. | 800 | .. | 700 | .. | 69.7 | 27 31 12.5 | .. | + | 30.2 | 78 41 3.9 |
| 2 | 152 0 | 7.1 | 3.6 | 4.1 | 4.8 | 37 | 960 | 890 | .. | .. | .. | 69.7 | 207 56 42.6 | .. | + | 30.7 | 23 9 7.9 |
| 3 | 27 52 | 11.1 | 5.2 | 6.5 | 9.2 | 32 | .. | .. | .. | 040 | 955 | 69.7 | 332 3 17.4 | .. | + | 30.7 | 23 9 7.9 |
| 4 | 64 46 | 11.2 | 5.0 | 5.4 | 6.8 | 36 | 260 | .. | .. | .. | 290 | 69.7 | 295 10 22.3 | 50.0 | - 2 | 2.6 | 316 14 40.9 |
| 5 | 332 44 | 10.5 | 7.4 | 7.2 | 7.4 | 33 | .. | .. | .. | 395 | 330 | 68.8 | 27 11 38.1 | 61.0 | + | 29.0 | 78 18 28.3 |
| 6 | 341 30 | 5.3 | 1.0 | 1.5 | 29.8 | 32 | .. | .. | .. | 695 | 660 | 68.8 | 18 25 21.5 | .. | + | 18.4 | 69 32 1.1 |
| 7 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 8 | 315 22 | 13.0 | 9.1 | 9.3 | 11.5 | 38 | 852 | 830 | .. | .. | .. | 68.8 | 44 35 3.1 | .. | + | 54.2 | 95 42 18.5 |
| 9 | 315 54 | 9.9 | 5.8 | 6.7 | 7.9 | 38 | .. | .. | .. | 770 | 770 | 68.8 | 44 2 59.7 | 74.0 | + | 53.2 | 95 10 14.1 |
| 10 | 52 22 | 9.3 | 3.7 | 7.7 | 4.8 | 34 | 850 | .. | 870 | .. | 950 | 68.8 | 307 33 58.5 | .. | - 1 | 11.4 | 358 39 8.3 |
| 11 | 340 52 | 10.2 | 7.2 | 9.4 | 8.3 | 34 | .. | 660 | .. | 985 | .. | 68.8 | 19 3 48.0 | .. | + | 18.9 | 70 10 28.1 |
| 12 | 348 38 | 13.1 | 10.0 | 12.5 | 11.1 | 33 | .. | 585 | .. | 435 | .. | 68.8 | 11 17 43.3 | .. | + | 10.9 | 62 24 15.4 |
| 13 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 14 | 332 28 | 11.1 | 7.1 | 6.5 | 8.0 | 36 | 445 | .. | .. | .. | 305 | 67.8 | 27 28 22.4 | 77.5 | + | .. | .. |
| 15 | 332 28 | 11.1 | 7.1 | 6.5 | 8.0 | 37 | .. | 910 | .. | 740 | .. | 67.8 | 27 28 44.6 | 51.5 | + | 30.1 | 78 35 13.7 |
| 16 | 341 30 | 5.8 | 1.2 | 0.7 | 3.5 | 32 | .. | 775 | .. | 670 | .. | 67.8 | 18 25 21.1 | .. | + | 30.1 | 78 35 35.9 |
| 17 | 342 14 | 9.5 | 5.8 | 5.4 | 7.1 | 32 | .. | 495 | .. | 265 | .. | 67.8 | 17 41 19.3 | .. | + | 19.3 | 69 32 1.6 |
| 18 | 314 58 | 12.3 | 8.1 | 9.6 | 10.2 | 34 | 670 | 650 | .. | .. | .. | 67.8 | 44 57 57.4 | 52.8 | + | 18.4 | 68 47 58.9 |
| 19 | 315 30 | 4.8 | 29.9 | 2.0 | 3.6 | 34 | .. | .. | .. | 695 | 870 | 67.8 | 44 25 54.3 | .. | + | 57.4 | 96 5 16.0 |
| 20 | 52 22 | 8.1 | 2.8 | 5.6 | 4.0 | 35 | 335 | 305 | 255 | 285 | 310 | 67.8 | 307 34 2.5 | 55.2 | + | 56.3 | 95 33 11.8 |
| 21 | 348 38 | 11.8 | 7.2 | 8.0 | 9.0 | 33 | .. | 790 | .. | 675 | .. | 67.8 | 11 17 42.8 | 56.3 | - 1 | 14.5 | 358 39 9.2 |
| 22 | 1 54 | 7.5 | 4.7 | 5.5 | 5.3 | 30 | .. | 965 | .. | 860 | .. | 67.8 | 358 0 56.5 | 56.7 | + | 11.5 | 62 24 15.5 |
| 23 | 312 8 | 12.6 | 10.1 | 9.6 | 11.6 | 35 | .. | 655 | .. | 500 | .. | 67.8 | 47 48 12.8 | .. | - 2 | 2.0 | 49 7 15.7 |
| 24 | 331 52 | 4.5 | 29.3 | 2.0 | 1.5 | 34 | 585 | .. | .. | .. | 430 | 67.8 | 47 48 12.8 | 56.6 | + | 3.3 | 98 55 37.3 |
| 25 | 331 52 | 4.5 | 29.3 | 2.0 | 1.5 | 35 | .. | 935 | .. | 885 | .. | 69.2 | 28 3 48.8 | .. | + | 3.3 | .. |
| 26 | 37 22 | 10.2 | 2.5 | 7.3 | 6.0 | 33 | 920 | .. | .. | .. | .. | 69.2 | 28 4 10.1 | .. | + | 31.6 | 79 10 41.6 |
| 27 | 156 24 | 4.3 | 1.0 | 3.4 | 2.1 | 30 | 575 | .. | 590 | .. | .. | 69.2 | 322 33 44.3 | .. | + | 31.6 | 79 11 2.9 |
| 28 | 23 28 | 7.0 | 2.2 | 4.9 | 4.3 | 29 | .. | .. | .. | 640 | 580 | 69.2 | 203 30 49.4 | .. | + | 45.3 | 13 39 20.2 |
| 29 | 342 14 | 5.0 | 0.2 | 2.2 | 2.3 | 32 | .. | 545 | .. | 455 | .. | 69.2 | 203 30 49.4 | .. | + | 25.7 | 27 35 6.1 |
| 30 | 31 2 | 6.5 | 1.0 | 3.1 | 2.9 | 33 | 705 | .. | .. | .. | 760 | 69.2 | 330 29 10.8 | 48.5 | + | 25.7 | 27 35 6.3 |
| 31 | 64 4 | 5.7 | 20.0 | 2.8 | 2.4 | 37 | 255 | 260 | .. | .. | .. | 69.2 | 17 41 18.6 | .. | + | 18.8 | 68 47 58.6 |
| 32 | 336 18 | 7.5 | 3.4 | 5.0 | 5.5 | 32 | .. | 940 | .. | 875 | .. | 69.2 | 328 53 38.8 | 49.3 | - 2 | 0.8 | 19 59 24.6 |
| 33 | 15 26 | 6.2 | 1.0 | 5.0 | 4.4 | 29 | .. | .. | .. | 490 | 390 | 69.2 | 295 52 30.9 | .. | + | 0.8 | 346 56 51.3 |
| 34 | 314 44 | 9.9 | 3.8 | 6.8 | 9.4 | 33 | 315 | 315 | .. | .. | .. | 69.2 | 23 37 27.8 | .. | + | 25.7 | 74 44 14.7 |
| 35 | 314 12 | 7.2 | 3.0 | 5.6 | 9.0 | 33 | .. | .. | .. | 540 | .. | 69.2 | 344 31 7.5 | .. | + | 16.3 | 35 37 12.4 |
| 36 | 52 22 | 7.3 | 2.0 | 5.2 | 3.6 | 35 | 485 | 450 | 415 | 455 | 405 | 69.2 | 45 11 35.6 | .. | + | 58.7 | 96 18 55.5 |
| 37 | 168 54 | 8.2 | 6.7 | 8.9 | 7.1 | 34 | 845 | 785 | .. | .. | .. | 69.2 | 45 43 38.5 | 53.3 | + | 59.8 | 96 50 59.5 |
| 38 | 10 58 | 5.1 | 1.0 | 3.8 | 4.5 | 35 | .. | .. | .. | 290 | 230 | 69.2 | 307 34 5.5 | 53.9 | - 1 | 15.6 | 358 39 11.1 |
| 39 | 26 0 | 6.6 | 2.0 | 5.0 | 4.0 | 35 | 770 | .. | .. | .. | 700 | 69.2 | 191 1 57.8 | .. | + | 11.3 | 40 4 12.1 |
| 40 | 199 0 | 8.5 | 7.0 | 7.8 | 3.5 | 35 | 985 | 910 | .. | .. | .. | 69.2 | 348 58 3.5 | .. | + | 11.3 | 40 4 13.4 |
| 41 | 340 52 | 4.1 | 0.0 | 2.0 | 2.5 | 34 | .. | .. | .. | 165 | 150 | 69.2 | .. | .. | + | .. | .. |
| 42 | 359 54 | 5.4 | 1.7 | 4.7 | 3.2 | 37 | .. | 850 | .. | 795 | .. | 69.2 | .. | .. | + | .. | .. |
| 43 | 348 38 | 6.3 | 2.5 | 4.6 | 5.1 | 33 | .. | 980 | .. | 885 | .. | 69.2 | 11 17 42.8 | 57.4 | + | 11.6 | 51 9 2.8 |
| 44 | 35 42 | 4.8 | 29.2 | 2.5 | 0.9 | 38 | 100 | .. | .. | .. | 080 | 69.2 | .. | .. | + | .. | 62 24 15.6 |
| 45 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 69.2 | 324 14 43.6 | .. | - | 41.6 | 15 20 23.2 |
| 46 | 348 10 | 8.5 | 3.4 | 6.0 | 6.5 | 33 | .. | 265 | .. | 135 | .. | 69.2 | 11 45 33.1 | .. | + | .. | .. |
| 47 | 327 52 | 6.5 | 2.0 | 4.9 | 5.8 | 35 | .. | 725 | .. | 590 | .. | 69.2 | 32 4 9.3 | 56.6 | + | 12.0 | 62 52 6.3 |
| 48 | 54 24 | 8.8 | 2.4 | 4.0 | 4.8 | 33 | 690 | 730 | 705 | 695 | 665 | 70.4 | 305 31 40.6 | 56.4 | + | 36.2 | 83 11 6.7 |
| 49 | 343 38 | 8.0 | 1.5 | 3.4 | 4.0 | 37 | .. | 785 | .. | 680 | .. | 70.4 | 16 15 41.8 | 43.6 | - 1 | 22.2 | 356 36 39.6 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|---------|
| 4 | 29.81 | 52.1 | 1 | 0.1 | .. | .. | 0.1 |
| 5 | 29.75 | 58.8 | 5 | 5.0 | 10.7 | .. | 15.7 |
| 9 | 29.74 | 71.4 | 8 | 6.2 | 16 2.2 | .. | 16 8.4 |
| 13 | 29.65 | 77.8 | 9 | 6.2 | 16 2.2 | .. | 15 56.0 |
| 14 | 29.92 | 53.6 | 14 | 5.0 | 11.5 | 0.8 | 5.7 |
| 17 | 29.94 | 55.1 | 15 | 5.0 | 11.5 | .. | 16.5 |
| 19 | 29.95 | 57.6 | 18 | 6.3 | 16 2.1 | .. | 16 8.4 |
| 20 | 29.95 | 57.5 | 19 | 6.2 | 16 2.1 | .. | 15 55.9 |
| 21 | 29.96 | 57.8 | 24 | 5.0 | 11.0 | 0.7 | 5.3 |
| 23 | 29.99 | 60.0 | 25 | 5.0 | 11.0 | .. | 16.0 |
| 24 | 30.28 | 46.5 | 34 | 6.3 | 16 2.0 | .. | 15 55.7 |
| 28 | 30.29 | 49.0 | 35 | 6.3 | 16 2.0 | .. | 16 8.3 |
| 30 | 30.28 | 49.9 | | | | | |
| 33 | 30.28 | 50.7 | | | | | |
| 35 | 30.24 | 53.4 | | | | | |
| 36 | 30.24 | 53.8 | | | | | |
| 41 | 30.21 | 55.4 | | | | | |
| 43 | 30.21 | 56.7 | | | | | |
| 46 | 30.19 | 56.8 | | | | | |
| 47 | 30.18 | 56.7 | | | | | |
| 48 | 29.90 | 45.6 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. |
|--------|---------|-----------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|----------|------------|--------------|----------------|----------------|---------------------------|--------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. m. s. | | |
| 1876. | | | | | | | | | | | | | m. s. | s. | s. | | s. | | |
| Oct. 9 | 1 | B. A. C. 2061 | P. | .. | 49.7 | 52.0 | 54.1 | 56.1 | 58.3 | 2.7 | 1.3 | 7.0 | 17 54.07 | - 1.26 | . | -36.04 | 6 17 16.77 | - 2.50 | |
| | 2 | Geminorum | P. | 0.0 | 2.6 | 4.3 | 10.5 | 12.7 | 14.8 | 21.2 | 22.9 | 25.5 | 31 12.72 | - 0.66 | -36.01 | -36.05 | 6 30 36.01 | - 0.07 | |
| | 3 | B. A. C. 2194 | P. | 44.6 | 47.3 | 49.0 | 55.8 | 58.1 | 0.2 | 7.0 | 8.9 | 11.5 | 36 58.04 | - 0.50 | . | -36.06 | 6 36 21.48 | - 3.34 | |
| | 4 | Canis Majoris | P. | 7.8 | 10.4 | 12.0 | 18.5 | 20.6 | 22.7 | 29.2 | 30.7 | 33.4 | 40 20.59 | - 1.23 | -36.14 | -36.06 | 6 39 43.30 | 0.00 | |
| | 5 | 51 Cephei | P. | .. | .. | .. | 53.2 | 35.4 | 16.5 | 58.6 | .. | .. | 42 34.78 | +17.23 | . | -36.07 | 6 42 15.94 | + 0.07 | |
| | 6 | 47 Geminorum (R) | P. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | . | . | .. | .. | |
| | 7 | 47 Geminorum | P. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | . | . | . | .. | .. | |
| | 8 | Draconis, S. P. | P. | 41.8 | 35.2 | 31.4 | 15.1 | 9.6 | 4.5 | 48.4 | 44.6 | 37.8 | 13 9.82 | - 2.98 | . | -36.10 | 19 12 30.71 | - 0.07 | |
| | 9 | Draconis, S. P. | P. | 15.9 | 7.3 | 1.8 | 40.8 | 33.9 | 26.9 | 5.9 | 0.4 | 51.7 | 18 33.84 | - 3.70 | . | -36.11 | 19 17 53.97 | - 0.07 | |
| | 10 | Moon II, S. | P. | 12.2 | 15.2 | 16.9 | 24.0 | 26.3 | 28.6 | 35.8 | 37.5 | 40.5 | 22 26.33 | - 0.46 | . | -36.11 | 7 21 49.79 | -75.77 | |
| | 11 | a ¹ Geminorum | P. | 5.9 | 9.0 | 11.0 | .. | .. | .. | 30.0 | 31.9 | 34.9 | 27 20.45 | - 0.36 | . | -36.11 | 7 26 43.98 | - 3.36 | |
| | 12 | a ² Geminorum | P. | .. | .. | 16.0 | 18.5 | 20.9 | 23.3 | 25.7 | .. | .. | 27 20.89 | - 0.36 | -36.17 | -36.11 | 7 26 44.42 | + 0.30 | |
| | 13 | Canis Minoris | P. | 15.7 | 18.4 | 19.8 | 26.0 | 28.0 | 30.0 | 30.2 | 37.8 | 40.4 | 33 28.03 | - 0.85 | -36.10 | -36.12 | 7 36 51.06 | - 0.18 | |
| | 14 | β Geminorum | P. | 9.3 | 12.2 | 13.8 | 20.7 | 23.2 | 25.5 | 32.4 | 34.2 | 37.0 | 35 23.14 | - 0.45 | -36.08 | -36.12 | 7 37 46.57 | - 0.07 | |
| 10 | 15 | 51 Cephei | S. | .. | .. | 12.0 | 55.0 | 37.5 | 19.5 | 1.5 | .. | .. | 42 37.32 | +15.42 | . | -36.06 | 6 42 16.68 | + 0.21 | |
| | 16 | Canis Majoris | S. | 11.0 | 14.0 | 15.7 | 22.6 | 24.9 | 27.3 | 34.1 | 35.9 | 38.9 | 54 21.93 | - 1.59 | -36.11 | -36.08 | 6 53 47.26 | - 0.02 | |
| | 17 | δ Canis Majoris | S. | 47.0 | 41.9 | 51.0 | 58.3 | 0.7 | 2.9 | 9.7 | 11.4 | 14.3 | 4 0.64 | - 1.54 | -36.07 | -36.00 | 7 3 23.01 | - 0.07 | |
| | 18 | Geminorum | S. | 9.7 | 12.4 | 14.0 | 20.6 | 22.9 | 25.2 | 31.6 | 33.4 | 36.2 | 13 22.89 | - 0.75 | -36.07 | -36.10 | 7 12 46.04 | - 0.09 | |
| | 19 | 15 Argus | S. | 41.8 | 44.7 | 46.4 | 53.0 | 55.3 | 57.5 | 4.3 | 5.8 | 8.6 | 2 55.27 | - 1.46 | -36.26 | -36.17 | 8 2 17.64 | + 0.03 | |
| | 20 | Moon II, S. | S. | .. | .. | .. | 37.6 | 39.9 | 42.2 | 46.7 | 48.3 | 51.3 | 25 37.50 | - 0.73 | . | -36.20 | 8 25 0.57 | -73.40 | |
| | 21 | ε Hydræ | S. | 39.6 | 42.0 | 43.6 | 49.8 | 51.9 | 54.0 | 0.2 | 1.7 | 4.3 | 40 51.90 | - 0.99 | -36.13 | -36.22 | 8 40 14.69 | - 0.13 | |
| 11 | 22 | Polaris, S. P. | F. | .. | .. | 21.0 | .. | 23.0 | 56.0 | .. | 33.0 | 46.0 | 15 24.66 | -40.17 | . | -36.29 | 1 14 8.20 | + 1.06 | |
| | 23 | ε Bootis | F. | 58.4 | 1 3 | 3.0 | 10.0 | 12.3 | 14.6 | 21.5 | 13.2 | 26.0 | 40 12.26 | - 0.61 | -36.27 | -36.32 | 14 39 35.33 | - 0.07 | |
| | 24 | a ¹ Libræ | F. | 27.7 | 30.4 | 32.0 | 38.3 | 40.5 | 42.8 | 48.8 | 50.5 | 53.0 | 44 40.44 | - 1.42 | -36.40 | -36.32 | 14 44 2.70 | + 0.07 | |
| | 25 | β Bootis | F. | .. | .. | .. | .. | .. | .. | 4.7 | 6.0 | 10.0 | 57 53.83 | - 0.28 | . | -36.32 | 14 57 17.23 | - 0.02 | |
| | 26 | β Libræ | F. | 46.9 | 49.4 | 51.0 | 57.2 | 59.3 | 1.3 | 7.3 | 9.0 | 11.7 | 10 59.23 | - 1.26 | -36.31 | -36.33 | 15 10 21.61 | - 0.02 | |
| | 27 | γ ² Ursæ Minoris | F. | 47.8 | 56.5 | 1.3 | 21.7 | 28.4 | 34.9 | 55.3 | 0.4 | 8.7 | 21 28.33 | + 1.83 | . | -36.33 | 15 20 53.83 | - 0.06 | |
| | 28 | α Coronæ Borealis | F. | 50.5 | 53.4 | 55.0 | 2.0 | 4.4 | 6.7 | 13.6 | 15.2 | 18.0 | 30 4.31 | - 0.62 | -36.30 | -36.34 | 15 29 27.35 | - 0.04 | |
| | 29 | α Serpentis | F. | 30.0 | 38.6 | 40.2 | 46.4 | 48.4 | 50.5 | 56.6 | 58.3 | 0.7 | 38 48.41 | - 1.01 | -36.30 | -36.34 | 15 38 11.06 | - 0.02 | |
| | 30 | ε Serpentis | F. | 4.7 | 7.4 | 9.0 | 15.0 | 17.0 | 19.0 | 25.2 | 26.9 | 29.4 | 45 17.07 | - 1.04 | -36.33 | -36.34 | 15 44 39.69 | + 0.05 | |
| | 31 | δ Scorpii | F. | 26.5 | 29.4 | 31.0 | 37.6 | 39.9 | 42.1 | 48.7 | 50.3 | 53.0 | 53 39.83 | - 1.56 | -36.33 | -36.34 | 15 53 1.93 | - 0.01 | |
| | 32 | β ¹ Scorpii | F. | 40.2 | 43.0 | 44.2 | 51.1 | 53.3 | 55.4 | 1.9 | 3.5 | 6.2 | 58 53.20 | - 1.59 | -36.24 | -36.34 | 15 58 15.36 | - 0.07 | |
| | 33 | δ Ophiuchi | F. | .. | .. | .. | .. | .. | .. | 38.5 | 39.9 | 42.5 | 8 30.26 | - 1.19 | -36.52 | -36.35 | 16 7 52.72 | + 0.19 | |
| | 34 | η Draconis | F. | .. | .. | 45.0 | 49.5 | 51.0 | 58.0 | 2.5 | .. | .. | 22 53.82 | + 0.66 | . | -36.35 | 16 22 18.13 | - 0.13 | |
| | 35 | B. A. C. 7387 | F. | .. | .. | 7.2 | 11.3 | 15.0 | 19.0 | 23.3 | .. | .. | 10 15.18 | + 0.70 | . | -36.44 | 21 9 39.44 | - 1.61 | |
| | 36 | Anonymous | F. | .. | .. | .. | .. | .. | .. | 59.8 | 2.5 | 19 49.39 | - 1.46 | . | -36.44 | 21 19 11.49 | - 3.67 | | |
| | 37 | B. A. C. 7544 | F. | 41.6 | 45.0 | 47.0 | 53.3 | 58.1 | 0.9 | 9.3 | 11.3 | 14.9 | 35 58.16 | - 0.08 | . | -36.45 | 21 35 21.63 | - 2.42 | |
| | 38 | α Ursæ Majoris, S. P. | F. | 11.3 | 5.6 | 2.5 | 49.4 | 45.0 | 40.7 | 27.5 | 24.0 | 18.5 | 56 44.94 | - 2.88 | . | -36.47 | 10 56 5.59 | - 0.08 | |
| | 39 | α Pegasi | F. | 3.1 | 5.7 | 7.4 | 13.5 | 15.7 | 17.8 | 24.2 | 25.7 | 28.4 | 59 15.72 | - 0.77 | -36.46 | -36.47 | 22 58 38.48 | + 0.02 | |
| | 40 | ω ¹ Aquarii | F. | 52.7 | 55.2 | 56.9 | 3.0 | 5.1 | 7.2 | 13.4 | 15.0 | 17.6 | 10 5.12 | - 1.22 | . | -36.48 | 23 9 27.42 | - 3.77 | |
| | 41 | B. A. C. 8102 | F. | 54.3 | 56.9 | 58.5 | 4.6 | 6.8 | 8.7 | 14.9 | 16.3 | 19.1 | 11 6.68 | - 1.20 | . | -36.48 | 23 10 29.00 | - 3.75 | |
| | 42 | B. A. C. 8184 | F. | 36.4 | 39.0 | 40.5 | 46.7 | 48.7 | 50.8 | 56.9 | 58.5 | 1.0 | 23 48.72 | - 1.14 | . | -36.48 | 23 23 11.10 | - 3.72 | |
| | 43 | λ Draconis, S. P. | F. | 18.9 | 11.0 | 7.2 | 55.0 | .. | .. | .. | .. | .. | 24 42.93 | - 3.74 | . | -36.48 | 11 24 2.79 | + 0.09 | |
| | 44 | γ Cephei | F. | .. | .. | 35.8 | 15.0 | 55.0 | .. | 3.2 | 12.3 | .. | 34 54.31 | + 3.33 | . | -36.49 | 23 34 21.15 | + 0.64 | |
| | 45 | Weisse 839 | F. | 35.0 | 37.6 | 39.0 | 45.3 | 47.4 | 49.5 | 55.6 | 57.0 | 59.6 | 42 47.33 | - 1.14 | . | -36.49 | 23 42 9.70 | - 3.77 | |
| | 46 | Groombridge 4163 | F. | 43.8 | 53.0 | 58.4 | .. | 20.4 | 28.0 | 31.8 | 42.2 | .. | 49 27.63 | + 2.49 | . | -36.49 | 23 48 53.65 | + 0.10 | |
| | 47 | ω Piscium | F. | 25.5 | 28.0 | 29.5 | 35.8 | 37.8 | 39.8 | 46.0 | 47.7 | 50.0 | 53 37.79 | - 0.93 | -36.51 | -36.49 | 23 53 0.37 | + 0.03 | |
| | 48 | α Andromedæ | F. | 25.4 | 28.2 | 30.0 | 37.0 | 39.4 | 41.7 | 48.8 | 50.5 | 53.4 | 2 39.38 | - 0.45 | -36.49 | -36.49 | 0 2 2.41 | + 0.02 | |
| | 49 | Amphitrite | F. | 57.3 | 59.9 | 1.4 | 7.6 | 9.5 | 11.7 | 17.0 | 19.0 | 22.0 | 5 9.53 | - 0.99 | . | -36.50 | 0 4 32.04 | .. | |
| | 50 | γ Pegasi | F. | 19.1 | 22.0 | 23.6 | 29.9 | 32.0 | 34.0 | 40.5 | 42.0 | 44.7 | 7 32.01 | - 0.77 | -36.49 | -36.50 | 0 6 54.74 | - 0.01 | |
| | 51 | Eugenia | F. | 48.8 | 51.5 | 53.2 | 59.0 | .. | 3.6 | 9.4 | 11.1 | 13.5 | 16 1.26 | - 1.14 | . | -36.50 | 0 15 23.62 | .. | |

8, 10, 27, 34, 43. Bisections at sets B and D.
 9, 44. Bisections at set C.
 40, 41, 49, 51. Thread A used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom ^r . | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " |
| 1 | 303 10 | 10 9.7 | 3.8 | 6.9 | 7.5 | 32 | .. | .. | .. | 945 | .. | 56 45 31.7 | .. + 1 | 29.6 | 107 53 22.5 | + 21.1 |
| 2 | 337 34 | 8.8 | 2.3 | 4.5 | 6.1 | 38 | .. | 430 | .. | 320 | .. | 22 22 52.8 | .. + | 21.2 | 73 29 38.2 | - 0.2 |
| 3 | 346 18 | 8.2 | 3.0 | 4.5 | 6.9 | 35 | .. | 705 | .. | 580 | .. | 13 38 11.3 | .. + | 14.3 | 64 44 46.8 | + 5.7 |
| 4 | 304 30 | 4.5 | 28.6 | 1.0 | 3.4 | 30 | 495 | 505 | .. | .. | .. | 55 24 47.6 | .. + 1 | 25.2 | 106 32 34.0 | - 0.1 |
| 5 | 48 16 | 9.1 | 2.6 | 5.0 | 5.1 | 38 | .. | .. | 510 | 515 | 515 | 311 40 55.0 | .. - 1 | 6.0 | 2 46 10.2 | - 1.2 |
| 6 | 191 44 | 8.5 | 6.2 | 7.7 | 5.1 | 27 | 545 | 460 | .. | .. | .. | 168 10 6.6 | .. - | 12.3 | 62 56 26.9 | + 2.8 |
| 7 | 348 6 | 8.5 | 2.5 | 4.5 | 6.4 | 34 | .. | .. | .. | 395 | 355 | 11 49 52.7 | 43.4 + | 12.3 | 62 56 26.2 | + 2.8 |
| 8 | 73 32 | 5.2 | 28.5 | 29.3 | 28.8 | 34 | 595 | .. | .. | .. | 510 | 286 23 48.5 | .. - 3 | 17.4 | 337 26 52.3 | - 0.1 |
| 9 | 67 52 | 4.4 | 29.0 | 0.7 | 0.0 | 34 | 490 | .. | .. | .. | 510 | 292 3 49.0 | .. - 2 | 24.2 | 343 7 46.0 | + 0.7 |
| 10 | 347 22 | 8.5 | 2.7 | 4.5 | 7.1 | 33 | 175 | .. | 250 | .. | 350 | 12 33 34.7 | 43.4 + | 13.1 | 63 40 9.0 | .. |
| 11 | 353 12 | 7.9 | 2.4 | 3.4 | 5.7 | 35 | 385 | .. | .. | .. | 160 | 6 44 5.1 | .. + | 6.9 | 57 50 33.2 | - 0.9 |
| 12 | 353 12 | 7.9 | 2.4 | 3.4 | 5.7 | 35 | .. | 135 | .. | 040 | .. | 6 44 2.0 | .. + | 6.9 | 57 50 30.1 | - 0.4 |
| 13 | 326 36 | 6.6 | 2.0 | 2.7 | 4.9 | 36 | .. | 560 | .. | 430 | .. | 33 20 22.6 | .. + | 38.7 | 84 27 22.5 | - 2.3 |
| 14 | 349 22 | 8.2 | 1.5 | 4.1 | 5.6 | 35 | .. | 120 | .. | 970 | .. | 10 34 1.3 | 43.3 + | 11.0 | 61 40 33.5 | - 0.3 |
| 15 | 48 16 | 10.6 | 4.4 | 6.3 | 6.8 | 38 | 400 | .. | 445 | .. | 408 | 311 40 55.0 | 46.0 - 1 | 5.9 | 2 46 10.3 | - 1.1 |
| 16 | 292 16 | 11.5 | 6.9 | 9.0 | 11.7 | 31 | .. | 550 | .. | 382 | .. | 67 39 11.0 | .. + 2 | 22.0 | 118 47 54.2 | - 1.0 |
| 17 | 294 52 | 8.6 | 4.1 | 6.5 | 7.5 | 31 | 169 | 172 | .. | 090 | 010 | 65 3 2.4 | .. + 2 | 5.7 | 116 11 29.3 | - 0.5 |
| 18 | 343 16 | 9.1 | 3.4 | 5.2 | 7.9 | 37 | 872 | 811 | .. | 730 | 668 | 16 40 44.6 | .. + | 17.6 | 67 47 23.4 | - 0.6 |
| 19 | 297 8 | 9.5 | 6.0 | 8.5 | 9.5 | 36 | .. | 220 | .. | 090 | .. | 62 48 21.4 | .. + 1 | 54.5 | 113 56 37.1 | - 0.5 |
| 20 | 343 47 | 7.0 | 5.0 | 5.2 | 6.7 | 33 | 630 | .. | 740 | .. | 910 | 16 8 41.4 | .. + | 17.0 | 67 15 19.7 | .. |
| 21 | 327 56 | 8.8 | 4.4 | 6.6 | 8.9 | 37 | .. | 430 | .. | 390 | .. | 32 0 39.6 | 43.1 + | 37.0 | 83 7 37.8 | + 1.6 |
| 22 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 23 | 348 38 | 5.5 | 28.1 | 24.3 | 5.9 | 34 | .. | 171 | .. | 122 | .. | 11 17 42.2 | .. + | 11.6 | 62 24 15.0 | - 0.6 |
| 24 | 305 32 | 4.8 | 29.9 | 26.5 | 9.4 | 35 | .. | 320 | .. | 230 | .. | 54 24 0.3 | 52.6 + 1 | 21.3 | 105 31 42.8 | 0.0 |
| 25 | 1 54 | 10.9 | 5.0 | 1.6 | 10.7 | 30 | .. | .. | .. | 760 | 738 | 358 0 57.4 | .. - | 2.0 | 49 7 16.6 | - 0.8 |
| 26 | 312 8 | 9.0 | 2.8 | 0.8 | 11.2 | 35 | .. | 786 | .. | 716 | .. | 47 48 11.4 | .. + 1 | 4.3 | 98 55 36.9 | - 0.1 |
| 27 | 33 18 | 10.9 | 1.9 | 28.4 | 8.1 | 34 | 544 | 524 | .. | 492 | 488 | 326 37 51.6 | .. - | 38.4 | 17 43 34.4 | - 0.8 |
| 28 | 348 10 | 7.4 | 27.7 | 25.8 | 4.9 | 33 | 500 | 474 | .. | 468 | 460 | 11 45 32.5 | .. + | 12.2 | 62 52 5.9 | + 0.1 |
| 29 | 327 52 | 5.6 | 28.5 | 26.0 | 5.4 | 35 | 854 | 832 | .. | 782 | 776 | 32 4 7.9 | .. + | 36.6 | 83 11 5.7 | 0.0 |
| 30 | 325 54 | 6.1 | 29.1 | 25.0 | 5.1 | 35 | 280 | 246 | .. | .. | .. | 34 1 58.6 | .. + | 39.4 | 85 8 59.2 | 0.0 |
| 31 | 298 48 | 2.8 | 25.2 | 23.9 | 3.7 | 35 | .. | 880 | .. | 778 | .. | 61 8 5.5 | .. + 1 | 45.5 | 112 16 12.2 | - 1.0 |
| 32 | 301 36 | 6.2 | 29.6 | 28.5 | 6.5 | 35 | 746 | 730 | .. | .. | .. | 58 20 7.0 | .. + 1 | 34.4 | 109 28 2.6 | - 1.8 |
| 33 | 317 40 | 0.9 | 24.5 | 21.8 | 0.5 | 32 | .. | .. | .. | 874 | 860 | 42 15 19.2 | .. + | 53.0 | 93 22 33.4 | + 1.0 |
| 34 | 22 50 | 7.4 | 1.0 | 1.4 | 6.1 | 36 | .. | .. | .. | 404 | 390 | 337 6 19.9 | 52.0 - | 24.7 | 28 12 16.4 | - 0.6 |
| 35 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 36 | 299 56 | 5.2 | 28.5 | 27.0 | 5.2 | 42 | .. | .. | .. | 008 | 000 | 60 1 45.0 | .. + 1 | 43.2 | 111 9 49.4 | + 7.9 |
| 37 | 3 44 | 6.2 | 1.6 | 29.4 | 6.7 | 29 | .. | .. | .. | 680 | 620 | 356 10 38.5 | 42.5 - | 4.0 | 47 16 55.7 | + 24.3 |
| 38 | 78 32 | 9.2 | 1.9 | 29.0 | 6.5 | 32 | .. | 440 | .. | 435 | .. | 281 23 19.8 | .. - 4 | 50.2 | 332 24 50.8 | - 0.4 |
| 39 | 335 36 | 6.6 | 0.4 | 28.8 | 5.0 | 37 | .. | 065 | .. | 968 | .. | 24 20 29.2 | .. + | 27.1 | 75 7 17.5 | + 0.9 |
| 40 | 311 16 | 19.1 | 13.5 | 10.4 | 17.8 | 36 | 356 | 370 | .. | .. | .. | 48 37 57.0 | .. + 1 | 8.1 | 99 45 26.3 | + 20.0 |
| 41 | 312 38 | 6.6 | 1.2 | 28.5 | 8.0 | 38 | .. | .. | .. | 716 | 648 | 47 16 23.0 | .. + 1 | 4.9 | 98 23 49.1 | + 20.4 |
| 42 | 315 50 | 6.6 | 29.4 | 26.8 | 6.9 | 30 | 338 | 330 | .. | .. | .. | 44 4 45.6 | .. + | 58.1 | 95 12 4.9 | + 21.8 |
| 43 | 70 58 | 10.9 | 2.2 | 29.4 | 5.5 | 31 | 544 | 560 | .. | .. | .. | 288 57 6.8 | 40.4 - 2 | 53.3 | 340 0 34.7 | + 2.8 |
| 44 | 37 58 | 7.9 | 1.4 | 0.5 | 6.2 | 33 | 336 | .. | .. | .. | 316 | 321 57 34.2 | .. - | 47.0 | 13 3 8.4 | - 0.6 |
| 45 | 315 40 | 6.1 | 28.8 | 27.4 | 6.1 | 29 | .. | 730 | .. | 695 | .. | 44 14 36.6 | .. + | 59.8 | 95 21 57.6 | + 22.8 |
| 46 | 34 44 | 8.1 | 1.4 | 29.8 | 5.3 | 30 | .. | 030 | .. | 996 | .. | 325 10 44.0 | .. - | 41.8 | 16 16 23.4 | + 1.3 |
| 47 | 327 14 | 7.7 | 1.4 | 28.9 | 5.2 | 35 | .. | 040 | .. | 986 | .. | 32 41 59.1 | .. + | 38.6 | 83 48 58.9 | - 1.1 |
| 48 | 349 26 | 9.9 | 2.6 | 1.4 | 8.7 | 29 | 785 | 765 | .. | .. | .. | 10 28 40.6 | .. + | 11.1 | 61 35 12.9 | + 1.0 |
| 49 | 323 56 | 11.6 | 5.6 | 2.8 | 11.9 | 36 | .. | 040 | .. | .. | .. | 35 57 45.2 | .. + | 43.6 | 87 4 50.0 | - 3.6 |
| 50 | 335 32 | 7.2 | 0.4 | 27.5 | 5.3 | 31 | .. | .. | .. | 630 | 612 | 24 23 7.4 | .. + | 27.3 | 75 29 55.9 | + 1.4 |
| 51 | 315 50 | 8.2 | 0.1 | 29.1 | 7.7 | 39 | .. | 402 | .. | 380 | .. | 44 4 33.0 | .. + | 58.2 | 95 11 52.4 | - 3.2 |

| No. | Barom. | At. Ther | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " " | " " | " " | " " |
| 7 | 29.89 | 45.3 | 10 | -12 41.0 | - 16 10.5 | .. | - 28 51.5 |
| 10 | 29.88 | 45.2 | 20 | -16 15.9 | - 16 10.1 | .. | - 32 26.0 |
| 14 | 29.88 | 45.1 | | | | | |
| 15 | 29.98 | 48.5 | | | | | |
| 21 | 30.06 | 46.8 | | | | | |
| 24 | 30.17 | 54.6 | | | | | |
| 34 | 30.19 | 53.5 | | | | | |
| 37 | 30.30 | 46.5 | | | | | |
| 43 | 30.32 | 44.5 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. | |
|---------|---------|--|-----------|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--------------|---------|----------------|---------------------------|----------------------------|----------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | | | Clock adopted. |
| 1876. | | | | | | | | | | | m. | s. | s. | s. | s. | h. m. s. | s. | |
| Oct. 11 | 1 | Amalthea | F. | 12.0 | 14.9 | 18.8 | 21.0 | 23.1 | 25.0 | 27.0 | 31.4 | 32.8 | 24 22.09 | - 1.15 | . . | -36.50 | 0 23 45.34 | . . |
| | 2 | β Ceti | F. | . . . | . . . | . . . | . . . | . . . | 8.0 | 12.5 | 14.0 | 16.8 | 38 3.81 | - 1.41 | -36.51 | -36.50 | 0 37 25.90 | + 0.06 |
| | 3 | Polaris | F. | 22.0 | 9.0 | 15.5 | . . . | . . . | . . . | 51.0 | 54.0 | 46.0 | 14 2.97 | + 41.67 | . . | -36.52 | 1 14 8.12 | + 0.96 |
| | 4 | Mnemosyne | F. | 22.4 | 25.0 | 20.7 | 32.7 | 34.8 | 36.8 | 43.3 | 44.7 | 47.6 | 16 34.80 | - 0.90 | . . | -36.52 | 1 15 57.47 | . . |
| | 5 | α Piscium | F. | 19.6 | 22.2 | 23.7 | 29.6 | 32.9 | 34.0 | 40.2 | 41.7 | 44.3 | 39 31.06 | - 0.89 | -36.40 | -36.52 | 1 38 54.55 | - 0.15 |
| | 6 | α Arietis | F. | 38.8 | 41.7 | 43.1 | 49.8 | 52.1 | 54.5 | 0.9 | 2.6 | 5.6 | 0 52.12 | - 0.60 | -36.43 | -36.53 | 2 0 14.99 | - 0.09 |
| | 7 | Phocæa | F. | . . . | . . . | 36.8 | 39.3 | 41.2 | 43.5 | 45.8 | . . . | . . . | 2 41.33 | - 0.71 | . . | -36.53 | 2 2 4.00 | . . |
| | 8 | Sirona | F. | 10.6 | 13.4 | 15.1 | 21.3 | 23.4 | 25.1 | 31.6 | 33.0 | 35.7 | 7 23.24 | - 0.87 | . . | -36.53 | 2 6 45.84 | . . |
| | 9 | Neptune | F. | 5.8 | 8.4 | 10.1 | 16.3 | 18.4 | 20.5 | 26.7 | 28.3 | 30.9 | 11 18.39 | - 0.83 | . . | -36.53 | 2 10 41.03 | . . |
| | 10 | B. A. C. 3162 | F. | 31.7 | 34.7 | 36.8 | 44.2 | 47.0 | 49.5 | 57.3 | 59.2 | 2.4 | 11 46.03 | - 0.22 | . . | -36.51 | 9 11 10.25 | - 2.76 |
| | 11 | γ Draconis | F. | . . . | . . . | . . . | . . . | 7.0 | 21.2 | 50.4 | 1.0 | 19.9 | 19 52.72 | + 6.15 | . . | -36.51 | 9 19 22.30 | + 0.66 |
| | 12 | Moon II | F. | 27.4 | 30.1 | 31.8 | 38.4 | 40.6 | 42.8 | 49.4 | 51.0 | 53.7 | 24 40.53 | - 0.68 | . . | -36.51 | 9 24 3.39 | -70.68 |
| | 13 | ϵ Leonis | F. | 14.5 | 17.5 | 19.0 | 25.8 | 28.0 | 30.2 | 36.9 | 38.7 | 41.4 | 39 28.00 | - 0.55 | -36.57 | -36.51 | 9 38 50.94 | 0.00 |
| | 14 | μ Leonis (R.) | F. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . |
| | 15 | μ Leonis | F. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . |
| | 16 | α Leonis | F. | . . . | 20.9 | 23.3 | 25.4 | 27.4 | 29.6 | 33.5 | 35.2 | 37.7 | 2 25.28 | - 0.70 | -36.51 | -36.51 | 10 1 47.98 | - 0.04 |
| | 17 | γ^1 Leonis | F. | 34.0 | 36.8 | 38.3 | . . . | . . . | . . . | 56.0 | 57.6 | 0.2 | 13 47.15 | - 0.63 | -36.45 | -36.51 | 10 13 10.01 | - 0.08 |
| | 18 | γ^2 Leonis | F. | . . . | . . . | 43.0 | 45.2 | 47.5 | 49.7 | 51.8 | . . . | . . . | 13 47.45 | - 0.63 | . . | -36.51 | 10 13 10.31 | - 2.05 |
| | 19 | Venus II, N. | P. | 54.9 | 57.5 | 59.0 | 5.3 | 7.3 | 9.4 | 15.6 | 17.3 | 19.9 | 26 7.36 | - 0.80 | . . | -36.50 | 10 25 30.00 | - 0.68 |
| | 20 | Venus, S. | P. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . |
| | 21 | α Ursæ Majoris (R.) | P. | . . . | . . . | . . . | . . . | . . . | . . . | 59.1 | 2.5 | 7.9 | 56 41.49 | + 0.86 | . . | -36.50 | 10 56 5.85 | + 0.16 |
| | 22 | α Ursæ Majoris | P. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . |
| | 23 | δ Leonis | P. | 56.5 | 59.3 | 0.7 | 5.2 | 7.4 | 9.5 | 11.7 | 14.0 | 22.8 | 8 9.59 | - 0.60 | -36.50 | -36.50 | 11 7 32.40 | - 0.06 |
| | 24 | λ Draconis | P. | 2.4 | 10.0 | 14.5 | 32.4 | 38.1 | 43.9 | 1.5 | 6.2 | 13.7 | 24 38.08 | + 1.65 | . . | -36.50 | 11 24 3.23 | + 0.51 |
| | 25 | γ Cephei, S. P. | P. | 56.3 | 44.5 | 38.3 | 11.2 | 2.3 | 53.1 | 26.3 | 19.4 | 8.0 | 35 2.16 | - 4.94 | . . | -36.50 | 23 34 20.72 | + 0.33 |
| | 26 | Polaris, S. P. | P. | . . . | . . . | . . . | . . . | . . . | . . . | 38.6 | 32.3 | 42.6 | 15 24.93 | -39.66 | . . | -36.50 | 1 14 8.77 | + 1.62 |
| | 27 | Sun I, S. | P. | 5.5 | 8.0 | 9.5 | 15.8 | 17.8 | 19.0 | 26.1 | 27.7 | 30.1 | 12 17.82 | - 1.16 | . . | -36.50 | 13 11 40.16 | . . |
| | 28 | Sun II, N. | P. | 15.4 | 17.9 | 19.4 | 25.7 | 27.7 | 29.7 | 36.0 | 37.6 | 40.0 | 14 27.71 | - 1.16 | . . | -36.50 | 13 13 50.05 | . . |
| | 29 | α Bootis (R.) | P. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . |
| | 30 | α Bootis | P. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . |
| | 31 | ϵ^2 Bootis | P. | 58.6 | 1.5 | 3.2 | 10.2 | 12.5 | 14.8 | 21.8 | 23.6 | 26.3 | 40 12.50 | - 0.57 | -36.54 | -36.50 | 14 39 35.43 | + 0.62 |
| | 32 | β Ursæ Minoris | P. | 50.1 | 59.6 | 5.7 | 28.5 | 36.5 | 44.1 | 7.3 | 12.9 | 22.6 | 51 36.37 | + 2.20 | . . | -36.50 | 14 51 2.07 | - 0.10 |
| | 33 | β Bootis | P. | 37.9 | 41.0 | 43.1 | 51.4 | 54.0 | 56.8 | 4.8 | 6.8 | 10.1 | 57 53.99 | - 0.20 | . . | -36.50 | 14 57 17.23 | 0.00 |
| | 34 | β Libræ | P. | 46.8 | 49.5 | 51.2 | 57.1 | 59.1 | 1.3 | 7.3 | 9.0 | 11.8 | 10 59.27 | - 1.22 | -36.43 | -36.50 | 15 10 21.55 | - 0.07 |
| | 35 | γ^2 Ursæ Minoris | P. | 48.4 | 56.3 | 1.6 | 22.1 | 28.2 | 35.3 | 55.0 | 59.8 | 8.7 | 21 28.38 | + 1.75 | . . | -36.50 | 15 20 53.63 | - 0.21 |
| | 36 | α Coronæ Borealis | P. | 50.8 | 53.6 | 55.3 | 2.3 | 4.5 | 6.6 | 13.5 | 15.4 | 18.3 | 30 4.48 | - 0.58 | -36.52 | -36.50 | 15 29 27.40 | + 0.02 |
| | 37 | γ Ursæ Majoris, S. P. | P. | 45.8 | 38.8 | 34.4 | 17.8 | 11.8 | 6.4 | 49.5 | 45.2 | 37.9 | 1 11.96 | - 3.34 | . . | -36.64 | 8 0 31.98 | - 0.40 |
| | 38 | κ Cephei | P. | 38.0 | 49.4 | 56.4 | 24.2 | 33.4 | 42.5 | 10.2 | 17.4 | 29.4 | 13 33.43 | + 3.33 | . . | -36.64 | 20 13 0.12 | + 0.33 |
| | 39 | B. A. C. 7077 | P. | 57.3 | 0.0 | 1.7 | 6.2 | 8.5 | 10.9 | 13.2 | 15.5 | . . . | 26 10.83 | - 1.47 | . . | -36.64 | 20 25 32.72 | - 3.52 |
| | 40 | Anonymous | P. | . . . | 22.5 | 24.7 | 27.0 | 29.2 | 31.4 | 35.9 | 37.7 | 40.6 | 26 26.97 | - 1.47 | . . | -36.64 | 20 25 48.86 | - 3.52 |
| | 41 | Anonymous | P. | 17.5 | 20.4 | 22.0 | 28.6 | 30.5 | 33.3 | 40.0 | 41.6 | 44.5 | 27 30.97 | - 1.47 | . . | -36.64 | 20 26 52.86 | - 3.53 |
| | 42 | α Cygni | P. | 33.6 | 37.1 | 39.4 | 48.0 | 51.0 | 53.7 | 2.4 | 4.6 | 8.1 | 37 50.88 | + 0.02 | -36.75 | -36.64 | 20 37 14.26 | + 0.13 |
| | 43 | 12 Year Cat. 1879 | P. | . . . | . . . | 15.5 | 27.4 | 39.6 | 51.1 | 2.8 | . . . | . . . | 53 39.34 | + 4.51 | . . | -36.64 | 20 53 7.21 | - 0.02 |
| | 44 | σ^2 Ursæ Majoris, S. P. | P. | . . . | . . . | 22.6 | 16.8 | 11.6 | 6.3 | 0.9 | . . . | . . . | 0 11.61 | - 3.22 | . . | -36.64 | 8 59 31.75 | + 0.09 |
| | 45 | ζ Cygni | P. | 4.9 | 7.8 | 9.6 | 16.7 | 19.0 | 21.5 | 28.4 | 30.1 | 33.3 | 8 19.03 | - 0.39 | -36.62 | -36.64 | 21 7 42.00 | - 0.01 |
| | 46 | B. A. C. 7387 | P. | 51.2 | 56.1 | 59.4 | 11.3 | 15.5 | 19.3 | 31.4 | 34.5 | 39.5 | 10 15.36 | + 0.72 | . . | -36.64 | 21 9 39.44 | - 1.58 |
| | 47 | α Cephei (R) | P. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . |
| | 48 | α Cephei | P. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . |

1, 4, 7, 8, 39 Thread A used.

3. Bisections at threads B₁, B₂, and B₃.

11, 21, 47. Bisections at sets B and D

22, 41. Thread B used.

24, 25, 32, 35, 37, 38, 43, 44, 46. Bisections at set C.

26. Bisections at threads D₁, D₂, and D₃.

29. Bisections at threads I and III.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom't. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|------|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|--------|----|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | | |
| | | " | " | " | " | " | " | " | " | " | | | | | | | " | | |
| 1 | 315 32 | 10 13.3 | 7.0 | 4.9 | 12.7 | 30 | .. | 490 | .. | .. | .. | 70.3 | 44 22 39.5 | .. | + | 58.9 | 95 29 59.6 | — 3.0 | |
| 2 | 302 24 | 5.7 | 28.4 | 27.4 | 5.0 | 34 | .. | .. | .. | 000. | 975 | 70.3 | 57 31 42.4 | 39.0 | + | 1 34.4 | 108 39 38.0 | — 0.6 | |
| 3 | 49 40 | 7.2 | 0.8 | 20.7 | 4.0 | 33 | 345 | 355 | 430 | .. | .. | 70.3 | 310 15 35.4 | .. | — | 1 11.1 | 1 20 45.5 | — 1.8 | |
| 4 | 329 0 | 7.0 | 0.0 | 27.8 | 5.7 | 33 | .. | 452 | .. | 436 | .. | 70.3 | 30 53 0.9 | .. | + | 36.1 | 81 59 58.2 | — 2.4 | |
| 5 | 329 36 | 7.4 | 2.0 | 29.9 | 8.6 | 37 | .. | 586 | .. | 548 | .. | 70.3 | 30 23 39.4 | .. | + | 35.4 | 81 27 36.0 | + 1.1 | |
| 6 | 343 56 | 5.4 | 28.6 | 26.4 | 3.6 | 36 | .. | 820 | .. | .. | .. | 70.3 | 16 0 23.8 | .. | + | 17.3 | 67 7 2.3 | — 1.6 | |
| 7 | 338 26 | 14.1 | 8.5 | 5.4 | 13.4 | 35 | .. | 186 | .. | 178 | .. | 70.3 | 21 27 35.3 | .. | + | 23.8 | 72 34 20.3 | — 2.6 | |
| 8 | 330 28 | 7.7 | 2.5 | 29.6 | 7.6 | 32 | .. | 940 | .. | 836 | .. | 70.3 | 29 24 54.2 | .. | + | 34.1 | 80 31 49.5 | — 2.2 | |
| 9 | 332 18 | 6.4 | 29.2 | 26.9 | 2.9 | 37 | .. | .. | .. | 385 | 345 | 70.3 | 27 38 34.1 | 37.5 | + | 31.7 | 78 45 27.0 | .. | |
| 10 | 358 22 | 8.7 | 1.8 | 1.2 | 7.8 | 35 | .. | 820 | .. | 688 | .. | 69.5 | 1 34 11.4 | .. | + | 1.5 | 52 40 34.4 | — 10.2 | |
| 11 | 42 54 | 5.0 | 27.3 | 26.7 | 0.7 | 37 | .. | .. | .. | 850 | 876 | 69.5 | 317 2 39.2 | .. | — | 56 8 | 8 8 3.6 | + 0.1 | |
| 12 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 13 | 345 24 | 5.6 | 28.0 | 25.3 | 4.6 | 38 | 494 | 480 | .. | .. | .. | 69.5 | 14 32 48.4 | 36 8 | + | 15.8 | 65 39 25.4 | — 2.5 | |
| 14 | 192 14 | 7.5 | 2.2 | 0.2 | 5.0 | 34 | 462 | 428 | .. | .. | .. | 60.5 | 167 41 48.8 | .. | — | 13 2 | 63 24 45.6 | + 1.2 | |
| 15 | 347 38 | 5.7 | 28.1 | 26.7 | 5.5 | 35 | .. | .. | .. | 758 | 750 | 69.5 | 12 18 9.0 | .. | + | 13.2 | 63 24 43.4 | — 1.0 | |
| 16 | 333 38 | 5.4 | 28.0 | 26.5 | 3.1 | 38 | .. | .. | .. | 658 | 640 | 69.5 | 26 18 52.4 | .. | + | 29 8 | 77 25 43.4 | — 0.2 | |
| 17 | 341 30 | 3.6 | 26.0 | 23.1 | 3.7 | 32 | 908 | .. | .. | .. | 818 | 69.5 | 18 25 21.4 | .. | + | 20.0 | 69 32 2.6 | + 0.1 | |
| 18 | 341 30 | 3.6 | 26.0 | 23.1 | 3.7 | 32 | .. | 976 | .. | 942 | .. | 69.5 | 18 25 22.9 | .. | + | 20.0 | 69 32 3.9 | — 8.4 | |
| 19 | 330 56 | 6.8 | 1.2 | 28.1 | 5.0 | 35 | 115 | .. | .. | .. | 160 | 69.1 | 28 59 59.3 | 42.8 | + | 33.2 | 80 6 53.7 | .. | |
| 20 | 330 56 | 6.8 | 1.2 | 28.1 | 5.0 | 36 | .. | 490 | .. | 455 | .. | 69.1 | 29 0 19.7 | .. | + | 33.2 | 80 7 14.1 | .. | |
| 21 | 156 24 | 4.5 | 0.6 | 28.6 | 1.9 | 30 | 605 | 540 | .. | .. | .. | 69.1 | 203 30 47.6 | .. | + | 26.0 | 27 35 7.6 | — 1.3 | |
| 22 | 23 28 | 2.8 | 27.2 | 26.0 | 0.6 | 30 | .. | .. | .. | 160 | 085 | 69.1 | 336 29 13.1 | 44.5 | — | 26.0 | 27 35 8.3 | — 0.6 | |
| 23 | 342 14 | 4.6 | 29.1 | 27.1 | 2.1 | 32 | .. | 680 | .. | 630 | .. | 69.1 | 17 41 19.3 | .. | + | 19.0 | 68 47 59.5 | — 0.6 | |
| 24 | 31 2 | 6.3 | 0.0 | 28.0 | 4.0 | 33 | 830 | .. | .. | .. | 910 | 69.1 | 328 53 39.1 | .. | — | 36.0 | 19 59 24.3 | — 4.0 | |
| 25 | 64 4 | 4.1 | 26.7 | 25.0 | 29.5 | 37 | 645 | .. | .. | .. | 580 | 69.1 | 295 52 33.1 | 45.3 | — | 2 2.4 | 346 56 51.9 | + 0.7 | |
| 26 | 52 22 | 8.1 | 2.1 | 1.3 | 4.5 | 35 | .. | .. | 660 | 740 | 775 | 69.1 | 307 34 7.4 | .. | — | 1 16.8 | 358 39 11.8 | — 1.1 | |
| 27 | 313 4 | 10.8 | 8.1 | 5.8 | 12.2 | 32 | 955 | 835 | .. | .. | .. | 69.1 | 46 51 30.8 | .. | + | 1 3.0 | 97 58 55.0 | .. | |
| 28 | 313 36 | 6.7 | 3.6 | 1.2 | 7.2 | 32 | .. | .. | .. | 740 | 720 | 69.1 | 46 19 24.6 | 49.5 | + | 1 1.8 | 97 26 47.6 | .. | |
| 29 | 199 0 | 12.6 | 10.0 | 5.1 | 7.0 | 35 | 740 | 725 | .. | .. | .. | 69.1 | 160 56 13.4 | .. | — | 20.3 | 70 10 28.1 | + 1.1 | |
| 30 | 340 52 | 6.0 | 1.0 | 28.3 | 4.0 | 34 | .. | .. | .. | 260 | 215 | 69.1 | 19 3 46.0 | 51.3 | + | 20.3 | 70 10 27.5 | + 0.5 | |
| 31 | 348 38 | 6.6 | 2.0 | 28.9 | 5.1 | 34 | .. | 070 | .. | 050 | .. | 69.1 | 11 17 43.2 | 53.2 | + | 11.7 | 62 24 16.1 | + 0.3 | |
| 32 | 35 42 | 6.7 | 1.9 | 0.5 | 4.2 | 38 | 260 | .. | .. | .. | 115 | 69.1 | 324 14 46.5 | .. | — | 42.2 | 15 20 25.5 | — 1.9 | |
| 33 | 1 54 | 7.2 | 3.5 | 1.8 | 6.0 | 31 | .. | 050 | .. | 015 | .. | 69.1 | 358 0 58.5 | .. | — | 2.0 | 49 7 17.7 | 0.0 | |
| 34 | 312 8 | 7.8 | 4.1 | 1.3 | 8.0 | 35 | .. | 740 | .. | 750 | .. | 69.1 | 47 48 11.0 | .. | + | 4.6 | 98 55 36.8 | — 0.2 | |
| 35 | 33 18 | 6.8 | 1.3 | 29.5 | 3.9 | 34 | 695 | .. | .. | .. | 755 | 69.1 | 326 37 53.0 | .. | — | 38.6 | 17 43 35.6 | + 0.1 | |
| 36 | 348 12 | 7.0 | 2.4 | 29.9 | 5.0 | 33 | .. | 455 | .. | 350 | .. | 69.1 | 11 45 33.6 | 51.9 | + | 12.2 | 62 52 7.0 | + 1.0 | |
| 37 | 72 10 | 7.5 | 1.0 | 27.1 | 4.0 | 37 | 680 | .. | .. | .. | 650 | 69.6 | 287 46 38.0 | 45.3 | — | 3 3.1 | 338 49 56.1 | + 1.5 | |
| 38 | 38 22 | 9.8 | 2.5 | 29.3 | 4.9 | 34 | 410 | .. | .. | .. | 410 | 69.6 | 321 33 50.0 | .. | — | 47.1 | 12 39 24.1 | — 2.6 | |
| 39 | 295 40 | 9.6 | 4.4 | 1.8 | 8.3 | 34 | 140 | 070 | .. | .. | .. | 69.6 | 64 13 12.4 | .. | + | 2 2.4 | 115 21 36.0 | + 1.4 | |
| 40 | 295 40 | 9.6 | 4.4 | 1.8 | 8.3 | 35 | .. | .. | .. | 330 | 340 | 69.6 | 64 16 6.6 | .. | + | 2 2.6 | 115 24 30.4 | + 1.4 | |
| 41 | 295 40 | 9.6 | 4.4 | 1.8 | 8.3 | 37 | .. | .. | .. | 750 | 760 | 69.6 | 64 19 16.1 | .. | + | 2 2.9 | 115 27 40.2 | + 1.5 | |
| 42 | 5 52 | 5.0 | 0.3 | 27.2 | 2.3 | 31 | 700 | 690 | .. | 640 | 600 | 69.6 | 354 3 5.4 | .. | — | 6.2 | 45 9 20.4 | — 1.3 | |
| 43 | 41 6 | 10.1 | 3.2 | 0.7 | 7.4 | 30 | 890 | .. | .. | .. | 865 | 69.6 | 318 48 57.2 | .. | — | 52.2 | 9 54 26.2 | — 1.3 | |
| 44 | 73 20 | 9.3 | 3.1 | 28.5 | 4.8 | 30 | 220 | .. | .. | .. | 165 | 69.6 | 286 34 45.2 | .. | — | 3 17.0 | 337 37 49.4 | + 0.7 | |
| 45 | 350 46 | 10.2 | 4.0 | 0.4 | 8.2 | 34 | 830 | 765 | .. | .. | .. | 69.6 | 9 9 56.9 | 44.1 | + | 9.6 | 60 16 27.7 | — 1.8 | |
| 46 | 20 38 | 8.3 | 2.9 | 1.4 | 6.1 | 36 | 630 | .. | .. | .. | 545 | 69.6 | 339 18 23.9 | .. | — | 22.4 | 30 24 22.7 | + 24.6 | |
| 47 | 350 46 | 10.2 | 4.0 | 0.4 | 8.2 | 34 | 830 | 765 | .. | .. | .. | 69.6 | 203 10 0.5 | .. | + | 25.4 | 27 55 55.3 | — 3.2 | |
| 48 | 20 38 | 8.3 | 2.9 | 1.4 | 6.1 | 36 | 630 | .. | .. | .. | 545 | 69.6 | 336 50 0.5 | .. | — | 25.4 | 27 55 50.3 | — 2.2 | |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|---------|
| 2 | 30.33 | 43.0 | 9 | — | 0.1 | — | 0.1 |
| 9 | 30.35 | 42.0 | 19 | — | 5.0 | + | 4.8 |
| 13 | 30.41 | 38.8 | 20 | — | 5.0 | — | 15.6 |
| 19 | 30.41 | 42.6 | 27 | — | 6.5 | — | 16 10.2 |
| 22 | 30.41 | 41.7 | 28 | — | 6.4 | + | 15 57.3 |
| 25 | 30.40 | 46.2 | | | | | |
| 28 | 30.00 | 49.6 | | | | | |
| 30 | 30.35 | 51.0 | | | | | |
| 31 | 30.33 | 51.0 | | | | | |
| 36 | 30.33 | 54.0 | | | | | |
| 37 | 30.24 | 47.0 | | | | | |
| 45 | 30.23 | 45.8 | | | | | |

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. |
|------------------|---------|-----------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|--------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. m. s. | | |
| 1876. Oct. 12 | 1 | Anonymous . . . | P. | | | 45.0 | 47.3 | 49.4 | 51.6 | 53.8 | | | m. s. | | s. | s. | h. m. s. | s. | |
| | 2 | β Aquarii . . . | P. | 30.5 | 33.0 | 34.6 | 40.7 | 42.8 | 44.9 | 51.0 | 52.5 | 55.1 | 19 49.43 | - 1.36 | | -36.64 | 21 19 11.43 | - 3.66 | |
| | 3 | O. Arg. S. 21542 . . | P. | 40.4 | 42.9 | 44.5 | 51.0 | 53.0 | 55.1 | 1.6 | 3.1 | 5.9 | 25 42.79 | - 1.08 | -36.55 | -36.64 | 21 25 5.07 | - 0.06 | |
| | 4 | η Cephei (R.) . . . | P. | | | | | | | | | | 32 53.06 | - 1.27 | | -36.64 | 21 32 15.15 | - 3.58 | |
| | 5 | η Cephei | P. | | | | | | | 6.8 | 11.6 | 19.2 | 40 42.09 | + 1.82 | | -36.64 | 21 40 7.27 | - 0.12 | |
| | 6 | B. A. C. 7646 (R.) . . | P. | | | | | | | | | | | | | | | | |
| | 7 | B. A. C. 7646 . . . | P. | | | | | | | 1.1 | 3.8 | 8.2 | 51 47.82 | + 0.32 | | -36.64 | 21 51 11.50 | - 2.32 | |
| | 8 | α Aquarii (R.) . . . | P. | | | | | | | | | | | | | | | | |
| | 9 | α Aquarii | P. | | | | | | | | | | | | | | | | |
| | 10 | 32 Ursæ Majoris, S. P. | P. | 13.0 | 3.2 | 53.0 | 48.0 | 42.9 | 38.3 | 33.4 | 23.4 | 13.3 | 9 43 17 | - 3.01 | | -36.64 | 10 9 3.52 | + 0.15 | |
| | 11 | π Aquarii (R.) . . . | P. | | | | | | | | | | | | | | | | |
| | 12 | π Aquarii | P. | | | | | | | 45.8 | 47.4 | 50.0 | 19 37.70 | - 0.96 | -36.67 | -36.64 | 22 19 0.10 | + 0.05 | |
| | 13 | η Draconis, S. P. . . | P. | 55.6 | 49.1 | 32.4 | 23.0 | 14.7 | 6.0 | 57.4 | 40.2 | 33.1 | 25 14.61 | - 4.84 | | -36.64 | 10 24 33.13 | - 0.22 | |
| | 14 | 226 Cephei | P. | 52.3 | 2.3 | 8.8 | 24.7 | 33.1 | 41.4 | 49.0 | 57.4 | | 30 41.28 | + 2.80 | | -36.64 | 22 30 7.44 | - 0.28 | |
| | 15 | ζ Pegasi (R.) . . . | P. | | | | | | | | | | | | | | | | |
| | 16 | ζ Pegasi | P. | | | | | | | 5.5 | 7.2 | 9.8 | 35 57.31 | - 0.79 | -36.54 | -36.64 | 22 35 19.88 | - 0.04 | |
| | 17 | ι Cephei (R.) . . . | P. | | | | | | | | | | | | | | | | |
| | 18 | ι Cephei | P. | | | | | | | 14.3 | 18.0 | 24.5 | 45 54.67 | + 1.18 | | -36.64 | 22 45 19.21 | + 0.31 | |
| | 19 | α Ursæ Majoris, S. P. | P. | 11.4 | 6.0 | 2.7 | 49.5 | 45.1 | 40.8 | 27.0 | 24.0 | 18.5 | 56 45.00 | - 2.72 | | -36.64 | 10 56 5.64 | - 0.07 | |
| | 20 | Weisse 103 | P. | 5.1 | 7.7 | 9.3 | | | | 25.9 | 27.4 | 30.0 | 8 17.57 | - 1.14 | | -36.64 | 23 7 39.79 | - 3.76 | |
| | 21 | Weisse 104 | P. | | | 13.5 | 15.7 | 17.7 | 19.8 | 21.9 | | | 8 17.73 | - 1.14 | | -36.64 | 23 7 39.95 | - 3.76 | |
| | 22 | Weisse 109 | P. | | | | | | | | 35.9 | 38.5 | 8 26.08 | - 1.14 | | -36.64 | 23 7 48.30 | - 3.76 | |
| | 23 | λ Draconis, S. P. . . | P. | 18.6 | 11.4 | 6.7 | 48.6 | 42.6 | 36.8 | 10.3 | 14.5 | 7.0 | 24 42.83 | - 3.52 | | -36.64 | 11 24 2.67 | - 0.07 | |
| | 24 | Aegle | P. | | 51.8 | 53.9 | 56.0 | 58.2 | 0.1 | 4.3 | 5.9 | 8.7 | 34 55.09 | - 0.72 | | -36.64 | 23 34 18.63 | | |
| | 25 | Anonymous | P. | 45.8 | 48.4 | 50.0 | 56.2 | 58.4 | 0.4 | 6.6 | 8.0 | 10.5 | 41 58.26 | - 1.07 | | -36.64 | 23 41 20.55 | - 3.76 | |
| | 26 | Weisse 848 | P. | 52.3 | 54.8 | 56.4 | 2.6 | 4.7 | 6.7 | 12.9 | 14.5 | 17.0 | 43 4.66 | - 1.07 | | -36.64 | 23 42 26.95 | - 3.76 | |
| | 27 | B. A. C. 8316 . . . | P. | | | 51.0 | 54.5 | 57.5 | 1.1 | 4.5 | | | 45 57.74 | + 0.28 | | -36.64 | 23 45 21.38 | - 3.53 | |
| | 28 | ω Piscium | P. | 25.5 | 28.0 | 29.0 | 35.8 | 37.8 | 39.9 | 46.0 | 47.6 | 50.0 | 53 37.80 | - 0.87 | -36.58 | -36.64 | 23 53 0.29 | - 0.05 | |
| | 29 | α Andromedæ . . . | P. | 28.5 | 30.2 | 34.7 | 37.2 | 39.6 | 41.9 | 44.1 | 48.7 | 50.5 | 2 39.49 | - 0.43 | -36.65 | -36.64 | 0 2 2.42 | + 0.03 | |
| | 30 | Amphitrite | P. | 7.7 | 10.3 | 11.9 | 18.0 | 19.9 | 22.0 | 28.2 | 29.7 | 32.3 | 4 20.00 | - 0.92 | | -36.64 | 0 3 42.44 | | |
| | 31 | 4 Draconis, S. P. . . | P. | | | 23.7 | 13.0 | 3.4 | 53.9 | 43.5 | | | 7 3.45 | - 5.54 | | -36.64 | 12 6 21.27 | - 0.58 | |
| | 32 | Eugenia | P. | 7.1 | 9.7 | 11.2 | 17.4 | 19.3 | 21.5 | 27.6 | 29.1 | 31.6 | 15 19.39 | - 1.06 | | -36.64 | 0 14 41.69 | | |
| | 33 | Amalthea | P. | | | 29.2 | 31.2 | 33.3 | 35.5 | 37.5 | | | 23 33.35 | - 1.07 | | -36.64 | 0 22 55.64 | | |
| | 34 | Cybele | P. | 49.0 | 51.4 | 52.9 | 59.0 | 1.0 | 3.1 | 9.2 | 10.8 | 13.3 | 25 1.08 | - 0.97 | | -36.64 | 0 24 23.47 | | |
| | 35 | B. A. C. 166 . . . | P. | 8.7 | 11.7 | 13.4 | 20.4 | 22.8 | 25.1 | 32.3 | 34.0 | 37.0 | 33 22.82 | - 0.39 | | -36.64 | 0 32 45.79 | - 3.77 | |
| | 36 | β Ceti | P. | 50.9 | 53.6 | 55.2 | 1.6 | 3.8 | 5.9 | 22.5 | 24.0 | 26.7 | 38 3.80 | - 1.31 | -36.60 | -36.64 | 0 37 25.85 | + 0.01 | |
| | 37 | Weisse 753 | P. | 8.4 | 11.0 | 12.5 | 16.6 | 18.7 | 20.8 | 22.8 | 24.8 | | 45 20.73 | - 0.92 | | -36.65 | 0 44 43.16 | - 3.79 | |
| | 38 | B. A. C. 237 | P. | | 3.5 | 34.6 | 36.7 | 38.6 | 40.7 | 44.9 | 46.4 | 49.0 | 45 36.67 | - 0.92 | | -36.65 | 0 44 59.10 | - 3.79 | |
| | 39 | Galatæa | P. | 21.3 | 23.7 | 25.5 | 31.6 | 33.6 | 35.8 | 41.8 | 43.4 | 45.9 | 52 33.62 | - 0.87 | | -36.65 | 0 51 56.10 | | |
| | 40 | Weisse 982 | P. | 45.1 | 47.7 | 49.3 | 5.5 | 57.5 | 59.5 | 5.8 | 7.3 | 9.8 | 57 57.50 | - 0.89 | | -36.65 | 0 57 19.96 | - 3.79 | |
| | 41 | Polaris | P. | 16.0 | 21.3 | 0.7 | 35.4 | 2.3 | | | | | 14 5.48 | +39.72 | | -36.65 | 1 14 8.55 | + 1.40 | |
| | 42 | Mnemosyne | P. | 42.0 | 44.7 | 46.3 | 52.5 | 54.6 | 56.6 | 2.7 | 4.3 | 6.7 | 15 54.49 | - 0.83 | | -36.65 | 1 15 17.01 | | |
| | 43 | 38 Cassiopeæ | P. | 7.4 | 14.5 | 16.0 | 37.0 | 42.8 | 48.4 | 6.2 | 10.8 | 18.0 | 22 42.68 | + 1.65 | | -36.65 | 1 22 7.68 | + 0.22 | |
| | 44 | B. A. C. 495 | P. | 3.0 | 4.5 | 7.1 | 13.5 | 15.6 | 17.7 | 21.2 | 22.5 | 28.5 | 33 15.42 | - 0.68 | | -36.65 | 1 32 35.09 | - 3.84 | |
| | 45 | B. A. C. 544 | P. | 45.7 | 48.8 | 50.8 | 58.5 | 1.1 | 3.8 | 41.4 | 43.3 | 46.5 | 42 1.10 | - 0.22 | | -36.65 | 1 41 24.23 | - 4.08 | |
| | 46 | Weisse 791 ¹ | P. | 56.2 | 58.8 | 0.5 | | | | 17.0 | 18.5 | 21.2 | 46 8.70 | - 0.80 | | -36.65 | 1 45 31.25 | - 3.83 | |
| | 47 | Weisse 791 ² | P. | | | 4.5 | 6.7 | 8.8 | 10.8 | 12.9 | | | 46 8.75 | - 0.80 | | -36.65 | 1 45 31.30 | - 3.83 | |
| | 48 | B. A. C. 590 | P. | 3.8 | 7.6 | 10.0 | 19.3 | 22.5 | 25.5 | 34.8 | 37.0 | 40.9 | 51 22.38 | + 0.14 | | -36.65 | 1 50 45.87 | - 4.42 | |
| | 49 | Durch. 2, 315 . . . | P. | 54.5 | 57.1 | 58.7 | 4.9 | 6.9 | 8.9 | 15.1 | 16.6 | 19.1 | 56 6.87 | - 0.94 | | -36.65 | 1 55 29.28 | - 3.82 | |
| | 50 | Phocæa | P. | 36.4 | 39.0 | 40.7 | 17.0 | 49.2 | 51.3 | 57.7 | 59.3 | 1.9 | 1 49.17 | - 0.67 | | -36.65 | 2 1 11.85 | | |

1, 4, 5, 17, 18, 19, 23, 27, 43. Bisections at sets B and D.

4, 17, 38. Thread B used.

10, 13, 14, 31, 41. Bisections at set C.

20, 21, 22, 24, 25, 26, 32, 33, 34, 37, 39, 40, 42, 50. Thread A used.

23. Telescope micrometer reading increased 1 revolution in reduction.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. |
| | ° ' " | ° ' " | " | " | " | | | | | | | " | ° ' " | ° | ' " | ° ' " | " |
| 1 | 299 54 | 10 6.5 | 0.4 | 28.0 | 6.0 | 34 | .. | .. | .. | 155 | 085 | 69.6 | 60 1 44.4 | .. | + 1 42.8 | 111 9 48.4 | + 7.8 |
| 2 | 314 56 | 10.7 | 5.4 | 1.7 | 10.6 | 32 | 310 | 305 | .. | 280 | 230 | 69.6 | 44 59 20.3 | .. | + 59.4 | 96 6 40.9 | - 1.1 |
| 3 | 305 2 | 10.6 | 4.0 | 2.3 | 10.0 | 28 | .. | 580 | .. | 525 | .. | 69.6 | 54 52 22.8 | .. | + 1 24.4 | 106 0 8.4 | + 10.6 |
| 4 | 148 6 | 7.5 | 4.2 | 0.9 | 6.1 | 27 | 485 | 505 | .. | .. | .. | 69.6 | 211 50 36.5 | .. | + 37.0 | 19 15 7.7 | - 0.9 |
| 5 | 31 46 | 7.0 | 0.5 | 28.6 | 4.2 | 32 | .. | .. | .. | 685 | 645 | 69.6 | 328 9 22.2 | .. | - 37.0 | 19 15 6.4 | - 2.2 |
| 6 | 166 10 | 10.2 | 6.9 | 3.7 | 9.3 | 34 | 515 | 485 | .. | .. | .. | 69.6 | 193 45 53.2 | .. | + 14.6 | 37 20 13.4 | + 26.0 |
| 7 | 13 42 | 8.5 | 3.0 | 1.1 | 6.8 | 35 | .. | .. | .. | 490 | 455 | 69.6 | 346 14 8.5 | .. | - 14.6 | 37 20 15.1 | + 26.0 |
| 8 | 219 44 | 9.0 | 3.5 | 2.0 | 5.6 | 35 | 855 | 785 | .. | .. | .. | 69.6 | 140 12 11.6 | .. | - 49.7 | 90 54 59.3 | - 0.3 |
| 9 | 320 8 | 10.5 | 4.0 | 0.9 | 10.6 | 34 | .. | .. | .. | 035 | 030 | 69.6 | 39 47 47.4 | .. | + 49.7 | 90 54 58.3 | - 1.3 |
| 10 | 75 16 | 9.3 | 2.3 | 28.8 | 5.0 | 37 | 450 | .. | .. | .. | 370 | 69.6 | 284 40 35.6 | .. | - 3 44.3 | 335 43 12.5 | + 0.7 |
| 11 | 218 4 | 11.6 | 6.9 | 4.9 | 9.0 | 36 | 260 | 285 | .. | .. | .. | 69.6 | 141 52 21.6 | .. | - 46.9 | 89 14 46.5 | + 1.7 |
| 12 | 321 48 | 11.5 | 6.0 | 2.8 | 9.6 | 33 | .. | .. | .. | 195 | 150 | 69.6 | 38 7 35.2 | .. | + 46.9 | 89 14 43.3 | - 1.5 |
| 13 | 64 40 | 7.0 | 0.3 | 27.4 | 4.0 | 36 | 885 | .. | .. | .. | 825 | 69.6 | 295 16 25.4 | .. | - 2 6.0 | 346 20 40.6 | + 1.8 |
| 14 | 36 36 | 10.5 | 3.8 | 1.1 | 7.5 | 29 | 815 | .. | .. | .. | 790 | 69.6 | 323 18 41.0 | .. | - 44.5 | 14 24 17.7 | - 1.4 |
| 15 | 208 38 | 11.1 | 8.4 | 5.1 | 8.4 | 36 | 115 | 130 | .. | .. | .. | 69.6 | 151 18 19.3 | .. | - 32.7 | 79 48 34.6 | + 2.3 |
| 16 | 331 14 | 8 3 | 2.8 | 29.8 | 7.8 | 33 | .. | .. | .. | 515 | 530 | 69.6 | 28 41 37.9 | .. | + 32.7 | 79 48 31.8 | - 0.5 |
| 17 | 153 18 | 11.5 | 7.5 | 4.0 | 10.1 | 29 | 780 | 765 | .. | .. | .. | 69.6 | 206 39 15.0 | .. | + 30.0 | 24 26 36.2 | - 2.6 |
| 18 | 26 34 | 9.0 | 3 0 | 1.4 | 7.2 | 30 | .. | .. | .. | 145 | 220 | 69.6 | 333 20 46.7 | .. | - 30.0 | 24 26 37.9 | - 0.9 |
| 19 | 78 32 | 10.1 | 3 8 | 28.9 | 5.7 | 32 | 620 | .. | .. | .. | 510 | 69.6 | 281 23 21.1 | 39.9 | - 4 49.8 | 332 24 53.5 | + 2.6 |
| 20 | 311 26 | 12.4 | 7.0 | 3.7 | 11.7 | 37 | .. | 125 | .. | .. | 030 | 69.6 | 48 28 2.0 | .. | + 1 7.6 | 99 35 30.8 | + 19.9 |
| 21 | 311 26 | 12.4 | 7.0 | 3.7 | 11.7 | 38 | .. | 745 | .. | .. | .. | 69.6 | 48 28 26.1 | .. | + 1 7.6 | 99 35 54.9 | + 19.9 |
| 22 | 311 26 | 12.4 | 7.0 | 3.7 | 11.7 | 40 | .. | .. | .. | .. | 470 | 69.6 | 48 28 54.9 | .. | + 1 7.6 | 90 36 23.7 | + 19.9 |
| 23 | 70 58 | 10.4 | 3.0 | 28.0 | 4.8 | 30 | 590 | .. | .. | .. | 505 | 69.6 | 288 57 6.0 | .. | - 2 53.2 | 340 0 34.0 | + 2.5 |
| 24 | 334 58 | 8.5 | 3.3 | 28.8 | 8.0 | 44 | .. | 750 | .. | 625 | .. | 69.6 | 24 57 54.5 | 39.1 | + 27.9 | 76 4 43.6 | - 1.5 |
| 25 | 315 52 | 9.0 | 3.1 | 0.0 | 8.8 | 34 | .. | 610 | .. | 565 | .. | 69.6 | 44 1 20.3 | .. | + 58.0 | 95 8 39.5 | + 22.7 |
| 26 | 315 52 | 9.0 | 3.1 | 0.0 | 8.8 | 28 | .. | 450 | .. | 355 | .. | 69.6 | 43 59 45.6 | .. | + 57.9 | 95 7 4.7 | + 22.8 |
| 27 | 13 4 | 8.8 | 2.4 | 0.9 | 6.3 | 30 | .. | .. | .. | 035 | 990 | 69.6 | 346 50 43.5 | .. | - 14.0 | 37 56 50.7 | + 27.2 |
| 28 | 327 14 | 11.4 | 6.0 | 2.0 | 9.6 | 34 | 720 | 760 | .. | 610 | 630 | 69.6 | 32 41 57.3 | .. | + 38.6 | 83 48 57.1 | - 0.9 |
| 29 | 349 26 | 8.7 | 2.5 | 0 0 | 7.4 | 29 | 705 | 800 | .. | .. | .. | 69.6 | 10 28 38.6 | .. | + 11.1 | 61 35 10.9 | - 0.9 |
| 30 | 323 56 | 9.9 | 4.2 | 1.1 | 8.8 | 36 | .. | 815 | .. | 765 | .. | 69.6 | 36 0 28.3 | .. | + 43.6 | 87 7 33.1 | - 3.6 |
| 31 | 62 42 | 7.8 | 2.2 | 29.8 | 4.9 | 33 | 295 | .. | .. | .. | 305 | 69.6 | 297 13 32.5 | .. | - 1 56.3 | 348 17 57.4 | + 1.6 |
| 32 | 315 46 | 10.8 | 5.0 | 1.6 | 10.0 | 43 | .. | 790 | .. | 850 | .. | 69.6 | 44 9 43.3 | .. | + 58.3 | 95 17 2.8 | - 3.2 |
| 33 | 315 28 | 13.0 | 7.4 | 4.5 | 12.3 | 43 | 345 | 280 | .. | .. | .. | 69.6 | 44 27 36.9 | .. | + 59.0 | 95 34 57.1 | - 3.8 |
| 34 | 321 0 | 13.8 | 7.7 | 4.0 | 12.0 | 46 | .. | 235 | .. | 030 | .. | 69.6 | 38 56 21.2 | .. | + 48.6 | 90 3 31.0 | - 2.2 |
| 35 | 351 14 | 12.0 | 7.1 | 3.9 | 9.6 | 35 | 170 | 125 | .. | 125 | 110 | 69.6 | 8 42 5.3 | .. | + 9.2 | 86 48 35.7 | + 25.8 |
| 36 | 302 24 | 6.0 | 0.0 | 28.0 | 4.4 | 33 | .. | 915 | .. | 860 | .. | 69.6 | 57 31 39.8 | .. | + 1 34.4 | 108 39 35.4 | - 3.3 |
| 37 | 323 48 | 8.2 | 2.7 | 28.2 | 8.1 | 32 | 095 | 115 | .. | .. | .. | 69.6 | 36 4 40.4 | .. | + 43.9 | 87 11 45.5 | + 26.0 |
| 38 | 323 48 | 8.2 | 2.7 | 28.2 | 8.1 | 31 | .. | .. | .. | 830 | 835 | 69.6 | 36 9 44.0 | .. | + 44.0 | 87 16 49.2 | + 26.0 |
| 39 | 326 44 | 8.7 | 4.1 | 0.5 | 7.7 | 43 | .. | 630 | .. | 530 | .. | 69.6 | 33 11 38.0 | .. | + 39.4 | 84 18 38.6 | - 4.3 |
| 40 | 325 36 | 7.3 | 1.7 | 27.9 | 5.4 | 38 | .. | 640 | .. | 555 | .. | 69.6 | 34 18 19.6 | .. | + 41.1 | 85 25 21.9 | + 26.3 |
| 41 | 49 40 | 8.6 | 2.5 | 0.2 | 4.0 | 33 | 520 | 550 | 590 | .. | .. | 69.6 | 310 15 36.6 | 36.4 | - 1 11.1 | 1 20 46.7 | - 0.2 |
| 42 | 328 52 | 9.2 | 3.9 | 0.6 | 7.0 | 39 | .. | 750 | .. | 620 | .. | 69.6 | 31 2 38.4 | .. | + 36.3 | 82 9 35.9 | - 2.4 |
| 43 | 30 40 | 6.1 | 28.8 | 27.5 | 3.2 | 36 | 570 | .. | .. | .. | 540 | 69.6 | 339 16 20.3 | .. | - 35.8 | 20 22 5.7 | - 0.7 |
| 44 | 337 2 | 9.0 | 3.9 | 1.0 | 7.4 | 31 | .. | 285 | .. | 220 | .. | 69.6 | 22 53 2.9 | .. | + 25.5 | 73 59 49.6 | + 26.3 |
| 45 | 358 22 | 5.9 | 0.5 | 27.8 | 3.9 | 31 | .. | 740 | .. | 755 | .. | 69.6 | 1 33 7.3 | .. | + 1.6 | 52 39 30.1 | + 24.5 |
| 46 | 331 14 | 10.6 | 4.7 | 1.5 | 8.7 | 30 | 365 | .. | .. | .. | 270 | 69.6 | 28 40 49.7 | .. | + 33.0 | 79 47 43.9 | + 26.4 |
| 47 | 331 14 | 10.6 | 4.7 | 1.5 | 8.7 | 30 | .. | 070 | .. | 040 | .. | 69.6 | 28 40 45.6 | .. | + 33.0 | 79 47 37.8 | + 26.4 |
| 48 | 9 38 | 6.0 | 0.7 | 28.9 | 5.6 | 33 | .. | 605 | .. | 540 | .. | 69.6 | 350 17 36.2 | .. | - 10.3 | 41 23 47.1 | + 22.8 |
| 49 | 323 20 | 7.9 | 2.3 | 29.8 | 7.4 | 34 | .. | 060 | .. | 940 | .. | 69.6 | 36 35 43.9 | .. | + 44.8 | 87 42 49.9 | + 26.7 |
| 50 | 338 10 | 6.0 | 1.0 | 28.1 | 5.5 | 40 | .. | 260 | .. | 160 | .. | 69.6 | 21 44 43.9 | .. | + 24.1 | 72 51 29.2 | - 2.7 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|------|
| | in. | ° | | " | " | " | " |
| 19 | 30.22 | 44.2 | | | | | |
| 24 | 30.21 | 43.3 | | | | | |
| 41 | 30.19 | 40.0 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. | | | |
|---------|---------|--|-----------|--------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|--------------|----------------|----------------|---------------------------|----------------------------|-----------|--------|--------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | | | | |
| 1876. | | | | | | | | | | | | m. | s. | s. | s. | s. | h. | m. | s. | s. | |
| Oct. 12 | 1 | Sirona | P. | | 30.3 | 32.5 | 34.4 | 36.5 | 38.6 | | | 6 | 34.47 | - 0.81 | . . . | -36.65 | 2 | 5 | 57.01 | . . . | |
| | 2 | Neptune | P. | 0.0 2.6 | 4.1 | 10.5 | 12.5 | 14.5 | 20.9 | 22.5 | 25.0 | 11 | 12.51 | - 0.78 | . . . | -36.65 | 2 | 10 | 35.08 | . . . | |
| | 3 | Lalande 4528 | P. | 10.7 13.4 | 15.0 | 21.5 | 23.5 | 25.6 | 32.0 | 33.6 | 36.2 | 21 | 23.50 | - 0.69 | . . . | -36.65 | 2 | 20 | 46.16 | - 3.88 | |
| | 4 | Ursæ Minoris, S. P. | P. | | 9.5 | 18.1 | 26.5 | 35.1 | 44.1 | | | 28 | 26.61 | - 4.81 | . . . | -36.65 | 14 | 27 | 45.15 | - 0.15 | |
| | 5 | Lalande 4830 | P. | 3.6 6.8 | 8.9 | 16.5 | 19.2 | 21.8 | 29.4 | 31.3 | 34.4 | 31 | 19.10 | - 0.23 | . . . | -36.65 | 2 | 30 | 42.22 | - 4.23 | |
| | 6 | ρ Arietis | P. | | | | | | | | | | | | | | | | | | |
| | 7 | Ursæ Minoris, S. P. | P. | | | | | | | | | | | | | | | | | | |
| | 8 | γ Cephei | P. | 26.9 38.2 | 45.3 | | | | | | | 5 | 22.39 | + 3.33 | . . . | -36.65 | 3 | 4 | 49.07 | + 0.29 | |
| | 9 | ζ Arietis (R.) | P. | | | | | | | | | | | | | | | | | | |
| | 10 | ζ Arietis | P. | | | | | | | | | | | | | | | | | | |
| | 11 | α Persei | P. | | | | | | 22.4 | 24.8 | 28.8 | 16 | 9.90 | + 0.18 | . . . | -36.65 | 3 | 15 | 33.43 | + 0.02 | |
| | 12 | γ^2 Ursæ Minoris, S. P. | P. | 14.8 6.2 | 1.0 | 11.0 | 34.3 | 27.6 | 7.6 | 2.6 | 53.7 | 21 | 34.31 | - 3.91 | . . . | -36.65 | 15 | 20 | 53.75 | - 0.07 | |
| | 13 | B. A. C. 1100 | P. | 34.3 36.8 | 38.4 | 44.7 | 46.7 | 48.8 | 55.0 | 56.6 | 59.1 | 27 | 46.71 | - 1.15 | . . . | -36.65 | 3 | 27 | 8.91 | - 3.59 | |
| | 14 | δ Persei (R.) | P. | | | | | | | | | | | | | | | | | | |
| | 15 | δ Persei | P. | | | | | | | 1.7 | 5.5 | 34 | 47.38 | - 0.50 | . . . | -36.65 | 3 | 34 | 10.23 | - 0.51 | |
| | 16 | η Tauri (R.) | P. | | | | | | | | | | | | | | | | | | |
| | 17 | η Tauri | P. | | | | | | | | | | | | | | | | | | |
| | 18 | Ursæ Minoris, S. P. | P. | 8.4 55.8 | 48.4 | 18.5 | 7.8 | 58.8 | 28.3 | 20.8 | 8.4 | 49 | 8.36 | - 5.50 | . . . | -36.65 | 15 | 48 | 26.21 | - 0.12 | |
| | 19 | γ Tauri | P. | 12.7 15.3 | 16.9 | 23.2 | 25.4 | 27.4 | 33.9 | 35.5 | 38.0 | 13 | 25.37 | - 0.70 | -36.64 | -36.65 | 4 | 12 | 48.02 | 0.00 | |
| | 20 | δ^2 Tauri | P. | 56.9 59.7 | 1.5 | | | | 19.3 | 21.0 | 23.8 | 17 | 10.37 | - 0.53 | . . . | -36.65 | 4 | 16 | 33.19 | - 3.91 | |
| | 21 | δ^2 Tauri | P. | | 7.9 | 10.2 | 12.4 | 14.6 | 16.7 | | | 17 | 12.37 | - 0.53 | . . . | -36.65 | 4 | 16 | 35.19 | - 3.91 | |
| | 22 | ϵ Tauri | P. | 50.8 53.5 | 55.0 | 1.6 | 3.7 | 5.9 | 12.4 | 13.9 | 16.7 | 22 | 3.72 | - 0.63 | -36.68 | -36.65 | 4 | 21 | 26.44 | + 0.02 | |
| | 23 | α Tauri | P. | 16.6 19.3 | 20.9 | 27.4 | 29.5 | 31.6 | 38.0 | 39.5 | 42.0 | 29 | 29.42 | - 0.68 | -36.63 | -36.65 | 4 | 28 | 52.09 | - 0.04 | |
| | 24 | B. A. C. 1464 | P. | 6.5 9.7 | 11.7 | 19.4 | 22.0 | 24.5 | 32.4 | 34.3 | 37.4 | 38 | 21.99 | - 1.75 | . . . | -36.65 | 4 | 37 | 43.59 | - 3.01 | |
| | 25 | B. A. C. 1480 | P. | 40.8 43.9 | 45.8 | 53.2 | 55.6 | 58.0 | 5.5 | 7.4 | 10.4 | 41 | 55.62 | - 1.67 | . . . | -36.65 | 4 | 41 | 17.30 | - 3.01 | |
| | 26 | Lalande 9484 | P. | 20.0 23.0 | 24.9 | 31.9 | 34.1 | 36.5 | 43.1 | 44.8 | 47.8 | 57 | 34.01 | - 0.45 | . . . | -36.65 | 4 | 56 | 56.91 | - 3.91 | |
| | 27 | Ursæ Minoris, S. P. | P. | | 48.8 | 33.8 | 18.9 | 3.9 | 48.8 | | | 59 | 18.75 | - 8.05 | . . . | -36.65 | 16 | 58 | 34.05 | - 0.68 | |
| | 28 | Venus II, S. | F. | | 17.8 | 20.1 | 22.2 | 24.0 | 26.2 | | | 30 | 22.07 | - 0.91 | . . . | -36.58 | 10 | 29 | 44.58 | - 0.67 | |
| | 29 | λ Draconis | F. | | 9.5 | 13.5 | 26.6 | | 44.0 | 50.0 | 6.3 | 14.0 | 24 | 38.03 | + 1.60 | . . . | -36.60 | 11 | 24 | 3.12 | + 0.36 |
| | 30 | β Leonis | F. | 10.3 13.0 | 14.5 | 20.9 | 23.0 | 25.0 | 31.4 | 32.9 | 35.6 | 43 | 22.96 | - 0.80 | -36.58 | -36.60 | 11 | 42 | 45.56 | - 0.04 | |
| | 31 | γ Ursæ Majoris (R.) | F. | | | | | | | | | | | | | | | | | | |
| | 32 | γ Ursæ Majoris | F. | | | | | | | | | | | | | | | | | | |
| | 33 | α Virginis | F. | 20.2 22.9 | 24.4 | 30.5 | 32.5 | 34.5 | 40.9 | 42.5 | 44.9 | 59 | 32.59 | - 0.92 | -36.63 | -36.61 | 11 | 58 | 55.06 | 0.00 | |
| | 34 | Polaris, S. P. | F. | 6.0 . . . | | | | 57.0 | 41.0 | 35.0 | . . . | 15 | 25.90 | -42.05 | . . . | -36.63 | 1 | 14 | 7.22 | + 0.08 | |
| 13 | 35 | Sun N. | F. | | | | | | | | | | | | | | | | | | |
| | 36 | Sun S. | F. | | | | | | | | | | | | | | | | | | |
| | 37 | β Bootis | F. | | | | | | | | | | | | | | | | | | |
| | 38 | β Libræ | F. | | | | | | | | | | | | | | | | | | |
| | 39 | μ^1 Bootis | F. | | | | | | | | | | | | | | | | | | |
| | 40 | γ^2 Ursæ Minoris | F. | | | | | | | | | | | | | | | | | | |
| | 41 | ϵ Serpentis | F. | | | | | | | | | | | | | | | | | | |
| | 42 | δ Scorpii | F. | | | | 40.1 | . . . | 49.0 | . . . | 53.5 | 53 | 40.18 | - 1.57 | -36.68 | -36.67 | 15 | 53 | 1.94 | + 0.02 | |
| | 43 | β^1 Scorpii | F. | 40.7 43.6 | 44.9 | 49.4 | 51.5 | 57.9 | 2.5 | 3.9 | 6.5 | 58 | 53.68 | - 1.52 | -36.71 | -36.67 | 15 | 58 | 15.49 | + 0.07 | |
| | 44 | δ Ophiuchi | F. | 20.7 22.2 | 26.2 | 28.3 | 30.4 | 32.4 | 34.5 | 38.5 | 40.0 | 8 | 30.36 | - 1.20 | -36.63 | -36.67 | 16 | 7 | 52.49 | - 0.02 | |
| | 45 | Anonymous | F. | 36.6 39.5 | 41.2 | 47.6 | 49.8 | 52.1 | 58.5 | 0.1 | 2.9 | 19 | 49.81 | - 1.50 | . . . | -36.74 | 21 | 19 | 11.57 | - 3.65 | |
| | 46 | β Cephei | F. | | | | | | | | | | | | | | | | | | |
| | 47 | ϵ Pegasi (R.) | F. | | | | | | | | | | | | | | | | | | |
| | 48 | ϵ Pegasi | F. | | | | | | | | | | | | | | | | | | |
| | 49 | μ Capricorni | F. | 1.2 3.8 | 5.3 | 11.7 | 13.7 | 16.0 | 22.2 | 23.7 | 26.4 | 47 | 13.78 | - 1.36 | -36.74 | -36.74 | 21 | 46 | 35.68 | + 0.03 | |
| | 50 | α Aquarii | F. | | | | | | | | | | | | | | | | | | |

1. Thread A used.

4, 7, 27, 31. Bisections at set C.

8, 12, 18, 29, 37. Bisections at sets B and D.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. |
| 1 | 330 26 | 10 10.8 | 5.0 | 1.9 | 9.5 | 39 | .. | 295 | .. | 210 | .. | 69.6 | 29 28 33.4 | .. + | 34.1 | 80 35 28.7 | - 2.2 |
| 2 | 332 16 | 7.0 | 0.8 | 27.9 | 5.0 | 31 | .. | 685 | .. | 600 | .. | 69.6 | 27 39 6.2 | .. + | 31.6 | 78 45 59.0 | .. |
| 3 | 337 8 | 6.0 | 0.7 | 26.5 | 4.8 | 33 | .. | 625 | .. | 580 | .. | 69.6 | 22 47 35.6 | 36.0 + | 25.4 | 73 54 22.2 | + 25.2 |
| 4 | 64 46 | 8.8 | 1.9 | 29.0 | 4.6 | 36 | 665 | .. | .. | .. | 690 | 69.6 | 295 10 24.1 | .. - 2 | 7 7 | 346 14 37.6 | + 1.6 |
| 5 | 358 14 | 8.1 | 3.0 | 0.1 | 6.7 | 34 | .. | 805 | .. | 695 | .. | 69.6 | 1 41 55.8 | .. + | 1.8 | 52 48 18.8 | + 21.9 |
| 6 | 338 52 | 9.3 | 3.6 | 0.0 | 8.5 | 31 | .. | 730 | .. | 675 | .. | 69.6 | 21 3 9.8 | .. + | 23.2 | 72 9 54.2 | + 23.9 |
| 7 | 66 20 | 7.0 | 0.0 | 27.2 | 1.8 | 33 | 285 | .. | .. | .. | 295 | 69.6 | 293 35 30.2 | .. - 2 | 17.4 | 344 39 34.0 | + 1.6 |
| 8 | 38 18 | 9.9 | 2.5 | 29.7 | 6.0 | 33 | 820 | 800 | .. | .. | .. | 69.6 | 321 37 41.1 | .. - | 47.8 | 12 43 14.5 | - 1.2 |
| 9 | 198 14 | 11.4 | 9.0 | 3.7 | 8.0 | 35 | 240 | 210 | .. | .. | .. | 69.6 | 161 42 5.2 | .. - | 20.0 | 69 24 36.0 | + 0.4 |
| 10 | 341 38 | 7.0 | 0.0 | 27.2 | 6.5 | 34 | .. | .. | .. | 775 | 770 | 69.6 | 18 17 55.1 | .. + | 20.0 | 69 24 36.3 | + 0.7 |
| 11 | 10 28 | 9.3 | 3.1 | 1.4 | 7 5 | 36 | .. | .. | .. | 830 | 795 | 69.6 | 349 28 29.4 | .. - | 11.2 | 40 34 39.4 | - 0.1 |
| 12 | 68 44 | 8.3 | 1.0 | 27.9 | 2.7 | 37 | 650 | .. | .. | .. | 580 | 69.6 | 291 12 37.3 | .. - 2 | 34.4 | 342 16 24.1 | - 0.3 |
| 13 | 311 10 | 9.4 | 3.9 | 1.2 | 9.7 | 30 | .. | 250 | .. | 195 | .. | 69.6 | 48 44 47.7 | .. + 1 | 8.7 | 99 52 17.6 | + 26.8 |
| 14 | 171 26 | 11.2 | 8.3 | 4.0 | 9.1 | 34 | 225 | 125 | .. | .. | .. | 69.6 | 188 29 48.9 | .. + | 9.0 | 42 36 23.3 | - 1.5 |
| 15 | 8 26 | 8.5 | 2.3 | 1.0 | 6.1 | 35 | .. | .. | .. | 740 | 695 | 69.6 | 351 30 11.8 | .. - | 9.0 | 42 36 24.0 | - 0.8 |
| 16 | 195 6 | 12.5 | 9.5 | 5.0 | 8.1 | 35 | 510 | 480 | .. | .. | .. | 69.6 | 164 50 10.1 | .. - | 16.4 | 66 16 27.5 | 0.0 |
| 17 | 344 46 | 8.6 | 3.2 | 0.0 | 7.6 | 34 | .. | .. | .. | 240 | 250 | 69.6 | 15 9 49.3 | 35.4 + | 16.4 | 66 16 26.9 | - 0.6 |
| 18 | 62 50 | 7.4 | 1.4 | 28.2 | 4.6 | 35 | 320 | .. | .. | .. | 215 | 69.6 | 297 6 1.7 | .. - 1 | 37.4 | 348 10 25.5 | + 0.2 |
| 19 | 336 22 | 9.5 | 3.0 | 28.5 | 5.4 | 32 | .. | 180 | .. | 155 | .. | 69.6 | 23 33 15.7 | 35.1 + | 26.3 | 74 40 3.2 | - 0.7 |
| 20 | 345 2 | 8.5 | 2.0 | 28.5 | 7.0 | 28 | 255 | .. | .. | .. | 265 | 69.6 | 14 52 16.0 | 35.1 + | 16.0 | 65 58 53.2 | + 17.5 |
| 21 | 345 2 | 8.5 | 2.0 | 28.5 | 7.0 | 29 | .. | 000 | .. | 870 | .. | 69.6 | 14 52 26.2 | .. + | 16.0 | 65 59 3.4 | + 17.5 |
| 22 | 339 56 | 9.3 | 3.3 | 29.4 | 7.3 | 30 | .. | 070 | .. | 010 | .. | 69.6 | 19 58 43.9 | .. + | 22.0 | 71 5 27.1 | - 0.4 |
| 23 | 337 18 | 11.3 | 4.8 | 1.3 | 7.7 | 32 | 595 | 530 | .. | 495 | 475 | 69.6 | 22 37 23.4 | .. + | 25.2 | 73 44 9.8 | - 1.1 |
| 24 | 283 42 | 9.3 | 3.6 | 2.6 | 10.2 | 28 | .. | 590 | .. | 420 | .. | 69.6 | 76 12 21.6 | .. + 4 | 1.8 | 127 22 41.6 | + 29.2 |
| 25 | 286 52 | 7.1 | 1.2 | 0.0 | 7.5 | 34 | .. | 150 | .. | 150 | .. | 69.6 | 73 3 45.6 | .. + 3 | 16.3 | 124 13 23.1 | + 28.7 |
| 26 | 348 34 | 9.6 | 3.0 | 0.4 | 8.5 | 34 | 800 | 820 | .. | .. | .. | 69.6 | 11 21 56.8 | .. + | 12.2 | 62 28 30.2 | + 13.4 |
| 27 | 58 46 | 6.5 | 0.5 | 28.0 | 3.6 | 33 | 740 | .. | 780 | .. | 755 | 69.6 | 301 9 38.0 | 33.9 - 1 | 39.8 | 352 14 19.4 | - 0.6 |
| 28 | 330 36 | 7.3 | 29.5 | 0.6 | 5.4 | 34 | .. | .. | .. | 645 | 600 | 69.9 | 29 19 50.6 | 42.4 + | 33.5 | 80 26 45.3 | .. |
| 29 | 31 2 | 6.7 | 29.8 | 1.8 | 5.7 | 33 | 975 | 982 | .. | 850 | 832 | 69.9 | 328 53 39.2 | .. - | 35.6 | 19 59 24.8 | - 3.8 |
| 30 | 336 18 | 9.6 | 1.5 | 6.5 | 8.1 | 33 | 086 | 066 | .. | .. | .. | 69.9 | 23 37 28.4 | .. + | 25.7 | 74 44 15.3 | + 0.2 |
| 31 | 164 26 | 6.5 | 1.6 | 5.4 | 6.1 | 30 | 761 | .. | .. | .. | 778 | 69.9 | 195 28 52.3 | .. + | 16.3 | 35 37 12.6 | - 2.8 |
| 32 | 15 26 | 7.0 | 0.0 | 3.0 | 7.0 | 39 | .. | .. | .. | .. | 770 | 69.9 | 344 31 11.6 | .. - | 16.3 | 35 37 16.5 | + 1.1 |
| 33 | 330 28 | 5.1 | 29.0 | 29.9 | 3.7 | 34 | .. | .. | .. | 788 | 738 | 69.9 | 29 27 51.2 | .. + | 33.1 | 80 34 45.5 | - 5.7 |
| 34 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 35 | 313 14 | 6.6 | 1.5 | 3.5 | 4.3 | 34 | 624 | 590 | .. | .. | .. | 69.9 | 46 41 49.6 | .. + 1 | 1.4 | 97 49 12.2 | .. |
| 36 | 312 42 | 4.5 | 29.8 | 3.7 | 7.5 | 35 | .. | .. | .. | 208 | 210 | 69.9 | 47 13 59.6 | 56.0 + 1 | 2.5 | 98 21 23.2 | .. |
| 37 | 1 54 | 1.6 | 23.3 | 25.4 | 28.5 | 31 | .. | .. | .. | 640 | 650 | 69.9 | 358 0 58.4 | .. - | 2.0 | 49 7 17.6 | - 0.4 |
| 38 | 312 8 | 7.1 | 0.2 | 5.5 | 11.3 | 35 | .. | 998 | .. | 918 | .. | 69.9 | 47 48 12.8 | 60.6 + 1 | 3.2 | 98 55 37.2 | + 0.2 |
| 39 | 358 50 | 5.2 | 28.5 | 9.0 | 4.5 | 31 | .. | .. | .. | 220 | 190 | 69.9 | 1 4 59.7 | .. + | 1.1 | 52 11 22.0 | + 3.0 |
| 40 | 33 18 | 6.8 | 28.7 | 2.5 | 5.9 | 34 | .. | .. | .. | 668 | 604 | 69.9 | 326 37 52.6 | .. - | 37.7 | 17 43 36.1 | + 0.3 |
| 41 | 325 54 | 3.5 | 27.2 | 27.3 | 2.6 | 35 | .. | .. | .. | 520 | 480 | 69.9 | 35 2 0.9 | .. + | 40.1 | 86 9 2.2 | + 2.9 |
| 42 | 298 48 | 5.7 | 29.3 | 3.7 | 9.1 | 35 | .. | .. | .. | 860 | 780 | 69.9 | 61 8 9.8 | .. + 1 | 43.4 | 112 16 14.4 | + 1.3 |
| 43 | 301 36 | 7.6 | 0.9 | 4.4 | 8.7 | 35 | .. | 744 | .. | .. | .. | 69.9 | 58 20 8.2 | 61.2 + 1 | 32.8 | 109 28 2.2 | - 2.1 |
| 44 | 317 40 | 4.1 | 28.6 | 0.9 | 5.4 | 32 | .. | .. | .. | 696 | 686 | 69.9 | 42 15 19.9 | 61.2 + | 51.9 | 93 22 33.0 | + 0.5 |
| 45 | 299 54 | 8.7 | 1.9 | 5.7 | 9.4 | 34 | .. | 195 | .. | 095 | .. | 68.9 | 60 1 47.4 | 51.2 + 1 | 40.7 | 111 9 49.3 | + 7.7 |
| 46 | 31 2 | 7.7 | 2.1 | 3.3 | 5.0 | 30 | .. | .. | .. | 285 | 200 | 68.9 | 328 52 48.2 | .. - | 35.2 | 19 58 34.2 | - 1.9 |
| 47 | 209 30 | 11.7 | 7.6 | 8.9 | 8.5 | 33 | 485 | 470 | .. | .. | .. | 68.9 | 150 25 39.1 | .. - | 33.0 | 80 41 15.1 | + 0.8 |
| 48 | 330 22 | 16.9 | 11.4 | 13.0 | 15.4 | 35 | .. | .. | .. | 735 | 680 | 68.9 | 29 34 20.2 | .. + | 33.0 | 80 41 14.4 | + 0.1 |
| 49 | 306 56 | 1.4 | 25.0 | 26.5 | 1.2 | 36 | .. | 280 | .. | 208 | .. | 68.9 | 53 0 11.7 | 51.2 + 1 | 17.1 | 104 7 50.0 | 0.0 |
| 50 | 320 8 | 12.6 | 6.8 | 8.0 | 13.0 | 33 | .. | .. | .. | 940 | 918 | 68.9 | 39 47 48.8 | .. + | 48.5 | 90 54 58.5 | - 1.1 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| 3 | 30.18 | 39.1 | 2 | 0.1 | .. | .. | 0.1 |
| 17 | 30.16 | 39.4 | 28 | 5.0 | 10.0 | .. | 15.0 |
| 19 | 30.15 | 39.4 | 35 | 6.5 | + 16 5.5 | .. | + 15 59.0 |
| 20 | 30.15 | 39.4 | 36 | 6.5 | - 16 5.5 | .. | - 16 12.0 |
| 27 | 30.14 | 38.7 | | | | | |
| 28 | 30.19 | 43.2 | | | | | |
| 36 | 30.16 | 55.0 | | | | | |
| 38 | 30.15 | .. | | | | | |
| 43 | 30.11 | 60.8 | | | | | |
| 44 | 30.12 | 61.0 | | | | | |
| 45 | 30.06 | 50.5 | | | | | |
| 49 | 30.05 | 53.5 | | | | | |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. | |
|------------------|---------|----------------|---------------------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|---------------|----------------|---------------------------|-------------|-------------|----------------------------|---|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't | Clock adopted. | h. | m. | s. | | |
| 1876. Oct. 13 | | | | | | | | | | | | m. | s. | s. | s. | s. | h. | m. | s. | s. | |
| | 1 | 32 | Ursæ Majoris, S. P. | F. | 13.0 | 6.8 | 3.0 | 48.0 | 43.3 | 38.0 | 23.5 | 19.8 | 13.8 | 9 43.24 | - 3.15 | . | -36.74 | 10 9 3.35 | - 0.07 | . | |
| | 2 | θ | Aquarii. | F. | | | | | | | | | | | | | | | | . | |
| | 3 | | Saturn I, N. | F. | 13.8 | 16.5 | 18.0 | . | . | . | . | 34.8 | 36.3 | 39.0 | 18 26.40 | - 1.32 | . | -36.74 | 22 17 48.34 | . | . |
| | 4 | | Saturn II, S. | F. | . | . | 23.4 | 25.6 | 27.7 | 29.7 | 31.8 | . | . | 18 27.65 | - 1.32 | . | -36.74 | 22 17 49.59 | . | . | |
| | 5 | η | Aquarii | F. | 28.0 | 30.7 | 32.2 | 38.2 | 40.2 | 42.2 | 48.5 | 50.0 | 52.6 | 29 40.29 | - 1.09 | -36.68 | -36.74 | 22 29 2.46 | - 0.03 | . | |
| | 6 | 226 | Cephei | F. | . | . | . | . | 41.3 | 49.4 | 57.6 | 13.9 | 30.9 | 30 41.27 | + 2.87 | . | -36.74 | 22 30 7.40 | - 0.26 | . | |
| | 7 | λ | Aquarii (R.) | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 8 | λ | Aquarii | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 9 | α | Piscis Australis | F. | 16.3 | 19.3 | 21.0 | 28.2 | 30.5 | 32.8 | 39.9 | 41.7 | 44.7 | 51 30.49 | - 1.72 | -36.77 | -36.74 | 22 50 52.03 | + 0.07 | . | |
| | 10 | α | Ursæ Majoris, S. P. | F. | 11.6 | 6.0 | 2.9 | 54.0 | 49.5 | 45.1 | 40.9 | . | . | 56 45.15 | - 2.86 | . | -36.75 | 10 56 5.54 | - 0.21 | . | |
| | 11 | α | Pegasi | F. | 3.3 | 5.9 | 7.6 | 14.0 | 16.0 | 18.1 | 24.4 | 26.0 | 28.7 | 59 16.00 | - 0.80 | -36.72 | -36.75 | 22 58 38.45 | 0.00 | . | |
| | 12 | | Weisse 103 | F. | 5.3 | 7.8 | 9.4 | . | . | . | . | . | . | 8 17.68 | - 1.26 | . | -36.75 | 23 7 39.67 | - 3.75 | . | |
| | 13 | | Weisse 104 | F. | . | 13.6 | 15.7 | 17.7 | 19.8 | 21.9 | 26.0 | 27.6 | 30.1 | 8 17.74 | - 1.26 | . | -36.75 | 23 7 39.73 | - 3.75 | . | |
| | 14 | | Weisse 109 | F. | . | . | . | . | . | . | 34.5 | 35.9 | 38.5 | 8 26.13 | - 1.26 | . | -36.75 | 23 7 48.12 | - 3.75 | . | |
| | 15 | | B. A. C. 8184 | F. | 36.6 | 39.3 | 40.7 | 46.9 | 49.0 | 51.0 | 57.1 | 58.6 | 1.2 | 23 48.93 | - 1.17 | . | -36.75 | 23 23 11.01 | - 3.72 | . | |
| | 16 | | Aegle | F. | 3 | 5 | 6.0 | 7.8 | 13.5 | 15.9 | 18.6 | 24.5 | 26.2 | 28.8 | 34 16.09 | - 0.81 | . | -36.75 | 23 33 38.53 | . | . |
| | 17 | | Amphitrite | F. | 19.4 | 22.0 | 23.6 | 29.5 | 31.6 | 33.6 | 39.8 | 41.2 | 43.8 | 3 31.61 | - 1.02 | . | -36.75 | 0 2 53.84 | . | . | |
| | 18 | γ | Pegasi | F. | 19.4 | 22.2 | 23.9 | 28.0 | 30.1 | 32.2 | 40.6 | 42.1 | 44.8 | 7 32.10 | - 0.80 | -36.64 | -36.75 | 0 6 54.64 | - 0.11 | . | |
| | 19 | | Eugenia | F. | 26.5 | 28.7 | 30.5 | . | . | . | 46.5 | 48.3 | 50.8 | 14 38.55 | - 1.18 | . | -36.75 | 0 14 0.62 | . | . | |
| | 20 | | Amalthea | F. | 32.3 | 35.0 | 36.6 | 42.6 | 44.7 | 47.0 | 52.9 | 54.5 | 57.0 | 22 44.73 | - 1.18 | . | -36.75 | 0 22 6.80 | . | . | |
| | 21 | | Cybele | F. | 12.5 | 14.9 | 16.5 | 22.0 | 24.5 | 26.5 | 32.8 | 34.6 | 37.1 | 24 24.67 | - 1.08 | . | -36.75 | 0 23 46.84 | . | . | |
| | 22 | β | Ceti | F. | 51.0 | 53.8 | 55.4 | 1.9 | 4.0 | 6.1 | 12.7 | 14.3 | 17.0 | 38 4.02 | - 1.44 | -36.69 | -36.75 | 0 37 25.83 | - 0.01 | . | |
| | 23 | 21 | Cassiopeæ | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 24 | | Galatea | F. | 40.6 | 43.3 | 44.9 | 51.2 | 53.4 | 55.2 | 1.6 | 3.0 | 5.7 | 51 53.21 | - 0.97 | . | -36.75 | 0 51 15.49 | . | . | |
| | 25 | | Polaris | F. | . | . | 9.0 | 35.0 | . | . | . | 54.0 | 44.0 | 14 2.60 | +41.24 | . | -36.76 | 1 14 7.08 | - 0.04 | . | |
| | 26 | | Mnemosyne | F. | 2.1 | 4.6 | 6.1 | 12.3 | 14.4 | 16.5 | 22.5 | 24.0 | 26.4 | 15 14.32 | - 0.93 | . | -36.76 | 1 14 36.63 | . | . | |
| | 27 | α | Piscium | F. | 19.9 | 22.3 | 24.0 | 30.2 | 32.3 | 34.3 | 40.6 | 42.0 | 44.6 | 39 32.24 | - 0.91 | -36.64 | -36.76 | 1 38 54.57 | - 0.15 | . | |
| | 28 | β | Arietis | F. | . | . | . | . | . | . | 37.6 | 39.2 | 41.9 | 48 28.88 | - 0.68 | -36.74 | -36.76 | 1 47 51.44 | 0.00 | . | |
| | 29 | | Phocæa | F. | 46.2 | 48.1 | 52.6 | 54.8 | 56.7 | 58.9 | 0.9 | 5.5 | 7.2 | 0 56.77 | - 0.75 | . | -36.76 | 2 0 19.26 | . | . | |
| | 30 | | Sirona | F. | 33.3 | . | 37.4 | 41.4 | 43.5 | . | . | 55.3 | 58.1 | 5 45.62 | - 0.90 | . | -36.76 | 2 5 7.96 | . | . | |
| | 31 | | Neptune | F. | 53.8 | 56.5 | 58.0 | 4.3 | 6.3 | 8.4 | 14.6 | 16.1 | 18.8 | 11 6.31 | - 0.86 | . | -36.76 | 2 10 28.69 | . | . | |
| | 32 | γ | Ceti | F. | 21.9 | 24.5 | 26.0 | 32.1 | 34.3 | 36.3 | 42.3 | 43.8 | 46.5 | 37 34.19 | - 1.02 | -36.78 | -36.76 | 2 36 56.41 | + 0.02 | . | |
| | 33 | | Venus II, S. | S. | 24.7 | 27.3 | 28.9 | 35.2 | 37.1 | 39.2 | 45.5 | 47.0 | 49.7 | 34 37.18 | - 0.97 | . | -36.73 | 10 33 59.48 | - 0.67 | . | |
| | 34 | δ | Leonis | S. | 56.9 | 59.8 | 1.4 | 7.7 | 10.0 | 11.9 | 18.7 | 20.3 | 23.1 | 8 9.98 | - 0.76 | -36.69 | . | | | . | |
| | 35 | | Moon II | S. | 35.0 | 37.6 | 39.4 | 45.5 | 47.6 | 49.9 | 56.0 | 57.8 | 0.4 | 11 47.69 | - 1.04 | . | -36.74 | 11 11 9.91 | -66.56 | . | |
| | 36 | β | Leonis | S. | 10.5 | . | . | . | 25.4 | . | 31.7 | 33.3 | 35.9 | 43 23.24 | - 0.87 | -36.78 | . | . | . | . | . |
| | 37 | | Polaris, S. P. | S. | . | . | . | . | 52.0 | . | 30.0 | . | 15 20.35 | -36.90 | . | . | -36.76 | 1 14 6.69 | - 0.42 | . | |
| | 16 | 38 | Polaris, S. P. | F. | . | . | 23.0 | 56.0 | 29.0 | 2.0 | 34.0 | . | . | 15 28.32 | -43.09 | . | -37.12 | 1 14 8.11 | + 0.93 | . | |
| | 17 | 39 | Sun II, N. | F. | 54.9 | 57.4 | 58.9 | 5.1 | 7.2 | 9.3 | 15.4 | 17.0 | 19.6 | 33 7.20 | - 1.25 | . | -37.13 | 13 32 28.82 | -65.48 | . | |
| | 40 | ε ² | Bootis | F. | 59.4 | 2.2 | 3.9 | 10.8 | 13.0 | 15.4 | 22.1 | 24.0 | 26.9 | 40 13.11 | - 0.49 | -37.24 | -37.14 | 14 39 35.48 | + 0.08 | . | |
| | 41 | α ² | Libræ | F. | 28.3 | 31.0 | 32.7 | 39.0 | 41.2 | 43.1 | 49.7 | 51.2 | 54.0 | 44 41.13 | - 1.38 | -37.13 | -37.14 | 14 44 2.61 | - 0.02 | . | |
| | 42 | β | Bootis | F. | 38.3 | 41.8 | 43.8 | 51.8 | 54.6 | 57.3 | 5.4 | 7.3 | 10.7 | 57 54.56 | - 0.13 | . | -37.14 | 14 57 17.29 | + 0.10 | . | |
| | 43 | β | Libræ | F. | 47.6 | 50.1 | 51.7 | 58.0 | 0.1 | 2.0 | 8.4 | 9.7 | 12.3 | 10 59.99 | - 1.24 | -37.14 | -37.14 | 15 10 21.61 | 0.00 | . | |
| | 44 | γ ² | Ursæ Minoris. | F. | . | . | 15.0 | 21.8 | 28.9 | 35.2 | 42.3 | . | . | 21 28.68 | + 2.14 | . | -37.14 | 15 20 53.68 | + 0.04 | . | |
| | 45 | α | Coronæ Borealis | F. | 51.2 | 54.1 | 55.8 | 2.6 | 5.0 | 7.3 | 14.2 | 16.0 | 18.8 | 30 5.00 | - 0.50 | -37.16 | -37.15 | 15 29 27.35 | + 0.01 | . | |
| | 46 | α | Serpentis | F. | 36.8 | 39.3 | 40.9 | 47.0 | 49.1 | 51.2 | 57.3 | 58.9 | 1.5 | 38 49.11 | - 0.92 | -37.13 | -37.15 | 15 38 11.04 | 0.00 | . | |
| | 47 | ε | Serpentis | F. | 5.4 | 7.9 | 9.5 | 15.7 | 17.7 | 19.8 | 25.9 | 27.5 | 30.0 | 45 17.71 | - 0.96 | -37.15 | -37.15 | 15 44 39.60 | 0.00 | . | |
| | 48 | ε | Coronæ Borealis | F. | 52.2 | 55.1 | 56.8 | 3.7 | 6.0 | 8.3 | 15.2 | 16.9 | 19.8 | 53 6.00 | - 0.50 | . | -37.15 | 15 52 28.35 | - 0.05 | . | |
| | 49 | β ¹ | Scorpii | F. | 41.0 | 43.7 | 45.3 | 51.8 | 54.0 | 56.0 | 2.7 | 4.2 | 6.9 | 58 53.96 | - 1.46 | -37.08 | -37.15 | 15 58 15.35 | - 0.04 | . | |

6, 10, 44. Bisections at sets B and D.

11. Telescope micrometer reading increased one revolution in reduction.

12, 13, 14, 16, 17, 19, 20, 21, 24, 26, 29, 30. Thread A used.

23. Bisections at threads V and VI.

25. Bisections at threads D₁, D₂, and D₃.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | |
| 1 | 75 16 | 10 10.4 | 3.2 | 3.6 | 7.1 | 33 | .. | 985 | .. | 975 | .. | 68.9 | 284 40 29.8 | .. | - 3 39.1 | 335 43 11.9 | + 0.4 | |
| 2 | 312 40 | 7.4 | 2.2 | 3.5 | 7.5 | 36 | .. | .. | .. | 154 | 150 | 68.9 | 47 16 17.8 | .. | + 1 3.0 | 98 23 42.0 | - 1.4 | |
| 3 | 201 30 | 6.5 | 0.5 | 2.1 | 8.2 | 39 | 100 | .. | .. | .. | 980 | 68.9 | 51 27 0.3 | .. | + 1 13.1 | 102 34 34.6 | .. | |
| 4 | 308 30 | 6.5 | 0.5 | 2.4 | 8.2 | 40 | .. | 250 | .. | 130 | .. | 68.9 | 51 27 18.0 | .. | + 1 13.1 | 102 34 52.3 | .. | |
| 5 | 320 18 | 9.0 | 2.0 | 4.0 | 8.6 | 34 | 455 | 390 | .. | .. | .. | 68.9 | 39 37 50.3 | 50.0 | + | 48.3 | 90 44 59.8 | - 2.1 |
| 6 | 36 36 | 9.9 | 2.1 | 6.0 | 8.4 | 29 | .. | .. | .. | 700 | 710 | 68.9 | 323 18 40.2 | .. | - 43.5 | 14 24 17.9 | - 0.8 | |
| 7 | 27 2 | 10.1 | 3.3 | 7.8 | 8.9 | 32 | 428 | 422 | .. | .. | .. | 68.9 | 132 53 21.5 | .. | - 1 2.8 | 98 14 2.5 | + 2.1 | |
| 8 | 312 50 | 7.7 | 3.2 | 4.1 | 8.1 | 37 | .. | .. | .. | .. | 315 | 68.9 | 47 6 36.4 | .. | + 1 2.8 | 98 14 0.4 | 0.0 | |
| 9 | 290 46 | 12.6 | 5.9 | 7.6 | 12.9 | 25 | .. | 352 | .. | 322 | .. | 68.9 | 69 7 35.8 | .. | + 2 32.0 | 120 16 29.0 | - 0.8 | |
| 10 | 78 32 | 12.1 | 5.3 | 7.4 | 11.0 | 32 | .. | .. | .. | 720 | 740 | 68.9 | 281 23 28.6 | .. | - 4 42.3 | 332 25 7.5 | - 1.9 | |
| 11 | 335 36 | 9.4 | 3.6 | 4.5 | 8.7 | 35 | .. | 830 | .. | 784 | .. | 68.9 | 24 20 28.5 | .. | + | 26.4 | 75 27 16.1 | - 0.3 |
| 12 | 311 2 | 9.5 | 3.0 | 4.0 | 9.5 | 37 | 442 | .. | .. | .. | .. | 68.9 | 48 28 3.3 | .. | + 1 5.9 | 99 35 30.4 | + 19.8 | |
| 13 | 311 26 | 9.5 | 3.0 | 4.0 | 9.5 | 39 | .. | 975 | .. | .. | .. | 68.9 | 48 28 28.8 | .. | + 1 5.9 | 99 35 55.9 | + 19.8 | |
| 14 | 311 26 | 9.5 | 3.0 | 4.0 | 9.5 | 40 | .. | .. | .. | 770 | 782 | 68.9 | 48 28 56.6 | .. | + 1 6.0 | 99 36 23.8 | + 19.8 | |
| 15 | 315 10 | 7.1 | 0.6 | 1.7 | 7.4 | 30 | .. | 320 | .. | 256 | .. | 68.9 | 44 4 46.2 | .. | + | 56.6 | 95 12 4.0 | + 21.7 |
| 16 | 334 52 | 9.2 | 4.8 | 4.5 | 8.6 | 36 | .. | 745 | .. | 720 | .. | 68.9 | 25 1 54.1 | .. | + | 27.3 | 76 8 42.6 | - 1.4 |
| 17 | 323 50 | 6.0 | 20.1 | 28.8 | 4.7 | 34 | .. | 168 | .. | 136 | .. | 68.9 | 36 3 9.9 | .. | + | 42.7 | 87 10 13.8 | - 3.6 |
| 18 | 335 32 | 12.6 | 6.3 | 6.7 | 12.6 | 31 | .. | 238 | .. | 210 | .. | 68.9 | 24 23 0.0 | .. | + | 26.6 | 75 29 53.8 | - 0.6 |
| 19 | 315 40 | 5.0 | 20.2 | 0.8 | 5.5 | 40 | .. | 714 | .. | .. | .. | 68.9 | 44 14 50.0 | .. | + | 57.1 | 95 22 8.3 | - 3.2 |
| 20 | 315 22 | 9.0 | 3.7 | 4.5 | 8.2 | 38 | .. | 950 | .. | 984 | .. | 68.9 | 44 32 27.8 | .. | + | 57.7 | 95 39 46.7 | - 3.8 |
| 21 | 320 54 | 6.5 | 20.8 | 0.7 | 5.6 | 40 | .. | .. | .. | 332 | 320 | 68.9 | 39 0 46.4 | 47.5 | + | 47.5 | 90 7 55.1 | - 2.2 |
| 22 | 302 24 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 23 | 35 20 | 1.7 | 23.4 | 26.4 | 28.6 | 32 | .. | .. | .. | 888 | 866 | 68.9 | 321 35 20.4 | .. | - 41.7 | 15 40 59.9 | - 2.3 | |
| 24 | 326 34 | 7.9 | 2.4 | 2.1 | 8.7 | 33 | .. | 110 | .. | 096 | .. | 68.9 | 33 15 57.0 | .. | + | 38.6 | 84 25 56.8 | - 4.3 |
| 25 | 49 40 | 5.9 | 20.1 | 1.4 | 0.8 | 33 | .. | .. | 400 | 380 | 230 | 68.9 | 310 15 33.1 | .. | - 1 9.2 | 1 20 45.1 | - 1.4 | |
| 26 | 328 42 | 7.3 | 1.6 | 2.6 | 7.5 | 38 | .. | 565 | .. | 540 | .. | 68.9 | 31 12 19.9 | .. | + | 35.6 | 82 19 16.7 | - 2.5 |
| 27 | 329 36 | 5.6 | 28.8 | 1.4 | 7.2 | 37 | .. | .. | .. | 590 | 570 | 68.9 | 30 20 37.9 | .. | + | 34.4 | 81 27 33.5 | - 1.3 |
| 28 | 341 14 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 29 | 337 52 | 6.1 | 0.2 | 0.4 | 4.1 | 37 | .. | 575 | .. | 550 | .. | 68.9 | 22 2 2.7 | .. | + | 23.8 | 73 8 47.7 | - 3.1 |
| 30 | 330 22 | 6.4 | 2.4 | 2.0 | 5.8 | 38 | .. | .. | .. | 570 | 588 | 68.9 | 29 32 20.7 | .. | + | 33.3 | 80 39 15.2 | - 2.2 |
| 31 | 332 16 | 5.1 | 28.8 | 20.3 | 2.9 | 33 | .. | 935 | .. | 925 | .. | 68.9 | 27 39 39.4 | .. | + | 30.8 | 78 46 31.4 | .. |
| 32 | 323 46 | 8.2 | 2.7 | 3.7 | 9.2 | 33 | 972 | 952 | .. | .. | .. | 68.9 | 36 9 43.4 | 46.6 | + | 42.9 | 87 16 47.5 | - 2.3 |
| 33 | 330 16 | 7.4 | 4.3 | 4.5 | 3.4 | 34 | .. | 000 | .. | 972 | .. | 68.9 | 29 39 43.5 | 53.0 | + | 32.9 | 80 46 37.6 | .. |
| 34 | 342 14 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 35 | 326 5 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 36 | 336 18 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 37 | 52 22 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 38 | 52 22 | 8.7 | 1.7 | 4.8 | 4.9 | 35 | 390 | 408 | 406 | 420 | 460 | 60.2 | 307 34 5.6 | 59.2 | - 1 13.7 | 358 39 13.1 | - 1.6 | |
| 39 | 311 44 | 4.0 | 1.9 | 3.0 | 6.0 | 28 | .. | .. | .. | 746 | 780 | 60.2 | 48 10 23.0 | 60.5 | + 1 3.5 | 99 17 47.7 | .. | |
| 40 | 348 38 | 6.6 | 28.5 | 2.5 | 7.0 | 34 | .. | 128 | .. | 046 | .. | 60.2 | 11 17 44.2 | .. | + | 11.3 | 62 24 16.7 | - 0.2 |
| 41 | 305 32 | 6.1 | 28.8 | 1.8 | 10.2 | 35 | .. | .. | .. | 375 | 320 | 60.2 | 54 24 4.7 | .. | + 1 19.0 | 100 31 44.9 | + 2.2 | |
| 42 | 1 54 | 4.2 | 28.2 | 0.0 | 3.8 | 31 | .. | 232 | .. | 220 | .. | 60.2 | 358 0 58.4 | .. | - 2.0 | 49 7 17.6 | - 1.5 | |
| 43 | 312 8 | 9.6 | 3.6 | 6.2 | 11.6 | 35 | .. | 635 | .. | 778 | .. | 60.2 | 47 48 14.4 | .. | + 1 2.4 | 98 55 38.0 | + 0.9 | |
| 44 | 33 18 | 6.0 | 28.0 | 1.9 | 5.3 | 34 | .. | 636 | .. | 636 | .. | 60.2 | 326 37 51.7 | .. | - 37.3 | 17 43 35.6 | - 1.5 | |
| 45 | 348 10 | 4.3 | 25.0 | 28.1 | 3.2 | 33 | .. | 638 | .. | 606 | .. | 60.2 | 11 45 33.6 | 64.0 | + | 11.8 | 62 52 6.6 | - 0.1 |
| 46 | 327 52 | 6.1 | 28.9 | 1.9 | 8.4 | 35 | 780 | 758 | .. | 698 | 682 | 60.2 | 32 4 9.4 | .. | + | 35.4 | 83 11 6.0 | - 0.4 |
| 47 | 325 54 | 6.4 | 28.5 | 1.0 | 7.1 | 35 | .. | 206 | .. | 126 | .. | 60.2 | 34 2 0.3 | .. | + | 38.2 | 85 8 59.7 | 0.0 |
| 48 | 348 16 | 9.1 | 1.1 | 5.2 | 10.4 | 32 | 115 | 068 | .. | .. | .. | 60.2 | 11 39 15.7 | .. | + | 11.7 | 62 45 48.6 | + 1.6 |
| 49 | 301 36 | 6.2 | 29.5 | 4.3 | 8.5 | 35 | .. | .. | .. | 770 | 782 | 60.2 | 58 20 11.6 | .. | + 1 31.4 | 109 28 4.2 | 0.0 | |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | ' " | ' " | ' " | ' " |
| 5 | 30.05 | 52.2 | 3 | - 0.8 | + 8.8 | .. | + 8.0 |
| 21 | 30.05 | 49.5 | 4 | - 0.8 | - 8.8 | .. | - 9.6 |
| 32 | 30.01 | 48.0 | 31 | - 0.1 | .. | .. | - 0.1 |
| 33 | 29.89 | 52.2 | 33 | - 5.1 | - 9.9 | .. | - 15.0 |
| 38 | 29.95 | 55.0 | 39 | - 6.6 | + 16 5.3 | .. | + 15 58.7 |
| 39 | 29.91 | 55.6 | | | | | |
| 45 | 29.95 | .. | | | | | |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. |
|---------|---------|------------------------------|-----------|--------------------------------|---------|---------|---------|------|------|------|-----------|----------|------------|--------------|----------------|----------------|---------------------------|--------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | m. | |
| 1876. | | | | | | | | | | | m. | s. | s. | s. | s. | | | s. | |
| Oct. 17 | 1 | δ Ophiuchi . . . | F. | 18.5 | 21.1 | 22.7 | 23.8 | 30.8 | 32.9 | 39.0 | 40.4 | 43.0 | 8 30.80 | - 1.12 | -37.18 | -37.15 | 16 7 | 52.53 | + 0.05 |
| | 2 | τ Herculis . . . | F. | 20.0 | 24.3 | 26.5 | 35.4 | 38.4 | 41.4 | 50.3 | 52.5 | 50.2 | 16 38.40 | + 0.07 | . | -37.15 | 16 16 | 1.32 | + 0.28 |
| | 3 | α Scorpii . . . | F. | 15.3 | 18.1 | 19.9 | 20.7 | 25.9 | 31.2 | 37.9 | 39.8 | 42.7 | 22 28.84 | - 1.62 | -36.94 | -37.15 | 16 21 | 50.07 | - 0.22 |
| | 4 | A Draconis . . . | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 5 | δ Cygni . . . | F. | 44.8 | 47.8 | 49.9 | . | . | . | 10.6 | 12.5 | 15.8 | 2 0.23 | - 0.24 | -37.19 | -37.20 | 21 1 | 22.79 | - 0.05 |
| | 6 | δ Cygni . . . | F. | . | . | 56.5 | 59.0 | 1.8 | 4.3 | 6.9 | . | . | 2 1.71 | - 0.24 | . | -37.20 | 21 1 | 24.27 | - 2.14 |
| | 7 | Anonymous . . . | F. | 14.4 | 17.1 | 19.1 | 23.0 | 25.2 | 27.7 | 30.0 | 31.8 | . | 8 27.61 | - 1.51 | . | -37.20 | 21 7 | 48.90 | - 3.57 |
| | 8 | Tran. Zones 176.1 | F. | . | 34.9 | 37.0 | 39.2 | 41.3 | 43.6 | 48.0 | 49.6 | 52.3 | 8 39.18 | - 1.51 | . | -37.20 | 21 8 | 0.47 | - 3.57 |
| | 9 | γ Draconis, S. P. | F. | 34.7 | 17.1 | 5.3 | 22.1 | 6.7 | 52.7 | 10.1 | 58.2 | 41.7 | 20 7.51 | - 8.00 | . | -37.20 | 9 19 | 22.31 | - 0.26 |
| | 10 | β Aquarii . . . | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 11 | ξ Aquarii . . . | F. | 38.3 | 41.0 | 42.5 | 48.7 | 50.8 | 52.9 | 59.0 | 0.5 | 3.2 | 31 50.77 | - 1.22 | -37.24 | -37.21 | 21 31 | 12.34 | + 0.05 |
| | 12 | B. A. C. 7564 . . . | F. | 25.3 | 33.4 | 37.7 | 55.9 | 2.5 | 9.0 | 27.2 | 31.5 | 39.4 | 38 2.43 | + 1.85 | . | -37.21 | 21 37 | 27.07 | - 1.05 |
| | 13 | B. A. C. 7588 . . . | F. | 5.6 | 13.3 | 18.0 | 36.8 | 42.8 | 48.8 | 7.5 | 11.8 | 19.6 | 40 42.60 | + 1.85 | . | -37.21 | 21 40 | 7.33 | - 1.10 |
| | 14 | γ Draconis . . . | F. | 13.6 | 22.4 | 27.7 | 48.6 | 55.7 | 2.8 | 24.0 | 28.9 | 37.8 | 51 55.72 | + 2.34 | . | -37.21 | 21 51 | 20.85 | + 0.32 |
| | 15 | B. A. C. 7732 . . . | F. | 34.1 | 52.3 | 2.5 | 49.6 | 5.1 | 20.3 | 5.7 | 17.6 | 30.2 | 3 4.82 | + 6.38 | . | -37.21 | 22 2 | 33.99 | + 0.17 |
| | 16 | B. A. C. 7735 . . . | F. | 40.9 | 59.0 | 10 3 56 | 311.9 | 26.8 | 12.5 | 24.0 | 42.4 | 3 11 57 | + 6.38 | . | -37.21 | 22 2 | 40.74 | + 0.17 | |
| | 17 | B. A. C. 7779 . . . | F. | 33.1 | 41.7 | 46.8 | 7. 14.3 | 21.2 | 42.2 | 47.0 | 55.8 | 11 14.41 | + 2.17 | . | -37.21 | 22 10 | 39.37 | - 1.68 | |
| | 18 | Saturn I, S. . . | F. | 44.0 | 46.6 | 48.2 | . | . | . | 4.8 | 6.4 | 9.1 | 17 56.52 | - 1.30 | . | -37.22 | 22 17 | 18.00 | . |
| | 19 | Saturn II, N. . . | F. | . | . | 53.7 | 55.8 | 57.9 | 59.9 | 2.1 | . | . | 17 57.89 | - 1.30 | . | -37.22 | 22 17 | 19.37 | . |
| | 20 | B. A. C. 7857 . . . | F. | 20.6 | 33.3 | 41.0 | 10.6 | 20.4 | 30.1 | 59.8 | 7.6 | 20.3 | 26 20.41 | + 3.76 | . | -37.22 | 22 25 | 46.95 | - 1.71 |
| | 21 | B. A. C. 7874 . . . | F. | 21.6 | 33.9 | 41.9 | 11.5 | 21.0 | 31.0 | 1.7 | 8.8 | 20.9 | 29 21.34 | + 3.76 | . | -37.22 | 22 28 | 47.88 | - 1.82 |
| | 22 | B. A. C. 8026 . . . | F. | 59.9 | 24 1.38 | 9 32.8 | 52.6 | 10.4 | 7.0 | 20.8 | 43.5 | 55 52.22 | + 8.02 | . | -37.22 | 22 55 | 23.02 | - 2.81 | |
| | 23 | B. A. C. 8074 . . . | F. | 49.3 | 59 3 | 4.9 | 28.5 | 35.8 | 43.6 | 7.2 | 12.4 | 22.5 | 4 35.94 | + 2.65 | . | -37.22 | 23 4 | 1.37 | - 3.04 |
| | 24 | γ Draconis . . . | F. | 4.0 | 6.5 | 8.6 | 14.2 | 16.2 | 18.2 | 24.4 | 25.9 | 8.4 | 34 16.20 | - 0.97 | -37.20 | -37.23 | 23 33 | 38.00 | - 0.03 |
| | 25 | Anonymous . . . | F. | 57.5 | 59.8 | 1.5 | 7.6 | 9.5 | 11.6 | 17.8 | 19.3 | 21.8 | 42 9.60 | - 1.16 | . | -37.23 | 23 41 | 31.21 | - 3.75 |
| | 26 | ω Piscium . . . | F. | 26.3 | 28.7 | 30.5 | 36.5 | 38 5 | 40.5 | 46.9 | 48.3 | 51.0 | 53 38.58 | - 0.95 | -37.29 | -37.23 | 23 53 | 0.40 | + 0.07 |
| | 27 | Amphitrite . . . | F. | 17.3 | 20.1 | 21.7 | 27.6 | 29.6 | 31.7 | 37.7 | 39.4 | 42.0 | 0 29.68 | - 1.01 | . | -37.23 | 23 59 | 51.44 | . |
| | 28 | α Andromedæ . . . | F. | 26.2 | 29.1 | 31.1 | 37.9 | 40.1 | 42.4 | 49.4 | 51.2 | 54.0 | 2 40.16 | - 0.49 | -37.26 | -37.23 | 0 2 | 2.44 | + 0.05 |
| | 29 | γ Pegasi . . . | F. | 22.7 | 24.2 | 28.5 | 30.7 | 32.9 | 35.0 | 37.1 | 41.3 | 43.0 | 7 32.82 | - 0.79 | -37.28 | -37.23 | 0 6 | 54.80 | + 0.05 |
| | 30 | Eugenia . . . | F. | 50.3 | 53.0 | 54.7 | 0.9 | 3.0 | 4.0 | 11.2 | 12.7 | 15.3 | 12 2.89 | - 1.17 | . | -37.23 | 0 11 | 24.49 | . |
| | 31 | Cybele . . . | F. | 51.2 | 54.0 | 55.5 | 1.6 | 3.6 | 5.7 | 11.8 | 13.4 | 15.9 | 22 3.63 | - 0.94 | . | -37.24 | 0 21 | 25.45 | . |
| | 32 | Galatæa . . . | F. | 3.9 | 6.4 | 8.1 | 14.4 | 16.4 | 18.4 | 24.7 | 26.0 | 28.5 | 49 16.31 | - 0.66 | . | -37.24 | 0 48 | 38.11 | . |
| | 33 | ϵ Piscium . . . | F. | . | 8.3 | 10.4 | 12.5 | 14.6 | 16.6 | 20.7 | 22.3 | 24.8 | 57 12.49 | - 0.92 | -37.21 | -37.24 | 0 56 | 34.33 | - 0.01 |
| | 34 | Polaris . . . | F. | . | . | . | 32.0 | 59.0 | 51.0 | 55.0 | 46.0 | 14 4.20 | + 41.15 | . | -37.24 | 1 14 | 8.11 | + 0.89 | |
| | 35 | η Piscium . . . | F. | 20.2 | 22.9 | 24.5 | 30.8 | 32.9 | 35.0 | 41.5 | 43.2 | 45.5 | 25 32.94 | - 0.78 | -37.30 | -37.25 | 1 24 | 54.91 | + 0.12 |
| | 36 | α Piscium . . . | F. | 20.5 | 23.0 | 24.6 | 30.8 | 32.8 | 34.8 | 41.0 | 42.6 | 45.3 | 39 32.82 | - 0.90 | -37.19 | -37.25 | 1 38 | 54.67 | - 0.09 |
| | 37 | β Arietis . . . | F. | 19.3 | 19.0 | 20.7 | 27.2 | 29.3 | 31.6 | 38.0 | 39.6 | 42.4 | 48 29.34 | - 0.67 | -37.17 | -37.25 | 1 47 | 51.42 | - 0.06 |
| | 38 | B. A. C. 590 . . . | F. | 4.4 | 8.2 | 10.4 | 10.8 | 22.7 | 25.8 | 35.4 | 37.7 | 41.5 | 51 22.88 | + 0.11 | . | -37.25 | 1 50 | 45.74 | - 4.49 |
| | 39 | Phocæa . . . | F. | 9.9 | 12.4 | 14.1 | 20.5 | 22.6 | 24.8 | 31.2 | 32.9 | 35.5 | 57 22.66 | - 0.76 | . | -37.25 | 1 56 | 44.65 | . |
| | 40 | α Arietis . . . | F. | . | . | . | 53.1 | 55.2 | 57.5 | 2.0 | 3.6 | 6.3 | 0 53.06 | - 0.62 | -37.28 | -37.25 | 2 0 | 15.19 | + 0.04 |
| | 41 | Sirona . . . | F. | 11.2 | 14.0 | 15.6 | 21.7 | 23.5 | 25.8 | 32.1 | 33.6 | 36.0 | 2 23.72 | - 0.89 | . | -37.25 | 2 1 | 45.58 | . |
| | 42 | Neptune . . . | F. | . | . | . | . | . | . | 6.8 | 19.2 | 10 41.81 | - 0.85 | . | -37.25 | 2 10 | 3.71 | . | |
| | 43 | Danae . . . | F. | 47.5 | 51.9 | 53.8 | 1.6 | 4.4 | 7.1 | 14.9 | 17.5 | 20.7 | 24 8.38 | - 0.15 | . | -37.26 | 2 23 | 26.97 | . |
| 18 | 44 | α Cygni . . . | S. | 34.0 | 37.3 | 39.7 | 48.4 | 51.2 | 54.0 | 2.7 | 4.8 | 8.4 | 37 51.17 | - 0.10 | -37.07 | -37.06 | 20 37 | 14.01 | + 0.03 |
| | 45 | μ Aquarii (R.) . . . | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 46 | μ Aquarii . . . | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 47 | ζ Cygni . . . | S. | 5.4 | 8.3 | 10.0 | 17.2 | 19.5 | 21.8 | 28.0 | 30.7 | 33.6 | 8 19.49 | - 0.51 | -37.07 | -37.06 | 21 7 | 41.92 | + 0.02 |
| | 48 | δ Ursæ Majoris, S. P. | S. | 51.9 | 43.0 | 38.5 | 20.6 | 14.3 | 8.4 | 49.7 | 45.0 | 37.6 | 24 14.33 | - 3.59 | . | -37.06 | 9 23 | 33.68 | + 0.26 |
| | 49 | B. A. C. 7588 . . . | S. | 5.0 | 13.0 | 17.6 | 36.0 | 42.3 | 48.5 | 7.0 | 11 7 19.6 | 40 42.30 | + 1.70 | . | -37.06 | 21 40 | 6.94 | - 1.05 | |
| | 50 | γ Draconis . . . | S. | 12.3 | 20.8 | 26.0 | 47.6 | 54.2 | 1.3 | 22.6 | 27.6 | 36.6 | 51 54.33 | + 2.11 | . | -37.06 | 21 51 | 19.38 | - 1.09 |

4. Bisections at threads D₁, D₃, and VII.

9, 15, 16, 20, 22, 23, 48. Bisections at sets B and D.

17, 34. Bisections at set C.

21, 22, 27, 30, 31, 32, 39, 41, 43, 50. Thread A used.

41. Micrometer reading diminished one revolution in reduction.

42. Transits over threads VI and VII.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Corrections. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|-----|---------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | |
| | | r. | " | " | " | | | | | | | | | | | | |
| 1 | 317 40 | 10 4.9 | 29.2 | 0.6 | 6.4 | 32 | 746 | 730 | .. | 646 | 62 | 69.2 | 42 15 21.7 | .. + | 51.4 | 93 22 34.3 | + 1.6 |
| 2 | 7 33 | 6.6 | 2.6 | 5.0 | 6.7 | 31 | .. | 992 | .. | 920 | .. | 69.2 | 352 17 13.4 | 63.4 - | 7.7 | 43 23 26.9 | - 1.0 |
| 3 | 294 54 | 8.6 | 2.4 | 6.2 | 9.9 | 31 | 712 | 670 | .. | .. | .. | 69.2 | 65 1 9.4 | .. + 2 | 0.8 | 116 9 31.4 | + 0.4 |
| 4 | 30 4 | 8.1 | 1.2 | 4.4 | 8.0 | 35 | .. | .. | 146 | 166 | 982 | 69.2 | 329 52 2.0 | 63.0 - | 32.9 | 20 57 50.9 | + 0.8 |
| 5 | 359 10 | 4.7 | 23.7 | 1.0 | 4.2 | 30 | .. | .. | .. | 393 | .. | 69.0 | 0 44 46.9 | .. + | 0.8 | 51 51 8.9 | + 0.8 |
| 6 | 359 10 | 4.7 | 28.7 | 1.0 | 4.2 | 30 | .. | .. | .. | .. | 964 | 69.0 | 0 44 56.2 | .. + | 0.8 | 51 51 18.2 | + 22.5 |
| 7 | 298 44 | 8.5 | 3.2 | 3.9 | 7.6 | 33 | 958 | .. | .. | .. | 890 | 69.0 | 61 11 43.2 | .. + 1 | 45.9 | 112 19 50.3 | + 6.1 |
| 8 | 293 44 | 8.5 | 3.2 | 3.9 | 7.6 | 32 | .. | 532 | .. | .. | .. | 69.0 | 61 11 21.4 | .. + 1 | 45.9 | 112 19 28.5 | + 6.1 |
| 9 | 59 8 | 10.8 | 4.4 | 7.5 | 10.1 | 31 | 684 | .. | .. | .. | 682 | 69.0 | 300 47 11.1 | .. - 1 | 37.5 | 351 51 54.5 | - 0.8 |
| 10 | 314 56 | 4.8 | 28.9 | 0.9 | 6.2 | 32 | .. | .. | .. | 778 | 760 | 69.0 | 44 59 23.6 | .. + | 58.4 | 96 6 43.2 | + 1.1 |
| 11 | 312 38 | 8.7 | 2.5 | 5.5 | 10.6 | 30 | 704 | 686 | .. | .. | .. | 69.0 | 47 16 54.2 | 47.8 + 1 | 3.3 | 98 24 18.7 | - 1.2 |
| 12 | 31 46 | 8.0 | 2.0 | 5.3 | 7.8 | 30 | .. | 502 | .. | 500 | .. | 69.0 | 328 8 52.1 | .. - | 36.4 | 19 14 36.9 | + 26.8 |
| 13 | 31 46 | 8.0 | 2.0 | 5.3 | 7.8 | 32 | .. | 436 | .. | 430 | .. | 69.0 | 328 9 21.6 | .. - | 36.4 | 19 15 6.4 | + 26.9 |
| 14 | 34 8 | 8.8 | 1.6 | 4.9 | 8.1 | 30 | .. | 650 | .. | 650 | .. | 69.0 | 325 46 54.6 | .. - | 39.8 | 16 52 36.0 | - 1.0 |
| 15 | 43 18 | 6.4 | 28.6 | 1.8 | 4.9 | 34 | 256 | .. | .. | .. | 232 | 69.0 | 316 37 46.2 | .. - | 55.3 | 7 43 12.1 | + 27.0 |
| 16 | 43 18 | 6.4 | 28.6 | 1.8 | 4.9 | 34 | .. | 172 | .. | 140 | .. | 69.0 | 316 37 44.5 | .. - | 55.3 | 7 43 10.4 | + 27.0 |
| 17 | 33 44 | 8.0 | 1.1 | 3.5 | 7.0 | 36 | 302 | .. | .. | .. | 296 | 69.0 | 326 12 19.0 | .. - | 31.2 | 17 18 1.0 | + 27.8 |
| 18 | 308 26 | 8.6 | 3.2 | 4.6 | 11.1 | 33 | 946 | .. | .. | .. | 886 | 69.0 | 51 29 44.4 | .. + 1 | 13.6 | 102 37 19.2 | .. |
| 19 | 308 26 | 8.6 | 3.2 | 4.6 | 11.1 | 32 | .. | 528 | .. | 512 | .. | 69.0 | 51 29 23.0 | .. + 1 | 13.6 | 102 36 57.8 | .. |
| 20 | 39 12 | 7.2 | 28.2 | 1.3 | 3.3 | 38 | .. | 528 | .. | 512 | .. | 69.0 | 320 44 50.7 | .. - | 47.9 | 11 50 24.0 | + 27.8 |
| 21 | 39 12 | 7.2 | 28.2 | 1.3 | 3.3 | 40 | .. | 184 | .. | 170 | .. | 69.0 | 320 42 44.0 | .. - | 48.0 | 11 48 17.2 | + 27.8 |
| 22 | 44 42 | 9.7 | 2.1 | 4.3 | 7.1 | 41 | .. | 950 | .. | 824 | .. | 69.0 | 315 13 12.3 | .. - | 58.3 | 6 18 35.2 | + 27.5 |
| 23 | 35 44 | 7.0 | 29.5 | 1.5 | 5.6 | 30 | .. | 490 | .. | 490 | .. | 69.0 | 324 10 48.7 | 46.4 - | 42.4 | 15 16 27.5 | + 28.2 |
| 24 | 326 0 | 5.6 | 0.0 | 2.3 | 4.4 | 32 | .. | 476 | .. | 460 | .. | 69.0 | 33 55 18.6 | .. + | 39.7 | 85 2 19.5 | - 0.5 |
| 25 | 315 26 | 5.9 | 0.4 | 3.3 | 8.2 | 32 | .. | 760 | .. | 740 | .. | 69.0 | 44 29 24.2 | .. + | 58.0 | 95 36 43.4 | + 22.5 |
| 26 | 327 14 | 7.6 | 1.9 | 3.0 | 7.2 | 34 | .. | 935 | .. | 935 | .. | 69.0 | 32 41 58.2 | 43.2 + | 58.0 | 83 48 57.4 | - 0.5 |
| 27 | 323 12 | 11.4 | 4.5 | 7.3 | 11.7 | 40 | .. | 810 | .. | 798 | .. | 69.0 | 36 12 55.4 | .. + | 43.4 | 87 20 3.0 | - 3.5 |
| 28 | 349 26 | 4.7 | 28.2 | 0.7 | 4.1 | 29 | .. | .. | .. | 868 | 854 | 69.0 | 10 23 38.6 | .. + | 11.0 | 61 35 10.8 | - 0.2 |
| 29 | 335 32 | 7.1 | 29.8 | 2.1 | 6.2 | 31 | .. | .. | .. | 630 | 616 | 69.0 | 24 23 7.3 | .. + | 26.8 | 75 29 55.3 | + 1.3 |
| 30 | 315 20 | 6.1 | 1.1 | 3.3 | 7.9 | 35 | .. | 742 | .. | 710 | .. | 69.0 | 44 33 36.4 | .. + | 58.3 | 95 40 55.9 | - 3.2 |
| 31 | 320 36 | 10.7 | 4.5 | 4.8 | 10.7 | 35 | .. | .. | .. | 330 | 300 | 69.0 | 39 17 34.3 | .. + | 48.5 | 90 24 44.0 | - 2.2 |
| 32 | 326 6 | 8.9 | 3.4 | 4.4 | 8.8 | 35 | .. | 278 | .. | 188 | .. | 69.0 | 33 47 39.7 | .. + | 39.7 | 84 54 31.6 | - 4.3 |
| 33 | 328 16 | 11.2 | 5.0 | 5.8 | 10.9 | 31 | .. | .. | .. | 840 | 830 | 69.0 | 31 39 14.9 | .. + | 36.6 | 82 46 12.7 | - 0.8 |
| 34 | 49 40 | 5.4 | 27.2 | 1.7 | 1.8 | 33 | .. | .. | .. | .. | 410 | 69.0 | 310 15 31.9 | .. - 1 | 10.1 | 1 20 43.0 | - 2.1 |
| 35 | 335 46 | 6.6 | 0.4 | 1.3 | 6.4 | 36 | .. | .. | .. | 630 | 626 | 69.0 | 24 10 23.8 | .. + | 26.7 | 75 17 11.7 | + 1.1 |
| 36 | 329 36 | 4.6 | 27.8 | 29.8 | 3.2 | 37 | 735 | 710 | .. | .. | .. | 69.0 | 30 20 36.4 | .. + | 34.8 | 81 27 32.4 | - 2.2 |
| 37 | 341 14 | 6.0 | 29.4 | 0.6 | 4.4 | 30 | 446 | 420 | .. | .. | .. | 69.0 | 18 49 46.2 | 41.1 + | 20.1 | 69 47 27.5 | - 1.5 |
| 38 | 9 38 | 9.0 | 1.9 | 5.7 | 9.6 | 33 | 334 | 316 | .. | .. | .. | 69.0 | 350 17 34.9 | .. - | 10.2 | 41 23 45.9 | + 24.1 |
| 39 | 336 42 | 6.1 | 0.0 | 2.4 | 6.5 | 37 | .. | 950 | .. | 916 | .. | 69.0 | 23 12 9.5 | .. + | 25.5 | 74 18 56.2 | - 2.8 |
| 40 | 343 56 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 41 | 330 6 | 7.4 | 0.9 | 2.0 | 7.1 | 37 | .. | .. | .. | 766 | 752 | 69.0 | 29 47 53.1 | .. + | 31.1 | 80 54 48.4 | - 2.5 |
| 42 | 332 14 | 5.3 | 29.1 | 0.0 | 5.5 | 34 | .. | .. | .. | 770 | 790 | 69.0 | 27 41 54.3 | 40.6 + | 31.3 | 78 48 46.8 | .. |
| 43 | 2 12 | 8.6 | 3.4 | 4.9 | 7.6 | 38 | .. | 996 | .. | 990 | .. | 69.0 | 357 42 28.3 | .. - | 2.4 | 48 48 47.1 | + 0.2 |
| 44 | 5 52 | 6.2 | 2.6 | 4.0 | 3.2 | 31 | .. | 540 | .. | 418 | .. | 69.3 | 354 3 5.0 | 52.6 - | 6.1 | 45 9 20.1 | - 1.1 |
| 45 | 228 16 | 11.1 | 3.5 | 8.5 | 8.2 | 37 | 760 | 750 | .. | .. | .. | 69.3 | 131 40 43.8 | .. - 1 | 5.7 | 99 26 43.1 | + 2.7 |
| 46 | 311 36 | 6.9 | 2.4 | 4.6 | 7.7 | 31 | .. | .. | .. | 878 | 890 | 69.3 | 48 19 13.1 | .. + 1 | 5.7 | 99 26 40.0 | - 0.4 |
| 47 | 350 46 | 10.4 | 3.3 | 5.8 | 8.6 | 34 | .. | 800 | .. | 770 | .. | 69.3 | 9 9 55.5 | .. + | 9.5 | 69 16 29.2 | + 0.1 |
| 48 | 70 38 | 8.2 | 1.7 | 3.0 | 4.6 | 37 | 010 | .. | .. | .. | 890 | 69.3 | 289 18 23.6 | .. - 2 | 46.3 | 340 22 3.5 | + 0.9 |
| 49 | 31 46 | 9.6 | 4.1 | 5.0 | 7.1 | 32 | .. | 400 | .. | 300 | .. | 69.3 | 328 9 21.4 | .. - | 36.6 | 19 15 6.0 | + 27.1 |
| 50 | 34 8 | 10.5 | 4.5 | 5.6 | 8.0 | 40 | 495 | 590 | .. | 510 | 442 | 69.3 | 325 46 54.4 | .. - | 40.1 | 16 52 35.5 | - 0.8 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|------|
| 2 | 29.91 | 62.0 | 18 | - 0.8 | - 10.7 | .. | 11.5 |
| 4 | 29.91 | 62.0 | 19 | - 0.8 | + 10.7 | .. | 9.9 |
| 11 | 30.00 | 52.6 | 42 | - 0.1 | .. | .. | 0.1 |
| 23 | 30.06 | 50.5 | | | | | |
| 26 | 30.06 | 49.4 | | | | | |
| 37 | 30.09 | 46.6 | | | | | |
| 42 | 30.10 | 46.3 | | | | | |
| 44 | 30.14 | 52.1 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. | |
|---------|---------|----------------------------------|-----------|--------------------------------|-------|-------|-------|-------|-------|-------|-------|----------|------------|--------------|----------------|----------------|---------------------------|--------|----|----------------------------|----|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | m. | s. | | |
| 1876. | | | | | | | | | | | m. | s. | | s. | s. | | | | | | s. |
| Oct. 18 | 1 | B. A. C. 7732 . . . | S. | 33.9 | 52.3 | 3.0 | 48.3 | 4.9 | 19.2 | 5.6 | 16.0 | 35.0 | 3 4.27 | + 5.96 | . . . | -37.06 | 22 2 33.17 | + 0.36 | | | |
| | 2 | B. A. C. 7735 . . . | S. | 39.6 | 59.1 | 11.0 | 56.1 | 10.8 | 26.3 | 11.5 | 23.3 | 42.3 | 3 11.11 | + 5.96 | . . . | -37.06 | 22 2 40.01 | + 0.35 | | | |
| | 3 | Saturn I, N. . . . | S. | 37.0 | 39.7 | 41.3 | . . . | . . . | . . . | 58.0 | 59.5 | 2.2 | 17 49.62 | - 1.31 | . . . | -37.06 | 22 17 11.25 | . . . | | | |
| | 4 | Saturn II, S. . . . | S. | . . . | . . . | 46.7 | 48.9 | 51.0 | 53.0 | 55.2 | . . . | . . . | 17 50.97 | - 1.31 | . . . | -37.06 | 22 17 12.60 | . . . | | | |
| | 5 | B. A. C. 7857 . . . | S. | 21.6 | 33.2 | 40.6 | 10.7 | 20.4 | 30.4 | 0.4 | 7.2 | 20.3 | 26 20.53 | + 3.58 | . . . | -37.06 | 22 25 47.05 | - 1.60 | | | |
| | 6 | B. A. C. 7874 . . . | S. | 22.6 | 33.9 | 41.0 | 10.8 | 21.0 | 31.0 | 1.2 | 8.7 | 21.3 | 29 21.28 | + 3.58 | . . . | -37.06 | 22 28 47.80 | - 1.71 | | | |
| | 7 | Cephei (R) | S. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | | | |
| | 8 | Cephei | S. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | | | |
| | 9 | Piscis Australis . . | S. | 16.5 | 19.4 | 21.3 | 28.4 | 30.7 | 33.0 | 40.0 | 41.9 | 44.8 | 51 30.67 | - 1.69 | -37.03 | -37.06 | 22 50 51.92 | + 0.01 | | | |
| | 10 | Ursæ Majoris, S. P. | S. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | | | |
| | 11 | Weisse 103 | S. | 5.6 | 8.3 | 9.8 | . . . | . . . | . . . | . . . | . . . | . . . | 8 18.08 | - 1.25 | . . . | -37.06 | 23 7 39.77 | - 3.72 | | | |
| | 12 | Weisse 104 | S. | . . . | . . . | . . . | . . . | 20.3 | 22.2 | 26.5 | 28.0 | 30.6 | 8 18.18 | - 1.25 | . . . | -37.06 | 23 7 39.87 | - 3.72 | | | |
| | 13 | Weisse 109 | S. | 14.2 | 16.9 | 18.5 | . . . | . . . | . . . | 34.9 | 36.5 | 39.0 | 8 26.67 | - 1.25 | . . . | -37.06 | 23 7 48.36 | - 3.72 | | | |
| | 14 | λ Draconis, S. P. . . | S. | 20.3 | 12.3 | 8.0 | 50.2 | 44.0 | 37.9 | 20.0 | 15.5 | 8.0 | 24 44.02 | - 3.63 | . . . | -37.06 | 11 24 3.33 | + 0.35 | | | |
| | 15 | γ Cephei | S. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | | | |
| | 16 | B. A. C. 8316 . . . | S. | 38.4 | 42.6 | 45.1 | 55.0 | 55.1 | 1.6 | 11.4 | 14.1 | 18.2 | 49 58.28 | + 0.23 | . . . | -37.06 | 23 49 21.45 | - 3.52 | | | |
| | 17 | B. A. C. 8326 . . . | S. | 12.2 | 16.1 | 18.3 | 27.9 | 31.1 | 34.3 | 43.8 | 46.1 | 50.3 | 5 31.12 | + 0.13 | . . . | -37.06 | 23 51 54.19 | - 3.53 | | | |
| | 18 | Amphitrite | S. | 34.8 | 37.3 | 39.0 | 45.0 | 46.8 | 49.0 | 55.1 | 56.6 | 59.3 | 59 46.99 | - 1.01 | . . . | -37.06 | 23 59 8.92 | . . . | | | |
| | 19 | Eugenia | S. | 13.5 | 16.4 | 18.1 | 24.2 | 25.9 | 28.0 | 34.2 | 35.8 | 38.2 | 11 26.03 | - 1.16 | . . . | -37.06 | 0 10 47.81 | . . . | | | |
| | 20 | Amalthea | S. | . . . | . . . | 50.0 | 52.0 | 54.0 | 56.0 | 58.1 | . . . | . . . | 18 51.03 | - 1.17 | . . . | -37.06 | 0 18 15.80 | . . . | | | |
| | 21 | Cybele | S. | 17.0 | 19.9 | 21.3 | 27.5 | 29.6 | 31.6 | 37.6 | 39.2 | 41.8 | 21 29.57 | - 1.06 | . . . | -37.06 | 0 20 51.45 | . . . | | | |
| | 22 | κ Draconis, S. P. . . | S. | . . . | . . . | 4.0 | 58.5 | 52.0 | 45.8 | 39.6 | . . . | . . . | 28 51.95 | - 3.73 | . . . | -37.06 | 12 28 11.16 | - 0.12 | | | |
| | 23 | 21 Cassiopee | S. | 21.7 | 34.3 | 39.6 | 2.6 | 10.3 | 17.8 | 40.4 | 46.0 | 55.4 | 38 10.12 | + 2.48 | . . . | -37.06 | 0 37 35.54 | + 0.64 | | | |
| | 24 | Galatea | S. | 26.5 | 28.9 | 30.5 | 36.6 | . . . | 40.8 | 46.8 | 48.5 | 50.9 | 48 38.69 | - 0.96 | . . . | -37.06 | 0 48 0.67 | . . . | | | |
| | 25 | Weisse 982 | S. | 45 7 48.3 | 50.0 | 55.9 | 58.0 | 0.2 | 6.2 | 7.9 | 10.4 | 57 58.07 | - 0.96 | . . . | -37.06 | 0 57 20.05 | - 3.82 | | | | |
| | 26 | Mnemosyne | S. | 42.3 | 44.9 | 46.4 | 52.6 | 54.7 | 56.8 | 3.6 | 4.6 | 7.6 | 11 54.70 | - 0.93 | . . . | -37.06 | 1 11 16.71 | . . . | | | |
| | 27 | Polaris | S. | . . . | . . . | . . . | . . . | 30.0 | 59.0 | 49.0 | 56.0 | 45.0 | 14 3.38 | + 0.64 | . . . | -37.06 | 1 14 6.96 | - 0.35 | | | |
| | 28 | B. A. C. 495 | S. | 3.4 | 6.1 | 7.7 | 14.0 | 16.1 | 18.3 | 24.6 | 26.3 | 28.8 | 33 16.14 | - 0.76 | . . . | -37.06 | 1 32 38.32 | - 3.89 | | | |
| | 29 | β Arietis | S. | 16.3 | 19.0 | 20.7 | 27.1 | 29.2 | 31.3 | 37.9 | 39.5 | 42.4 | 48 29.27 | - 0.67 | -37.09 | -37.06 | 1 47 51.54 | + 0.05 | | | |
| | 30 | Phœbe | S. | 15.9 | 18.5 | 20.1 | 26.4 | 28.6 | 30.7 | 36.9 | 38.5 | 41.2 | 56 28.53 | - 0.77 | . . . | -37.06 | 1 55 50.70 | . . . | | | |
| | 31 | Sirona | S. | 19.2 | 22.1 | 23.7 | 27.9 | 31.9 | 36.3 | 40.0 | 41.9 | 44.1 | 1 31.90 | - 0.89 | . . . | -37.06 | 2 0 53.95 | . . . | | | |
| | 32 | Neptune | S. | 22.7 | 25.3 | 26.9 | 33.1 | 35.1 | 37.2 | 43.6 | 45.0 | 47.6 | 10 35.17 | - 0.85 | . . . | -37.06 | 2 9 57.26 | . . . | | | |
| | 33 | Danæ | S. | 43.6 | 47.3 | 49.1 | 57.0 | 59.5 | 2.6 | 11.1 | 13.1 | 16.4 | 22 59.97 | - 0.17 | . . . | -37.06 | 2 22 22.74 | . . . | | | |
| | 34 | γ Ceti | S. | 22.3 | 24.8 | 26.4 | 32.5 | 34.5 | 36.6 | 42.7 | 44.2 | 46.7 | 37 34.52 | - 1.00 | -37.05 | -37.06 | 2 36 56.46 | 0.00 | | | |
| | 35 | ρ ² Arietis | S. | 19.6 | 22.1 | 23.7 | 27.0 | 32.3 | 34.4 | 40.8 | 42.1 | 45.1 | 49 32.27 | - 0.72 | . . . | -37.06 | 2 48 54.49 | - 4.00 | | | |
| | 36 | α Ceti | S. | 17.6 | 20.0 | 21.7 | 27.8 | 29.8 | 31.9 | 38.0 | 39.5 | 42.0 | 56 29.81 | - 0.98 | -37.04 | -37.06 | 2 56 51.77 | 0.00 | | | |
| | 37 | B. A. C. 1125 . . . | S. | 5.2 | 8.6 | 10.7 | 18.8 | 21.5 | 24.3 | 32.1 | 34.3 | 37.6 | 33 21.46 | - 1.96 | . . . | -37.06 | 3 32 42.46 | - 3.67 | | | |
| | 38 | B. A. C. 1136 ¹ . . . | S. | . . . | 49.0 | 50.9 | . . . | . . . | . . . | 12.6 | 14.4 | 18.0 | 36 1.75 | - 1.97 | . . . | -37.06 | 3 35 22.73 | - 3.65 | | | |
| | 39 | B. A. C. 1136 ² . . . | S. | . . . | 56.8 | 59.5 | 2.5 | 4.9 | 7.6 | . . . | . . . | . . . | 36 2.27 | - 1.97 | . . . | -37.06 | 3 35 23.25 | - 3.65 | | | |
| | 40 | η Tauri | S. | 35.3 | 38.0 | 39.7 | 46.5 | 48.6 | 50.9 | 57.6 | 59.4 | 2.0 | 40 48.67 | - 0.67 | -37.05 | -37.06 | 3 40 11.01 | - 0.01 | | | |
| | 41 | ζ Persei | S. | 47.8 | 50.8 | 52.6 | 59.9 | 2.3 | 4.6 | 11.7 | 13.7 | 16.5 | 47 2.21 | - 0.42 | -37.10 | -37.06 | 3 46 24.73 | + 0.03 | | | |
| | 42 | γ ¹ Eridani | S. | 44.0 | 46.7 | 48.2 | 54.6 | 56.7 | 58.7 | 5.0 | 6.7 | 9.2 | 52 56.64 | - 1.31 | -37.04 | -37.06 | 3 52 18.27 | + 0.02 | | | |
| | 43 | Venus II, N. . . . | P. | 44.7 | 47.4 | 48.9 | 55.2 | 57.2 | 59.3 | 5.4 | 7.6 | 9.5 | 55 57.18 | - 0.95 | . . . | -37.07 | 10 55 19.16 | - 0.64 | | | |
| | 44 | Venus S. | P. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | | | |
| | 45 | δ Leonis | P. | 57.3 | 59.9 | 1.6 | 8.2 | 10.4 | 12.5 | 19.0 | 20.8 | 23.5 | 8 10.36 | - 0.66 | -37.00 | -37.06 | 11 7 32.64 | - 0.06 | | | |
| | 46 | λ Draconis | P. | 2.6 | 10.3 | 14.6 | 32.7 | 38.4 | 44.4 | 2.4 | 6.9 | 14.5 | 24 38.53 | + 1.80 | . . . | -37.06 | 11 24 3.27 | + 0.26 | | | |
| | 47 | β Leonis (R.) . . . | P. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | | | |
| | 48 | β Leonis | P. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | | | |
| | 49 | η Virginis | P. | 1.0 | 3.5 | 5.2 | 11.3 | 13.4 | 15.4 | 21.5 | 23.0 | 25.5 | 14 13.31 | - 1.12 | -37.00 | -37.04 | 12 13 35.15 | - 0.06 | | | |
| | 50 | κ Draconis | P. | . . . | . . . | . . . | . . . | . . . | . . . | 11.0 | 15.8 | 23.3 | 28 46.68 | + 1.83 | . . . | -37.03 | 12 28 11.48 | + 0.19 | | | |

1. Bisections at threads II and III. } These bisections have been interchanged
 2. Bisections at threads V and VI. } in the reduction.

15. Bisections at threads D₂ and D₃.

19, 20, 21, 24, 25, 30, 31, 33, 37. Thread A used.

22, 27, 50. Bisections at sets B and D.

23, 46. Bisections at set C.

38, 39, 40. Thread B used.

38, 39. These bisections have been interchanged in the reduction.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETERS. | | | | | | Zenith-Point Correction. | Apparent Zenith-Distance, South. | | | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | | | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|------------------------|-----|-----|----|-----|-----|--------------------------|----------------------------------|------|-----|---------------------|-------------|--------------------------------|---|---|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | ° | ' | " | | | ° | ' | " | |
| 1 | 43 18 | 10 12.4 | 4.0 | 6.7 | 8.0 | 33 | 645 | 658 | .. | .. | .. | 69.3 | 316 37 45.1 | .. | — | 55.7 | 7 43 10.6 | +27.2 | | | |
| 2 | 43 18 | 12.4 | 4.0 | 6.7 | 8.0 | 33 | .. | .. | .. | 842 | 790 | 69.3 | 316 37 43.8 | .. | — | 55.7 | 7 43 9.3 | +27.2 | | | |
| 3 | 308 26 | 6.6 | 2.3 | 3.6 | 8.0 | 35 | .. | 980 | .. | 970 | .. | 69.3 | 51 30 14.6 | .. | + 1 | 14.2 | 102 37 50.0 | .. | | | |
| 4 | 308 26 | 6.6 | 2.3 | 3.6 | 8.0 | 34 | 860 | .. | .. | .. | 780 | 69.3 | 51 29 56.8 | .. | + 1 | 14.2 | 102 37 32.2 | .. | | | |
| 5 | 39 12 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | | | |
| 6 | 39 12 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | | | |
| 7 | 153 18 | 10 5 | 8.5 | 8.0 | 9.0 | 39 | 818 | 030 | .. | .. | .. | 69.3 | 206 39 16.9 | .. | + | 29.8 | 24 26 34.5 | — 2.7 | | | |
| 8 | 26 34 | 6.6 | 0.6 | 4.5 | 6.2 | 29 | .. | .. | .. | 970 | 035 | 69.3 | 333 20 44.8 | .. | — | 29.8 | 24 26 36.2 | — 1.0 | | | |
| 9 | 290 48 | 11.3 | 5.5 | 8.5 | 12.0 | 33 | .. | .. | .. | 200 | 100 | 69.3 | 69 7 36.1 | .. | + 2 | 34.4 | 120 16 31.7 | + 1.2 | | | |
| 10 | 78 32 | 8.8 | 3.1 | 4.0 | 5.6 | 32 | 320 | 330 | .. | .. | .. | 69.3 | 281 23 18.8 | .. | — 4 | 47.0 | 332 24 53.0 | + 4.0 | | | |
| 11 | 311 26 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | | | |
| 12 | 311 26 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | | | |
| 13 | 311 26 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | | | |
| 14 | 70 58 | 12.5 | 5.5 | 4.5 | 5.8 | 31 | .. | 314 | .. | 134 | .. | 69.3 | 288 57 3.0 | 41.5 | — 2 | 51.9 | 340 0 32.3 | + 2.9 | | | |
| 15 | 37 58 | 11.1 | 4.0 | 6.8 | 8.0 | 33 | .. | .. | .. | 075 | 050 | 69.3 | 321 57 33.0 | .. | — | 46.6 | 13 3 7.6 | + 1.0 | | | |
| 16 | 13 4 | 6.3 | 1.0 | 3.5 | 3.8 | 29 | 985 | 098 | .. | .. | .. | 69.3 | 346 50 42.1 | .. | — | 13.9 | 37 56 49.4 | +28.7 | | | |
| 17 | 10 46 | 8.6 | 3.7 | 5.7 | 6.2 | 28 | 796 | 768 | .. | .. | .. | 69.3 | 349 8 25.2 | .. | — | 11.4 | 40 14 35.0 | +28.7 | | | |
| 18 | 323 40 | 5.5 | 1.4 | 0.3 | 3.4 | 32 | 125 | 095 | .. | .. | .. | 69.3 | 36 15 12.1 | 41.0 | + | 13.7 | 87 22 17.0 | — 3.5 | | | |
| 19 | 315 16 | 10.6 | 5.4 | 5.5 | 8.9 | 36 | 285 | 090 | .. | .. | .. | 69.3 | 44 37 45.8 | .. | + | 58.9 | 95 15 5.9 | — 3.2 | | | |
| 20 | 315 0 | 4.7 | 1.6 | 2.8 | 3.5 | 37 | 090 | 860 | .. | .. | .. | 69.3 | 44 53 53.1 | .. | + | 59.4 | 96 1 14.0 | — 3.8 | | | |
| 21 | 320 32 | 9.6 | 3.4 | 5.0 | 8.6 | 34 | 900 | 850 | .. | .. | .. | 69.3 | 39 21 24.8 | .. | + | 49.0 | 90 28 35.0 | — 2.2 | | | |
| 22 | 70 32 | 6.7 | 0.1 | 1.3 | 1.7 | 36 | .. | .. | .. | 915 | 958 | 69.3 | 289 24 26.8 | .. | — 2 | 48.1 | 340 27 59.9 | + 4.5 | | | |
| 23 | 35 20 | 2.1 | 25.0 | 27.6 | 27.6 | 32 | 850 | .. | .. | .. | 830 | 69.3 | 324 35 19.6 | .. | — | 42.5 | 15 40 58.3 | — 2.1 | | | |
| 24 | 326 0 | 2.5 | 28.0 | 28.5 | 28.6 | 38 | .. | 900 | .. | 950 | .. | 69.3 | 33 54 20.6 | .. | + | 40.2 | 85 1 22.0 | — 4.3 | | | |
| 25 | 325 36 | 11.7 | 5.8 | 6.3 | 10.1 | 38 | .. | 415 | .. | 270 | .. | 69.3 | 34 18 20.7 | .. | + | 40.8 | 85 25 22.7 | +26.4 | | | |
| 26 | 327 54 | 9.7 | 3.6 | 4.8 | 7.2 | 39 | 760 | 740 | .. | .. | .. | 69.3 | 32 3 12.8 | .. | + | 37.5 | 83 10 11.5 | — 2.5 | | | |
| 27 | 49 40 | 4.3 | 27.1 | 29.1 | 27.4 | 33 | .. | .. | .. | 670 | 640 | 69.3 | 310 15 36.2 | .. | — 1 | 10.6 | 1 20 46.8 | + 2.1 | | | |
| 28 | 337 2 | 7.3 | 2.7 | 3.4 | 4.7 | 31 | .. | 390 | .. | 280 | .. | 69.3 | 22 53 3.1 | 38.6 | + | 25.3 | 73 59 49.6 | +26.8 | | | |
| 29 | 341 14 | 8.0 | 3.9 | 3.5 | 7.6 | 30 | .. | 330 | .. | 225 | .. | 69.3 | 18 40 48.4 | .. | + | 20.3 | 69 47 29.9 | + 1.0 | | | |
| 30 | 336 24 | 6.1 | 1.3 | 2.0 | 3.1 | 36 | 740 | 620 | .. | .. | .. | 69.3 | 23 29 49.1 | .. | + | 20.1 | 74 36 36.4 | — 2.9 | | | |
| 31 | 330 2 | 6.5 | 1.3 | 0.8 | 3.4 | 36 | 370 | 080 | .. | .. | .. | 69.3 | 29 51 41.9 | 37.8 | + | 34.4 | 80 58 37.5 | — 2.2 | | | |
| 32 | 332 14 | 8.4 | 3.3 | 3.5 | 5.5 | 37 | .. | 102 | .. | 025 | .. | 69.3 | 27 42 31.4 | .. | + | 31.5 | 78 49 24.1 | .. | | | |
| 33 | 2 14 | 7.0 | 2.3 | 4.8 | 5.0 | 39 | .. | 445 | .. | 395 | .. | 69.3 | 357 40 33.8 | .. | — | 2.4 | 48 46 52.6 | + 0.2 | | | |
| 34 | 323 46 | 10.7 | 4.7 | 4.9 | 9.2 | 33 | .. | 962 | .. | 908 | .. | 69.3 | 36 9 45.7 | .. | + | 43.9 | 87 16 50.8 | + 1.0 | | | |
| 35 | 338 52 | 5.0 | 0.5 | 0.0 | 3.0 | 31 | .. | 990 | .. | 975 | .. | 69.3 | 21 3 10.6 | .. | + | 23.1 | 72 9 54.9 | +24.4 | | | |
| 36 | 324 40 | 3.5 | 28.1 | 27.9 | 1.5 | 36 | .. | 870 | .. | 850 | .. | 69.3 | 35 16 23.3 | .. | + | 42.5 | 86 23 27.0 | — 0.1 | | | |
| 37 | 280 24 | 11.6 | 5.3 | 8.0 | 10.4 | 32 | 620 | 600 | .. | .. | .. | 69.3 | 79 28 51.9 | .. | + | 5 14.1 | 130 40 27.2 | +28.4 | | | |
| 38 | 280 24 | 11.6 | 5.3 | 8.0 | 10.4 | 29 | 440 | 490 | .. | .. | .. | 69.3 | 79 33 3.0 | .. | + | 5 16.1 | 130 44 40.3 | +28.4 | | | |
| 39 | 280 24 | 11.6 | 5.3 | 8.0 | 10.4 | 29 | .. | .. | .. | 050 | 015 | 69.3 | 79 33 11.5 | .. | + | 5 16.1 | 130 44 48.8 | +28.4 | | | |
| 40 | 344 46 | 7.3 | 2.8 | 3.1 | 6.0 | 24 | .. | .. | .. | 345 | 255 | 69.3 | 15 9 48.8 | .. | + | 16.3 | 66 16 26.3 | — 0.8 | | | |
| 41 | 352 34 | 10.3 | 3.6 | 4.5 | 7.3 | 36 | .. | 470 | .. | 400 | .. | 69.3 | 7 22 23.2 | .. | + | 7.8 | 58 28 52.2 | — 0.3 | | | |
| 42 | 307 12 | 6.6 | 1.5 | 3.0 | 5.2 | 33 | .. | 710 | .. | 650 | .. | 69.3 | 52 43 38.4 | 36.3 | + 1 | 19.0 | 163 51 18.6 | + 0.6 | | | |
| 43 | 328 32 | 10.5 | 5.0 | 5.7 | 7.1 | 34 | 340 | .. | .. | .. | 335 | 69.4 | 31 23 1.7 | 42.7 | + | 36.3 | 82 30 49.2 | .. | | | |
| 44 | 328 32 | 10.5 | 5.0 | 5.7 | 7.1 | 35 | .. | 615 | .. | 610 | .. | 69.4 | 31 24 11.1 | .. | + | 36.3 | 82 31 8.6 | .. | | | |
| 45 | 342 14 | 8.0 | 2.8 | 4.0 | 5.5 | 32 | .. | 475 | .. | 430 | .. | 69.4 | 17 41 20.8 | .. | + | 18.9 | 68 48 0.9 | — 0.7 | | | |
| 46 | 31 2 | 5.8 | 29.5 | 2.4 | 2.6 | 31 | 060 | .. | .. | .. | 125 | 69.4 | 328 53 43.4 | .. | — | 35.7 | 29 59 28.9 | — 1.8 | | | |
| 47 | 203 34 | 9.5 | 6.0 | 7.4 | 4.8 | 36 | 920 | 875 | .. | .. | .. | 69.4 | 156 22 20.6 | .. | — | 25.8 | 74 44 17.4 | + 1.1 | | | |
| 48 | 336 18 | 11.4 | 5.9 | 8.0 | 7.8 | 32 | .. | .. | .. | .. | 685 | 69.4 | 23 37 28.7 | 47.0 | + | 25.8 | 74 44 15.7 | — 0.6 | | | |
| 49 | 321 4 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | | | |
| 50 | 31 30 | 7.5 | 2.0 | 5.0 | 5.5 | 35 | .. | .. | .. | 225 | 230 | 69.4 | 328 26 18.9 | 52.7 | — | 35.8 | 19 32 4.3 | — 0.4 | | | |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|--------|
| | in. | ° | | " " | " " | " " | " " |
| 14 | 30.14 | 45.5 | 3 | — 0.8 | — | 8.9 | — 9.7 |
| 18 | 30.14 | 44.0 | 4 | — 0.8 | + | 8.9 | + 8.1 |
| 28 | 30.13 | 43.0 | 32 | — 0.1 | .. | .. | — 0.1 |
| 31 | 30.13 | 41.2 | 43 | — 5.1 | + | 10.1 | + 4.2 |
| 42 | 30.13 | 41.0 | 44 | — 5.1 | — | 10.1 | — 15.2 |
| 43 | 30.19 | 42.7 | | | | | |
| 48 | 30.19 | 46.0 | | | | | |
| 50 | 30.20 | 51.4 | | | | | |

For summary of the elements of reduction see page 3.

| DATE | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. |
|---------|---------|-----------------|---------------------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|-----------------|----------------|---------------------------|--------|-------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock apparent. | Clock adopted. | h. | m. | s. | |
| | | | | | | | | | | | | | | | | | | | | |
| 1876. | | | | | | | | | | | | m. | s. | s. | s. | s. | | | | s. |
| Oct. 18 | 1 | 12 | Canum Venat. | P. | 36.5 | 39.7 | 41.7 | 49.6 | 2.0 | 54.9 | 2.8 | 4.7 | 8.0 | 50 | 52.21 | -0.25 | -37.06 | -37.02 | 12 50 14.84 | +0.04 |
| | 2 | | Mercury II. | P. | 36.8 | 39.5 | 41.0 | 47.0 | 40.0 | 51.2 | 57.3 | 58.9 | 1.4 | 53 | 49.12 | -1.23 | . | -37.02 | 12 53 10.87 | -0.30 |
| | 3 | | Polaris, S. P. | P. | . | . | . | 56.8 | 26.6 | 0.4 | 35.9 | 39.9 | . | 15 | 28.22 | -44.06 | . | -37.01 | 1 14 7.15 | -0.21 |
| 19 | 4 | | Sun I, N. | P. | 15.0 | 17.7 | 19.2 | 25.4 | 27.5 | 29.5 | 35.7 | 37.4 | 40.0 | 38 | 27.49 | -1.37 | . | -37.00 | 13 37 49.12 | . |
| | 5 | | Sun II, S. | P. | 26.3 | 28.9 | 30.4 | 3.8 | 38.7 | 40.8 | 47.0 | 48.6 | 51.0 | 40 | 38.72 | -1.37 | . | -37.00 | 13 40 0.35 | . |
| | 6 | a | Draconis | P. | 8.5 | 14.6 | 17.9 | . | 37.2 | . | . | 0.5 | 6.4 | 0 | 37.40 | +1.10 | . | -36.99 | 14 1 1.51 | -0.01 |
| | 7 | 5 | Ursæ Minoris | P. | 27.5 | 38.6 | 44.8 | 10.8 | 19.6 | 28.0 | 53.6 | 0.3 | 10.8 | 28 | 19.33 | +3.05 | . | -36.98 | 14 27 45.40 | +0.29 |
| | 8 | | B. A. C. 5216 | P. | 54.4 | 57.0 | 58.6 | 5.0 | 7.0 | 9.2 | 5.5 | 17.0 | 19.8 | 41 | 7.06 | -0.85 | . | -36.95 | 15 40 29.26 | -1.26 |
| | 9 | δ | Scorpi | P. | 27.2 | 30.0 | 31.6 | 38.3 | 40.4 | 42.7 | 49.4 | 50.9 | 53.6 | 53 | 40.46 | -1.64 | -36.92 | -36.94 | 15 53 1.88 | -0.01 |
| | 10 | β ¹ | Scorpii | P. | 41.0 | 43.7 | 45.3 | 51.8 | 54.0 | 56.1 | 2.6 | 4.0 | 6.8 | 58 | 53.92 | -1.58 | -36.92 | -36.94 | 15 58 15.40 | +0.01 |
| | 11 | δ | Ophiuchi | P. | 18.5 | 1.0 | 22.6 | 28.7 | 30.7 | 32.7 | 38.9 | 40.4 | 43.0 | 8 | 30.72 | -1.25 | -36.98 | -36.94 | 16 7 52.53 | +0.06 |
| | 12 | | B. A. C. 5437 | P. | 13.1 | 15.8 | 17.4 | 23.4 | 25.5 | 27.6 | 33.7 | 35.3 | 37.8 | 12 | 25.51 | -1.27 | . | -36.93 | 16 11 47.31 | -1.61 |
| | 13 | | B. A. C. 5466 | P. | 53.0 | 55.7 | 57.4 | 3.9 | 6.0 | 8.2 | 14.6 | 16.3 | 19.0 | 17 | 6.01 | -0.80 | . | -36.93 | 16 16 28.28 | -1.24 |
| | 14 | a | Scorpii | P. | 15.3 | 18.1 | 19.9 | 26.7 | 28.9 | 31.2 | 38.0 | 39.7 | 42.5 | 22 | 28.92 | -1.75 | -36.90 | -36.93 | 16 21 50.24 | -0.04 |
| | 15 | | B. A. C. 5525 | P. | 19.1 | 21.9 | 23.5 | 30.1 | 32.4 | 34.5 | 41.0 | 42.7 | 45.5 | 25 | 32.30 | -0.76 | . | -36.93 | 16 24 54.61 | -1.20 |
| | 16 | A | Draconis | P. | . | . | 35.8 | 41.5 | . | 53.0 | 58.8 | . | . | 28 | 47.31 | +1.45 | . | -36.93 | 16 28 11.83 | +0.02 |
| 23 | 17 | δ | Leonis | E. | 58.7 | 1.4 | 3.0 | 9.6 | 11.8 | 14.0 | 50.6 | 52.3 | 54.9 | 8 | 11.81 | -0.74 | -38.31 | -38.38 | 11 7 32.69 | -0.13 |
| | 18 | | Venus II, S. | E. | 12.1 | 14.8 | 16.2 | 22.5 | 24.5 | 26.7 | 32.7 | 34.3 | 37.0 | 17 | 24.53 | -0.96 | . | -38.38 | 11 16 45.19 | -0.61 |
| | 19 | β | Draconis | E. | 5.3 | 12.9 | 17.3 | 35.3 | 41.3 | 47.0 | 5.0 | 9.6 | 17.0 | 24 | 41.19 | +0.89 | . | -38.38 | 11 24 3.70 | +0.46 |
| | 20 | β | Leonis | E. | 12.3 | 15.0 | 16.6 | 22.9 | 25.0 | 27.0 | 33.5 | 35.0 | 37.6 | 43 | 24.99 | -0.82 | -38.39 | -38.39 | 11 42 45.78 | -0.02 |
| | 21 | η | Virginis | E. | 2.5 | 5.0 | 6.6 | 12.7 | 14.8 | 16.8 | 22.6 | 24.4 | 27.0 | 14 | 14.74 | -1.05 | -38.42 | -38.40 | 12 13 35.29 | 0.00 |
| | 22 | κ | Draconis | E. | 12.6 | 20.4 | 24.8 | 43.0 | 49.3 | 55.4 | 14.0 | 18.2 | 25.9 | 28 | 49.29 | +0.91 | . | -38.41 | 12 28 11.79 | +0.37 |
| | 23 | 12 ² | Canum Venat. | E. | 38.0 | 41.2 | 43.3 | 51.2 | 53.9 | 56.5 | 4.5 | 6.2 | 9.5 | 50 | 53.79 | -0.44 | -38.47 | -38.42 | 12 50 14.93 | +0.05 |
| | 24 | | Mercury II, S. | E. | 14.4 | 17.0 | 18.5 | 24.6 | 26.8 | 28.8 | 34.0 | 36.4 | 39.0 | 55 | 26.71 | -1.10 | . | -38.42 | 12 54 47.19 | -0.26 |
| | 25 | | Polaris, S. P. | E. | 57.0 | 7.0 | 2.0 | 40.5 | 12.5 | 45.0 | 28.5 | 21.0 | 31.0 | 15 | 13.82 | -28.57 | . | -38.44 | 1 14 6.81 | -0.54 |
| | 26 | η | Ursæ Majoris (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 27 | η | Ursæ Majoris | E. | . | . | . | . | . | . | 31.4 | 33.6 | 37.6 | 43 | 18.61 | -0.20 | . | -38.46 | 13 42 39.95 | 0.00 |
| 24 | 28 | | Sun I, N. | E. | 15.7 | 18.3 | 19.7 | 26.2 | 28.3 | 30.4 | 36.6 | 38.3 | 40.7 | 57 | 28.24 | -1.22 | . | -38.47 | 13 56 48.55 | . |
| | 29 | | Sun II, S. | E. | 27.0 | 30.7 | 32.1 | 38.4 | 40.5 | 42.7 | 48.8 | 50.4 | 53.2 | 59 | 40.52 | -1.22 | . | -38.47 | 13 59 0.83 | . |
| | 30 | a | Cor. Borealis (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 31 | a | Coronæ Borealis | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 32 | ε | Serpentis | E. | . | . | . | . | . | 23.1 | 27.2 | 28.8 | 31.3 | 45 | 19.03 | -0.99 | -38.47 | -38.53 | 15 44 39.51 | -0.06 |
| | 33 | δ | Scorpii | E. | 28.5 | 31.0 | 32.8 | 39.4 | 41.5 | 43.9 | 50.4 | 52.2 | 55.0 | 53 | 41.67 | -1.40 | -38.40 | -38.53 | 15 53 1.74 | -0.12 |
| | 34 | η | Draconis | E. | 30.3 | 35.7 | 38.8 | 51.8 | 56.0 | 0.5 | 13.4 | 16.6 | 22.0 | 22 | 56.12 | +0.23 | . | -38.55 | 16 22 17.80 | -0.04 |
| | 35 | A | Draconis | E. | 15.5 | 22.1 | 26.7 | 43.8 | 49.5 | 55.0 | 12.3 | 16.5 | 23.6 | 28 | 49.48 | +0.71 | . | -38.55 | 16 28 11.64 | +0.04 |
| | 36 | κ | Ophiuchi | E. | 16.4 | 19.0 | 20.7 | 26.8 | 28.9 | 30.9 | 37.0 | 38.7 | 41.2 | 52 | 28.84 | -0.94 | -38.48 | -38.56 | 16 51 49.34 | -0.04 |
| | 37 | ε | Ursæ Minoris | E. | 37.7 | 55.1 | 6.6 | 53.0 | 8.0 | 23.4 | 8.7 | 19.7 | 38.6 | 59 | 7.94 | +3.74 | . | -38.57 | 16 58 33.11 | +0.11 |
| | 38 | a ¹ | Herculis | E. | 27.7 | 30.5 | 32.0 | 38.4 | 40.5 | 42.5 | 48.7 | 50.4 | 53.0 | 9 | 40.41 | -0.86 | -38.49 | -38.57 | 17 9 0.98 | -0.06 |
| | 39 | a | Ophiuchi | E. | . | . | . | . | 53.6 | 55.8 | 0.6 | 1.6 | 4.2 | 29 | 51.62 | -0.90 | -38.45 | -38.59 | 17 29 12.13 | -0.11 |
| | 40 | | Moon I, S. | E. | 32.5 | 35.3 | 37.0 | 43.8 | 46.0 | 48.4 | 55.4 | 57.0 | 59.9 | 2 | 46.14 | -1.42 | . | -38.67 | 20 2 6.05 | +67.48 |
| | 41 | κ | Cephei | E. | . | . | 26.0 | 35.4 | 45.0 | 51.0 | 12.8 | 19.6 | 31.6 | 13 | 35.48 | +2.07 | . | -38.68 | 20 12 58.87 | +0.36 |
| | 42 | | B. A. C. 7025 | E. | 19.4 | 22.4 | 24.5 | 32.0 | 34.9 | 37.5 | 45.0 | 47.0 | 50.4 | 19 | 34.79 | -1.67 | . | -38.68 | 20 18 54.44 | -3.67 |
| | 43 | ε | Delphini (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 44 | ε | Delphini | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 45 | a | Cygni | E. | 35.6 | 39.2 | 41.3 | 50.0 | 53.1 | 55.9 | 4.4 | 6.7 | 10.0 | 37 | 52.90 | -0.29 | -38.77 | -38.68 | 20 37 13.93 | +0.11 |
| | 46 | μ | Aquarii (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 47 | μ | Aquarii | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 48 | | 12-Year Cat., 1879 | E. | 30.6 | 46.0 | 54.7 | 30.1 | 42.3 | 53.9 | 29.6 | 38.9 | 43.5 | 53 | 42.21 | +2.92 | . | -38.70 | 20 53 6.43 | +0.75 |
| | 49 | a ² | Ursæ Majoris, S. P. | E. | 45.7 | 38.5 | 34.8 | 18.6 | 13.4 | 7.6 | 52.0 | 47.8 | 41.2 | 0 | 13.29 | -1.52 | . | -38.70 | 8 59 33.07 | -0.41 |
| | 50 | ς | Cygni | E. | 7.0 | 9.9 | 11.7 | 18.7 | 21.0 | 23.4 | 30.6 | 32.4 | 35.3 | 8 | 21.11 | -0.59 | -38.71 | -38.71 | 21 7 41.81 | +0.01 |

6, 7. Bisections at set C.

16, 25, 37, 48, 49. Bisections at sets B and D.

41. Bisections at threads V and VI.

46. Bisections at threads II and III.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | |
| 1 | 0 0 | " | " | " | " | " | " | " | " | " | " | " | " | " | " | " |
| 2 | 315 58 | " | " | " | " | " | " | " | " | " | " | " | 55.3 | " | " | " |
| 3 | 52 22 | 10 5.8 | 29.7 | 3.0 | 0.6 | 35 | 850 | 805 | 795 | 760 | 735 | 69.4 | 397 34 8.8 | 57.3 | — 1 15.0 | 358 39 15.0 — 0.5 |
| 4 | 311 2 | 3.0 | 29.8 | 2.2 | 1.2 | 34 | 655 | 650 | " | " | " | 69.4 | 48 53 50.3 | — + 1 6.0 | 100 1 17.5 | " |
| 5 | 310 30 | 2.4 | 29.7 | 1.2 | 2.5 | 35 | " | " | " | 350 | 340 | 69.4 | 49 26 1.7 | 58.2 | + 1 7.3 | 100 33 30.2 |
| 6 | 26 0 | 4.5 | 29.4 | 2.6 | 29.8 | 36 | 220 | " | " | " | 140 | 69.0 | 333 56 14 0 | 59.2 | — 29.5 | 25 2 5.7 — 3.9 |
| 7 | 37 16 | 10.5 | 5.4 | 8.6 | 6.6 | 34 | 100 | " | " | " | 040 | 68.5 | 322 39 47.4 | 60.2 | — 45.8 | 13 35 22.8 — 3.6 |
| 8 | 336 50 | 4.1 | 0.9 | 3.0 | 1.8 | 30 | 215 | 180 | " | 140 | 135 | 67.2 | 23 4 41.0 | 62.7 | + 24.3 | 74 11 26.5 — 8.0 |
| 9 | 298 48 | 9.5 | 6.5 | 7.8 | 8.0 | 35 | " | 625 | " | 595 | " | 66.9 | 61 8 9.3 | — + 1 43.1 | 112 16 13.6 | + 0.7 |
| 10 | 301 36 | 7.5 | 4.6 | 6.5 | 5.8 | 35 | " | 765 | " | 715 | " | 66.8 | 58 20 9.4 | — + 1 32.3 | 109 28 2.9 | — 1.2 |
| 11 | 317 40 | 5.5 | 3.2 | 4.5 | 4.8 | 32 | " | " | " | 575 | 560 | 66.6 | 42 15 20.0 | — + 51.8 | 93 22 23.0 | + 0.6 |
| 12 | 316 40 | 9 29 0 | 25.0 | 28.1 | 27.0 | 36 | " | 525 | " | 520 | " | 66.6 | 43 16 12.4 | — + 53.7 | 94 23 27.3 | — 9.6 |
| 13 | 310 30 | 10 5.6 | 3.5 | 4.0 | 2.3 | 37 | " | 815 | " | 745 | " | 66.6 | 19 26 38.4 | — + 20.1 | 70 33 19.7 | — 5.2 |
| 14 | 294 54 | 6.8 | 3.4 | 5.4 | 4.5 | 31 | 775 | 765 | " | " | " | 66.6 | 65 1 6.3 | — + 2 1.8 | 116 9 29.3 | — 1.6 |
| 15 | 342 48 | 8.0 | 5.9 | 6.7 | 6.1 | 34 | " | 110 | " | 670 | " | 66.6 | 17 7 44.8 | — + 17.6 | 68 14 23.6 | — 4.3 |
| 16 | 30 4 | 7.0 | 3.8 | 5.8 | 3.5 | 35 | " | " | " | 230 | 220 | 66.6 | 329 52 0.8 | 62.9 | — 33.1 | 20 57 48.9 — 1.7 |
| 17 | 342 14 | 12.4 | 8.8 | 8.6 | 13.5 | 32 | " | 280 | " | 230 | " | 67.4 | 17 41 21.5 | — + 18.2 | 68 48 0.9 | — 1.7 |
| 18 | 326 40 | 8.3 | 5.3 | 3.4 | 9.3 | 37 | " | 020 | " | 050 | " | 67.4 | 33 16 30.4 | — + 37.5 | 84 23 29.1 | " |
| 19 | 31 2 | 10.3 | 6.0 | 5.4 | 9.0 | 33 | 700 | 805 | " | 750 | 655 | 67.4 | 328 53 42.3 | 55.0 | — 34.5 | 19 59 29.0 — 3.4 |
| 20 | 336 18 | 16.2 | 12 6 | 10.9 | 14.5 | 32 | " | 790 | " | 700 | " | 67.4 | 23 37 31.7 | — + 25.0 | 74 44 17.9 | + 0.6 |
| 21 | 321 4 | 5.3 | 2.0 | 0 3 | 5.7 | 34 | " | 115 | " | 070 | " | 67.4 | 38 51 42.0 | — + 45.9 | 89 58 49.1 | — 0.1 |
| 22 | 31 30 | 3.8 | 29.1 | 28.3 | 2.3 | 36 | " | 420 | " | 410 | " | 67.4 | 328 26 15.8 | — 35.0 | 19 32 2.0 | — 4.6 |
| 23 | 0 0 | 7.5 | 4.8 | 1.0 | 7.8 | 29 | " | 700 | " | 680 | " | 67.4 | 359 54 36.8 | — 0.1 | 51 0 57.9 | — 1.1 |
| 24 | 317 0 | 2.8 | 29.3 | 28.2 | 4.0 | 33 | 520 | 510 | " | 510 | 450 | 67.4 | 42 55 30.6 | — + 52.9 | 94 2 44.7 | " |
| 25 | 52 22 | 9.4 | 4.8 | 4.5 | 7.5 | 35 | 775 | " | 500 | " | 725 | 67.4 | 307 34 11.6 | — + 13.8 | 358 39 19.0 | + 1.5 |
| 26 | 168 54 | 10.5 | 9.2 | 8.0 | 10.7 | 34 | 340 | 320 | " | " | " | 67.4 | 191 1 50.4 | 59.0 | + 11.1 | 40 4 19.7 + 0.3 |
| 27 | 10 58 | 9.8 | 6.5 | 5.2 | 10.0 | 35 | " | " | " | 420 | 395 | 67.4 | 348 58 8.2 | — 11.1 | 40 4 18.3 | — 1.1 |
| 28 | 309 16 | 14.4 | 7.5 | 8.0 | 14.1 | 33 | 590 | 540 | " | " | " | 67.4 | 50 39 41.1 | 59.0 | + 1 9.1 | 101 47 11.4 |
| 29 | 308 44 | 12.0 | 7.2 | 5.7 | 13.1 | 34 | " | " | " | 525 | 500 | 67.4 | 51 11 55.0 | — + 10.4 | 102 19 26.6 | " |
| 30 | 191 12 | 9.8 | 9.1 | 7.2 | 12.2 | 36 | 460 | 500 | " | " | " | 67.4 | 168 14 23.7 | — 11.8 | 62 52 9.3 | + 0.8 |
| 31 | 348 10 | 3.0 | 28 3 | 28.2 | 5.5 | 33 | " | " | " | 770 | 750 | 67.4 | 11 45 36.0 | — + 11.8 | 62 52 9.0 | + 0.5 |
| 32 | 325 54 | 8.0 | 6.5 | 3.0 | 10.1 | 35 | " | " | " | 220 | 100 | 67.4 | 34 2 2.9 | — + 38.3 | 85 9 2.4 | + 1.9 |
| 33 | 268 48 | 10.0 | 8.1 | 6.5 | 13 0 | 35 | " | 575 | " | 530 | " | 67.4 | 61 8 10.3 | — + 1 42.5 | 112 16 14.0 | + 1.3 |
| 34 | 22 50 | 3.6 | 0.7 | 1.5 | 4.1 | 36 | " | 635 | " | 595 | " | 67.4 | 337 6 20.4 | — 24.0 | 28 12 17.6 | — 2.8 |
| 35 | 30 4 | 3.0 | 29.2 | 29 0 | 2.8 | 35 | " | 495 | " | 410 | " | 67.4 | 329 52 1.4 | — 32.9 | 20 57 49.7 | — 2.3 |
| 36 | 320 36 | 7.3 | 3.8 | 3.2 | 7.8 | 36 | " | 295 | " | 225 | " | 67.4 | 29 19 0.9 | — + 31.9 | 80 25 54.0 | 0.0 |
| 37 | 43 16 | 6.3 | 2.0 | 3.0 | 4.6 | 36 | 020 | " | 020 | " | 955 | 67.4 | 316 40 12.4 | — 53.5 | 7 45 40.1 | — 2.5 |
| 38 | 335 34 | 3.7 | 1.5 | 29.8 | 6 6 | 32 | " | 375 | " | 350 | " | 67.4 | 24 21 15.2 | — + 25.7 | 75 28 2.1 | — 0.1 |
| 39 | 333 42 | 2.3 | 29.5 | 28.5 | 4.0 | 35 | " | " | " | 800 | 760 | 67.4 | 26 14 6.6 | — + 28.0 | 77 20 55.8 | + 1.8 |
| 40 | 295 28 | 11.5 | 8.3 | 7.8 | 14.1 | 36 | 865 | 740 | 630 | 535 | 370 | 68.1 | 64 28 28.5 | — + 1 58.7 | 115 36 48.4 | " |
| 41 | 36 22 | 7.2 | 1.7 | 2.5 | 6.5 | 34 | " | " | " | 265 | 255 | 68.1 | 321 33 47.9 | — 45.2 | 12 39 23.9 | — 1.8 |
| 42 | 283 18 | 16.0 | 11.0 | 10.3 | 16.1 | 34 | " | 295 | " | 290 | " | 68.1 | 76 37 55.0 | — + 3 54.9 | 127 48 11.7 | — 4.0 |
| 43 | 207 56 | 11.6 | 9.8 | 6.8 | 9.0 | 35 | 170 | 000 | " | " | " | 68.1 | 152 0 2.9 | 56.0 | — 30.3 | 79 6 48.6 + 1.6 |
| 44 | 331 56 | 2.2 | 29.1 | 27.9 | 2.3 | 35 | " | " | " | 030 | 990 | 68.1 | 27 59 54.8 | — + 30.3 | 79 6 46.3 | — 0.7 |
| 45 | 5 52 | 6.6 | 4.3 | 3.3 | 7.2 | 31 | " | 520 | " | 480 | " | 68.1 | 354 3 5.4 | — 5.9 | 45 9 20.7 | — 0.2 |
| 46 | 228 16 | 9.8 | 6.3 | 6.0 | 8.7 | 37 | 735 | 750 | " | " | " | 68.1 | 131 40 42.5 | — + 1 4.0 | 99 26 42.7 | + 2.1 |
| 47 | 311 36 | 8.3 | 6.3 | 5.3 | 12.3 | 31 | " | " | " | 995 | 970 | 68.1 | 48 19 16.0 | — + 1 4.0 | 99 26 41 2 | + 0.6 |
| 48 | 41 6 | 6.0 | 1.3 | 1.3 | 5.0 | 30 | 800 | " | " | " | 725 | 68.1 | 318 48 52.3 | — 49.8 | 9 54 23.7 | — 2.0 |
| 49 | 73 20 | 5.5 | 0.5 | 29.5 | 4.7 | 29 | 810 | " | " | " | 830 | 68.1 | 286 34 36.4 | — 3 9.1 | 337 37 48.5 | + 2.1 |
| 50 | 350 40 | 10.0 | 6.9 | 3.8 | 10.6 | 34 | " | 755 | " | 735 | " | 68.1 | 9 9 57.4 | — + 9.2 | 60 16 27.8 | — 1.0 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|------------|
| | in. | ° | | " | " | " | " |
| 1 | 30.19 | 53.3 | 4 | — 6.7 | + 16 6.3 | . | + 15 59.6 |
| 3 | 30.18 | 55.3 | 5 | — 6.8 | — 16 6.3 | . | — 16 13.1 |
| 5 | 30.18 | 55.7 | 18 | — 5.2 | — 9.1 | . | — 4.3 |
| 6 | 30.17 | 57.1 | 21 | — 7.1 | — 4.0 | . | — 11.1 |
| 7 | 30.15 | 57.8 | 28 | — 6.9 | + 16 7.6 | . | + 16 0.7 |
| 8 | 30.13 | 60.1 | 29 | — 6.9 | — 16 7.6 | . | — 16 14.5 |
| 16 | 30.13 | 61.2 | 40 | — 48 49.3 | — 14 48.7 | . | — 1 3 38.0 |
| 19 | 29.74 | 56.0 | | | | | |
| 26 | 29.74 | 59.0 | | | | | |
| 28 | 29.73 | 59.0 | | | | | |
| 43 | 29.70 | 58.0 | | | | | |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. |
|---------|---------|-------------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|-----------------|----------------|---------------------------|-------------|----------------------------|
| | | | | I. | II | III | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar'nt. | Clock adopted. | h. | m. | |
| 1876. | | | | | | | | | | | | | m. | s. | s. | | | s. | |
| Oct. 24 | 1 | <i>a</i> Cephei (R) | E. | | | | | | | | | | 16 | 16.77 | + 0.33 | | -38.71 | 21 15 38.39 | + 0.19 |
| | 2 | <i>a</i> Cephei | E. | | | | | 21.1 | 25.5 | 34.3 | 37.5 | 42.8 | 24 | 15.03 | - 2.77 | | -38.72 | 9 23 33.54 | - 0.31 |
| | 3 | <i>d</i> Ursæ Majoris, S. P. | E. | 51.5 | 44.0 | 39.6 | 21.0 | 15.0 | 8.8 | 51.0 | 46.2 | 38.2 | 25 | 44.75 | - 1.11 | -38.63 | -38.72 | 21 25 4.92 | - 0.06 |
| | 4 | <i>β</i> Aquarii | E. | | 40.6 | 42.7 | 44.7 | 46.8 | 48.9 | 53.0 | 54.5 | 57.0 | 51 | 58.17 | + 1.28 | | -38.74 | 21 51 20.71 | + 0.62 |
| | 5 | 79 Draconis | E. | 15.9 | 25.0 | 30.0 | 51.5 | 58.3 | 4.9 | 26.3 | 31.6 | 40.0 | | | | | | | |
| | 6 | B. A. C. 7732 | E. | 37.0 | 35.8 | 8.6 | 53.4 | 9.0 | 24.0 | 9.0 | 40.6 | 39.8 | 3 | 8.58 | + 4.06 | | -38.74 | 22 2 33.90 | + 1.26 |
| | 7 | B. A. C. 7735 | E. | 43.9 | 2.0 | 14.0 | 59.8 | 15.0 | 29.7 | 16.0 | 26.7 | 46.2 | 3 | 14.81 | + 4.06 | | -38.74 | 22 2 40.13 | + 1.20 |
| | 8 | Saturn I, N. | E. | 6.2 | 5.7 | 10.4 | | | | 27.0 | 28.6 | 31.3 | 17 | 18.70 | - 1.20 | | -38.75 | 22 16 38.75 | |
| | 9 | Saturn II, S. | E. | | | 15.8 | 17.8 | 19.9 | 21.9 | 23.9 | | | 17 | 19.87 | - 1.20 | | -38.75 | 22 16 39.92 | |
| | 10 | B. A. C. 7857 | E. | 23.8 | 35.8 | 43.4 | 12.9 | 23.8 | 33.5 | 2.9 | 10.7 | 23.1 | 26 | 23.32 | + 2.29 | | -38.75 | 22 25 46.86 | - 1.11 |
| 26 | 11 | Venus II, N. | P. | 7.4 | 9.9 | 11.6 | 17.8 | 19.8 | 21.9 | 28.0 | 29.5 | 32.0 | 30 | 19.77 | - 0.97 | | -39.04 | 11 29 39.76 | - 0.60 |
| | 12 | Venus S. | P. | | | | | | | | | | | | | | | | |
| | 13 | <i>β</i> Leonis | P. | 12.9 | 15.6 | 17.3 | 23.5 | 25.7 | 27.8 | 34.0 | 35.8 | 38.3 | 43 | 25.66 | - 0.76 | -39.06 | -39.04 | 11 42 45.86 | 0.00 |
| | 14 | <i>α</i> Draconis | P. | | | | | | | 13.0 | 17.8 | 25.0 | 28 | 48.58 | + 1.98 | | -39.03 | 12 28 11.53 | + 0.02 |
| | 15 | 12 ^h Canum Venat | P. | 38.3 | 41.6 | 43.6 | 51.5 | 54.2 | 56.7 | 4.7 | 6.6 | 9.9 | 50 | 54.12 | - 0.16 | -39.03 | -39.03 | 12 50 14.93 | 0.00 |
| | 16 | B. A. C. 4367 | P. | 29.0 | 31.7 | 33.3 | 39.5 | 41.6 | 43.7 | 49.9 | 51.4 | 53.9 | 56 | 51.56 | - 0.82 | | -39.02 | 12 56 1.72 | - 1.53 |
| | 17 | Mercury II, N. | P. | 8.5 | 11.1 | 12.6 | 18.8 | 20.8 | 22.8 | 29.0 | 30.6 | 33.0 | 3 | 20.79 | - 1.14 | | -39.02 | 13 2 40.63 | - 0.24 |
| | 18 | Mercury S. | P. | | | | | | | | | | | | | | | | |
| | 19 | Polaris, S. P. | P. | | | 8.3 | 57.6 | 31.7 | 5.0 | 38.5 | | | 15 | 31.76 | -45.74 | | -39.02 | 1 14 7.00 | + 0.27 |
| | 20 | <i>a</i> Virginis | P. | 11.5 | 13.0 | 17.2 | 19.3 | 21.4 | 23.5 | 25.6 | 29.6 | 31.2 | 19 | 21.37 | - 1.20 | -38.99 | -39.02 | 13 18 41.09 | - 0.05 |
| | 21 | <i>η</i> Ursæ Majoris (R.) | P. | | | | | | | | | | | | | | | | |
| | 22 | <i>η</i> Ursæ Majoris | P. | | | | | | | | 33.7 | 37.5 | 43 | 18.55 | + 0.24 | | -39.02 | 13 42 39.77 | - 0.21 |
| | 23 | <i>a</i> Draconis | P. | 10.2 | 16.3 | 19.9 | 34.4 | 39.2 | 43.9 | 58.5 | 1.9 | 8.1 | 1 | 39.16 | + 1.30 | | -39.01 | 14 1 1.45 | - 0.06 |
| 27 | 24 | Sun I, S. | P. | 48.5 | 51.0 | 52.7 | 59.0 | 1.1 | 3.2 | 9.2 | 11.0 | 13.6 | 9 | 1.03 | - 1.32 | | -39.01 | 14 8 20.70 | |
| | 25 | Sun II, N. | P. | 1.1 | 3.8 | 5.4 | 11.7 | 13.8 | 15.9 | 22.2 | 23.9 | 26.5 | 11 | 13.81 | - 1.32 | | -39.01 | 14 10 33.48 | |
| | 26 | <i>γ</i> ² Ursæ Minoris. | P. | 49.7 | 58.2 | 3.2 | 23.0 | 29.9 | 36.8 | 56.7 | 1.6 | 10.2 | 21 | 29.92 | + 2.34 | | -39.00 | 15 20 53.26 | - 0.06 |
| | 27 | <i>ι</i> Scaphi | P. | 17.1 | 20.0 | 21.7 | 28.5 | 30.8 | 33.3 | 39.9 | 41.6 | 44.4 | 22 | 30.81 | - 1.61 | -38.98 | -39.00 | 16 21 50.20 | - 0.03 |
| | 28 | <i>η</i> Draconis | P. | | | | | | | 12.8 | 16.3 | 21.5 | 22 | 55.62 | + 1.02 | | -39.00 | 16 22 17.64 | - 0.12 |
| | 29 | <i>A</i> Draconis | P. | 14.4 | 21.4 | 25.7 | 42.8 | 48.3 | 54.1 | 11.3 | 15.4 | 22.5 | 28 | 48.42 | + 1.81 | | -38.99 | 16 28 11.24 | - 0.24 |
| | 30 | <i>ζ</i> Ophiuchi | P. | 49.2 | 51.9 | 53.6 | 59.8 | 1.0 | 4.0 | 10.2 | 11.7 | 14.2 | 31 | 1.83 | - .24 | -38.97 | -38.99 | 16 30 21.60 | - 0.02 |
| | 31 | <i>η</i> Herculis | P. | 2.6 | 5.9 | 8.0 | 15.7 | 18.6 | 21.0 | 29.0 | 30.8 | 34.3 | 39 | 18.43 | - 0.11 | -39.03 | -38.99 | 16 38 39.33 | + 0.05 |
| | 32 | <i>β</i> Aquarii | P. | 32.6 | 35.2 | 36.8 | 43.0 | 45.0 | 47.0 | 53.2 | 54.7 | 57.3 | 25 | 44.98 | - 1.18 | -38.83 | -38.88 | 21 25 4.92 | - 0.02 |
| | 33 | <i>β</i> Cephei | P. | | | 28.1 | 34.6 | 40.4 | 46.4 | 52.3 | | | 27 | 40.39 | + 1.87 | | -38.88 | 21 27 3.38 | - 0.10 |
| | 34 | <i>ε</i> Pegasi | P. | 36.0 | 38.6 | 40.2 | 46.4 | 48.4 | 50.5 | 56.7 | 58.2 | 0.9 | 38 | 48.43 | - 0.88 | -38.90 | -38.85 | 21 38 8.67 | + 0.03 |
| | 35 | B. A. C. 7612 (R.) | P. | | | | | | | | | | | | | | | | |
| | 36 | B. A. C. 7612 | P. | | | | 10.2 | 22.6 | 26.0 | 32.7 | 35.0 | 39.0 | 46 | 19.25 | + 0.33 | | -38.88 | 21 45 40.70 | - 1.88 |
| | 37 | B. A. C. 7646 | P. | | | 42.9 | 46.4 | 49.7 | 53.0 | 56.3 | | | 51 | 49.68 | + 0.36 | | -38.88 | 21 51 11.16 | - 1.93 |
| | 38 | <i>a</i> Aquarii | P. | 55.7 | 58.4 | 59.9 | 6.0 | 8.0 | 10.0 | 16.3 | 17.8 | 20.4 | 0 | 8.06 | - 1.07 | -38.91 | -38.88 | 21 59 28.11 | + 0.06 |
| | 39 | B. A. C. 7779 ¹ | P. | 32.7 | 41.3 | 46.4 | 6.8 | 13.6 | 20.8 | 11.5 | 46.3 | 55.1 | 11 | 13.83 | + 2.38 | | -38.88 | 22 10 37.33 | - 1.08 |
| | 40 | B. A. C. 7779 ² | P. | 34.0 | 42.7 | 47.8 | 8.8 | 14.7 | 21.9 | 42.6 | 47.8 | 56.5 | 11 | 15.13 | + 2.38 | | -38.88 | 22 10 38.63 | - 1.08 |
| | 41 | Saturn I, N. | P. | 55.6 | 58.1 | 59.8 | | | | 16.6 | 18.0 | 20.7 | 17 | 8.13 | - 1.31 | | -38.88 | 22 16 27.94 | |
| | 42 | Saturn II, S. | P. | | | 5.0 | 7.3 | 9.4 | 11.5 | 13.6 | | | 17 | 9.37 | - 1.31 | | -38.88 | 22 16 29.18 | |
| | 43 | Moon I, S. | P. | 34.4 | 37.0 | 38.5 | 45.0 | 47.0 | 49.2 | 55.6 | 57.2 | 59.9 | 28 | 47.09 | - 1.20 | | -38.87 | 22 28 6.93 | + 0.53 |
| | 44 | 64 Aquarii | P. | 15.7 | 18.3 | 23.7 | 25.9 | 28.2 | 30.3 | 32.3 | 38.0 | 40.5 | 33 | 28.10 | - 1.27 | | -38.87 | 22 32 47.96 | - 3.54 |
| | 45 | <i>ι</i> Cephei (R.) | P. | | | | | | | | | | | | | | | | |
| | 46 | <i>ι</i> Cephei | P. | | | | | | | 15.7 | 19.2 | 25.7 | 45 | 55.98 | + 1.34 | | -38.87 | 22 45 18.45 | + 0.02 |
| | 47 | <i>a</i> Ursæ Majoris, S. P. | P. | 14.9 | 9.4 | 5.9 | 52.7 | 48.7 | 43.8 | 39.7 | 27.3 | 21.7 | 50 | 48.34 | - 2.99 | | -38.87 | 10 56 6.48 | - 0.16 |
| | 48 | B. A. C. 8058 | P. | 23.4 | 27.0 | 20.2 | 38.0 | 41.0 | 43.9 | 52.7 | 54.9 | 58.5 | 2 | 40.96 | + 0.10 | | -38.87 | 23 2 2.10 | - 2.91 |
| | 49 | <i>λ</i> Draconis, S. P. | P. | | | 58.5 | 52.5 | 46.3 | 40.5 | 34.5 | | | 24 | 46.43 | - 3.89 | | -38.87 | 11 24 3.67 | + 0.25 |
| | 50 | <i>ι</i> Piscium (R) | P. | | | | | | | | | | | | | | | | |

3, 14, 23, 26, 28, 33, 39, 40, 45, 48. Bisections at sets B and D
 21. Bisections at threads I and III.
 29, 37, 49. Bisections at set C.
 43. Bisections at threads II-VI.

| Number. | Circle Division. | MICROSCOPE MICROMS | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | |
|---------|------------------|--------------------|------|------|-------|-----------------------|-----|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | | |
| | | r. | " | " | " | | | | | | | | | | | | | |
| 1 | 156 46 | 10 7.4 | 5.8 | 5.3 | 9.8 | 35 | 380 | 250 | .. | .. | .. | 68.1 | 203 10 3.3 | .. | + | 24.4 | 27 55 53.5 | - 3.1 |
| 2 | 23 6 | 7.0 | 5.7 | 4.8 | 8.0 | 34 | .. | .. | .. | 770 | 730 | 68.1 | 336 49 57.8 | .. | - | 24.4 | 27 55 54.6 | - 2.0 |
| 3 | 70 38 | 12.7 | 4.7 | 7.6 | 10.9 | 36 | 33 | .. | .. | .. | 420 | 68.1 | 289 18 23.1 | .. | - | 2 41.3 | 340 22 3.0 | + 1.6 |
| 4 | 314 56 | 10.2 | 6.7 | 5.4 | 12.3 | 32 | .. | .. | .. | 560 | 550 | 68.1 | 44 59 25.4 | .. | + | 57.0 | 96 6 43.6 | + 1.2 |
| 5 | 34 8 | 7.0 | 2.9 | 1.3 | 7.7 | 30 | .. | 570 | .. | 170 | .. | 68.1 | 325 46 50.5 | .. | - | 38.8 | 16 52 32.9 | - 2.3 |
| 6 | 43 18 | 5.4 | 1.5 | 29.8 | 5.3 | 34 | .. | 010 | .. | 010 | .. | 68.1 | 316 37 43.6 | .. | - | 53.9 | 7 43 10.9 | +28.6 |
| 7 | 43 18 | 5.4 | 1.5 | 29.8 | 5.3 | 33 | .. | 770 | .. | 780 | .. | 68.1 | 316 37 40.0 | .. | - | 53.9 | 7 43 7.3 | +28.6 |
| 8 | 308 24 | 6.0 | 2.2 | 0.8 | 2.4 | 36 | 430 | .. | .. | .. | 400 | 68.1 | 51 32 17.7 | .. | + | 1 11.7 | 102 39 50.6 | .. |
| 9 | 308 24 | 6.0 | 2.2 | 0.8 | 2.4 | 37 | .. | 615 | .. | 585 | .. | 68.1 | 51 32 35.9 | .. | + | 1 11.7 | 102 49 8.8 | .. |
| 10 | 39 12 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 11 | 325 28 | 9.8 | 5.9 | 4.3 | 10.8 | 30 | .. | 125 | .. | 105 | .. | 69.4 | 34 26 47.6 | .. | + | 40.7 | 85 33 49.5 | .. |
| 12 | 325 28 | 9.8 | 5.9 | 4.3 | 10.8 | 31 | .. | 350 | .. | 330 | .. | 69.4 | 34 27 6.6 | 46.7 | + | 40.7 | 85 34 8.5 | .. |
| 13 | 336 18 | 9 29.7 | 24.7 | 25.0 | 28.3 | 33 | 693 | 680 | .. | 610 | 585 | 69.4 | 23 37 30.9 | .. | + | 26.0 | 74 44 18.1 | + 0.2 |
| 14 | 31 30 | 10 6.6 | 1.9 | 2.8 | 6.2 | 36 | .. | .. | .. | 425 | 410 | 69.4 | 328 26 21.2 | 47.8 | - | 36.4 | 19 32 6.0 | - 1.8 |
| 15 | 0 0 | 7.0 | 3.9 | 3.3 | 7.6 | 29 | 680 | 675 | .. | 640 | 600 | 69.4 | 359 54 38.6 | 48.5 | - | 0.1 | 51 0 59.7 | - 0.2 |
| 16 | 332 40 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 17 | 316 34 | 2.8 | 29.0 | 0.0 | 5.5 | 34 | 930 | .. | .. | .. | 915 | 69.4 | 43 21 55.2 | 48.5 | + | 55.8 | 94 29 12.2 | .. |
| 18 | 316 34 | 2.8 | 29.0 | 0.0 | 5.5 | 35 | .. | 345 | .. | 335 | .. | 69.4 | 43 22 1.6 | .. | + | 55.8 | 94 29 18.6 | .. |
| 19 | 52 22 | 7.6 | 3.5 | 4.2 | 6.6 | 35 | 910 | 875 | 840 | 835 | 830 | 69.4 | 307 34 13.1 | .. | + | 1 16.7 | 358 39 17.6 | - 1.1 |
| 20 | 310 32 | 8.5 | 5.3 | 4.1 | 9.9 | 32 | .. | .. | .. | 825 | 790 | 69.4 | 49 23 28.8 | 49.2 | + | 1 8.8 | 100 30 58.8 | - 0.6 |
| 21 | 168 54 | 9.2 | 8.6 | 8.4 | 10.3 | 34 | 220 | 175 | .. | .. | .. | 69.4 | 191 1 50.3 | .. | + | 11.5 | 40 4 19.4 | - 1.1 |
| 22 | 10 58 | 13.0 | 9.8 | 9.3 | 14.0 | 35 | .. | .. | .. | 185 | 155 | 69.4 | 348 58 10.3 | .. | - | 11.5 | 40 4 20.0 | - 0.5 |
| 23 | 26 0 | 9.0 | 4.5 | 5.4 | 7.7 | 35 | .. | .. | .. | .. | 985 | 69.4 | 333 56 16.9 | .. | - | 28.9 | 25 2 9.2 | - 3.5 |
| 24 | 307 42 | 3.0 | 29.5 | 0.1 | 5.1 | 32 | 130 | 209 | .. | .. | .. | 69.4 | 52 13 12.6 | .. | + | 1 16.0 | 103 20 49.8 | .. |
| 25 | 308 14 | 7.0 | 3.5 | 3.5 | 8.5 | 30 | .. | .. | .. | 925 | 960 | 69.4 | 51 40 58.5 | 49.6 | + | 1 14.6 | 102 48 34.3 | .. |
| 26 | 33 18 | 8.5 | 4.0 | 4.4 | 8.0 | 34 | 815 | .. | .. | .. | 820 | 69.4 | 326 37 58.3 | 52.2 | - | 38.6 | 17 43 40.9 | + 0.3 |
| 27 | 294 54 | 10.3 | 7.4 | 7.5 | 12.5 | 31 | 140 | 050 | .. | .. | .. | 69.4 | 65 1 3.1 | 52.5 | + | 2 5.1 | 116 9 29.4 | - 1.1 |
| 28 | 22 50 | 10.2 | 6.8 | 8.2 | 10.9 | 36 | .. | .. | .. | 305 | 315 | 69.4 | 337 6 24.1 | .. | - | 24.8 | 28 12 20.5 | - 0.8 |
| 29 | 30 4 | 8.5 | 4.7 | 4.3 | 9.0 | 35 | 185 | .. | .. | .. | 115 | 69.4 | 329 52 3.6 | .. | - | 34.0 | 20 57 50.8 | - 2.1 |
| 30 | 310 44 | 5.0 | 1.6 | 2.0 | 7.9 | 33 | .. | .. | .. | 210 | .. | 69.4 | 49 11 32.0 | .. | + | 1 7.8 | 100 19 1.0 | + 1.3 |
| 31 | 0 12 | 11.5 | 9.3 | 9.1 | 12.0 | 35 | .. | 295 | .. | 255 | .. | 69.4 | 359 44 9.6 | 52.3 | - | 0.3 | 50 50 30.5 | + 1.9 |
| 32 | 314 56 | 12.5 | 9.5 | 7.8 | 14.8 | 32 | .. | 145 | .. | 090 | .. | 69.4 | 44 59 21.6 | 44.7 | + | 59.4 | 96 6 42.2 | - 0.3 |
| 33 | 31 2 | 10.7 | 7.0 | 5.8 | 10.0 | 29 | 960 | .. | .. | .. | 950 | 69.4 | 328 52 46.0 | .. | - | 35.9 | 19 58 31.3 | - 2.5 |
| 34 | 330 22 | 11.0 | 7.9 | 5.7 | 12.2 | 35 | .. | 915 | .. | 880 | .. | 66.4 | 29 34 17.6 | .. | + | 33.8 | 80 41 12.6 | - 1.5 |
| 35 | 166 42 | 12.0 | 10.3 | 8.0 | 11.8 | 33 | 665 | 650 | .. | .. | .. | 69.4 | 193 13 43.1 | .. | + | 14.0 | 37 52 24.1 | +28.0 |
| 36 | 13 10 | 12.4 | 9.9 | 9.8 | 13.0 | 35 | .. | .. | .. | 790 | 725 | 69.4 | 346 46 10.1 | .. | - | 14.0 | 37 52 26.3 | +28.0 |
| 37 | 13 42 | 11.4 | 7.5 | 7.5 | 11.8 | 35 | 105 | .. | .. | .. | 065 | 69.4 | 346 14 5.5 | .. | - | 14.6 | 37 20 12.1 | +28.4 |
| 38 | 320 8 | 10.0 | 5.5 | 5.2 | 13.4 | 33 | .. | 990 | .. | 955 | .. | 69.4 | 39 47 47.4 | .. | + | 49.7 | 90 54 58.3 | - 1.4 |
| 39 | 33 44 | 11.7 | 7.3 | 7.0 | 11.6 | 34 | 915 | .. | .. | .. | 055 | 69.4 | 326 11 40.8 | 43.2 | - | 40.4 | 17 17 31.0 | +30.0 |
| 40 | 33 44 | 11.7 | 7.3 | 7.0 | 11.6 | 35 | 915 | .. | .. | .. | 925 | 69.4 | 326 12 18.6 | .. | - | 40.0 | 17 17 59.8 | +30.0 |
| 41 | 308 22 | 12.6 | 9.0 | 7.1 | 14.5 | 30 | 520 | .. | .. | .. | 385 | 69.4 | 51 32 55.7 | .. | + | 1 15.1 | 102 40 32.0 | .. |
| 42 | 308 22 | 12.6 | 9.0 | 7.4 | 14.5 | 31 | .. | 690 | .. | 575 | .. | 69.4 | 51 33 13.9 | .. | + | 1 15.1 | 102 40 50.2 | .. |
| 43 | 309 14 | 14.7 | 11.7 | 9.7 | 18.2 | 33 | 080 | 980 | 800 | 580 | 395 | 69.4 | 50 41 31.0 | .. | + | 1 12.9 | 101 49 8.1 | .. |
| 44 | 310 24 | 11.4 | 6.8 | 5.5 | 13.3 | 36 | .. | 775 | .. | 750 | .. | 69.4 | 49 32 30.8 | .. | + | 1 10.0 | 100 40 2.0 | +16.3 |
| 45 | 153 18 | 14.4 | 11.3 | 10.2 | 14.6 | 29 | 735 | 790 | .. | .. | .. | 69.4 | 206 39 19.0 | .. | + | 30.0 | 24 26 32.2 | - 2.8 |
| 46 | 26 34 | 9.2 | 5.6 | 5.7 | 10.5 | 29 | .. | .. | .. | 685 | 650 | 69.4 | 333 20 42.5 | .. | - | 30.0 | 24 26 34.0 | - 1.0 |
| 47 | 78 32 | 10.9 | 6.0 | 3.2 | 9.0 | 32 | .. | 150 | .. | 945 | .. | 69.4 | 281 23 16.1 | .. | - | 4 49.7 | 332 24 47.6 | + 1.3 |
| 48 | 6 46 | 12.0 | 9.0 | 7.8 | 12.0 | 35 | 400 | .. | .. | .. | 395 | 69.4 | 353 16 11.0 | .. | - | 7.2 | 44 16 25.0 | +30.2 |
| 49 | 70 58 | 16.0 | 10.1 | 7.0 | 11.7 | 39 | 740 | .. | .. | .. | 730 | 69.4 | 288 57 0.5 | .. | - | 2 53.2 | 340 0 28.5 | + 2.1 |
| 50 | 213 52 | 12.6 | 9.3 | 9.2 | 11.8 | 37 | 130 | 365 | .. | .. | .. | 69.4 | 146 4 41.2 | 40.5 | - | 40.4 | 85 2 20.4 | + 0.5 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " " | " " | " " | " " |
| 12 | 30.34 | 47.2 | 8 | - 0.8 | + 9.1 | .. | + 8.3 |
| 14 | 30.35 | 48.6 | 9 | - 0.8 | - 9.1 | .. | - 9.9 |
| 15 | 30.35 | 49.2 | 11 | - 5.2 | + 9.9 | 0.8 | + 3.9 |
| 17 | 30.35 | 49.2 | 12 | - 5.2 | - 9.9 | .. | - 15.1 |
| 20 | 30.35 | 49.6 | 17 | - 6.3 | + 3.3 | 0.2 | - 3.2 |
| 25 | 30.35 | 50.5 | 18 | - 6.3 | - 3.3 | .. | - 9.6 |
| 26 | 30.33 | 51.6 | 24 | - 7.0 | - 16 7.7 | .. | - 16 14.7 |
| 27 | 30.32 | 52.6 | 25 | - 7.0 | + 16 7.7 | .. | + 16 0.7 |
| 31 | 30.32 | 52.7 | 41 | - 0.8 | + 9.1 | .. | + 8.3 |
| 32 | 30.30 | 47.0 | 42 | - 0.8 | - 9.1 | .. | - 9.9 |
| 39 | 30.31 | 46.5 | 43 | -42 40.2 | - 15 6.7 | .. | - 57 46.9 |
| 50 | 30.31 | 44.2 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | m. | s. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1876. Oct. 27 | 1 | ι Piscium | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | .</ |

5, 9, 10, 12, 15, 16, 20, 21, 48. Thread A used.

6, 44. Bisections at set C.

7, 8, 30, 43. Bisections at sets B and D.

11, 39, 47. Thread B used.

13. Bisections at threads C₅, D₁, and D₃.

35. Bisections at threads II and III.

| Number. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Dis- tance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellan'us Corrections. | | | |
|---------|---------------------|--------|------|------|-----------------------|------|-----|-----|-----|-----------------------------|--|------------------------|-------------|--------------------------------------|------------------------------|--------|-------------|--------|
| | Circle Division. | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | | | | | | | 4. | 5. | |
| | | ° ' " | " " | " " | " " | | | | | | | | | | | | | |
| 1 | 326 0 | 10 9.7 | 6.4 | 5.3 | 11.5 | 31 | .. | .. | .. | 995 | 930 | 69.4 | 33 55 17.3 | .. | + | 40.4 | 85 2 18.9 | - 1.0 |
| 2 | 212 38 | 11.5 | 9.6 | 8.0 | 11.2 | 34 | 805 | 745 | .. | .. | .. | 69.4 | 147 18 0.4 | .. | - | 38.6 | 83 48 59.4 | + 1.7 |
| 3 | 327 14 | 6.7 | 2.8 | 1.6 | 8.4 | 34 | .. | .. | .. | 785 | 715 | 69.4 | 32 41 56.6 | .. | + | 38.6 | 83 48 56.4 | - 1.1 |
| 4 | 317 50 | 7.6 | 3.0 | 2.5 | 10.4 | 37 | 680 | 610 | .. | .. | .. | 69.4 | 42 6 46.1 | .. | + | 54.3 | 93 13 55.6 | + 23.5 |
| 5 | 317 50 | 7.6 | 3.0 | 2.5 | 10.4 | 23 | .. | .. | .. | 800 | 780 | 69.4 | 42 0 36.4 | .. | + | 54.1 | 93 7 51.7 | + 23.6 |
| 6 | 62 42 | 7.0 | 2.6 | 2.5 | 6.5 | 32 | 920 | .. | .. | .. | 940 | 69.4 | 297 13 27.6 | .. | - | 1 56.4 | 348 17 52.4 | + 2.2 |
| 7 | 11 46 | 7.5 | 5.3 | 4.1 | 8.5 | 29 | 720 | .. | .. | .. | 680 | 69.4 | 348 8 39.9 | .. | - | 12.6 | 39 14 48.5 | + 30.6 |
| 8 | 42 50 | 10.0 | 5.5 | 5.4 | 8.9 | 33 | 100 | .. | 125 | .. | 180 | 69.4 | 317 5 33.9 | .. | - | 55.9 | 8 10 59.2 | + 29.0 |
| 9 | 325 4 | 9.7 | 5.8 | 5.0 | 11.0 | 38 | .. | 225 | .. | 205 | .. | 69.4 | 34 50 18.3 | 38.8 | + | 11.9 | 85 57 21.4 | - 4.2 |
| 10 | 324 38 | 12.2 | 8.2 | 6.0 | 12.0 | 32 | 580 | 595 | .. | .. | .. | 69.4 | 35 14 52.9 | .. | + | 42.6 | 86 21 56.7 | + 26.2 |
| 11 | 324 38 | 12.2 | 8.2 | 6.0 | 12.0 | 33 | .. | .. | .. | 865 | 885 | 69.4 | 35 20 20.4 | .. | + | 42.7 | 86 27 24.3 | + 26.2 |
| 12 | 326 32 | 8.8 | 5.5 | 4.5 | 10.0 | 46 | .. | 140 | .. | 075 | .. | 69.4 | 33 24 18.5 | 38.1 | + | 39.5 | 84 31 19.5 | - 2.5 |
| 13 | 49 40 | 7.8 | 3.6 | 3.2 | 5.9 | 33 | .. | .. | 130 | 060 | 880 | 69.4 | 310 15 31.5 | .. | - | 1 11.9 | 1 20 40.8 | - 0.3 |
| 14 | 329 36 | 5.5 | 2.5 | 1.4 | 5.2 | 37 | 485 | 470 | .. | 435 | 370 | 69.4 | 30 20 35.7 | .. | + | 35.4 | 81 27 32.3 | - 2.2 |
| 15 | 333 46 | 10.1 | 7.2 | 6.6 | 10.6 | 38 | .. | 370 | .. | 335 | .. | 69.4 | 26 8 21.2 | .. | + | 29.7 | 77 15 12.1 | - 3.1 |
| 16 | 329 28 | 10.6 | 6.0 | 5.0 | 9.7 | 38 | .. | 980 | .. | 815 | .. | 69.4 | 30 26 28.7 | .. | + | 35.5 | 81 33 25.4 | - 2.3 |
| 17 | 343 56 | 7.4 | 4.0 | 2.6 | 8.2 | 36 | 500 | 490 | .. | 380 | 375 | 69.4 | 16 0 22.4 | .. | + | 17.4 | 67 7 1.0 | - 1.1 |
| 18 | 329 18 | 9.1 | 5.0 | 4.3 | 9.9 | 29 | 880 | 870 | .. | .. | .. | 69.4 | 30 36 42.4 | 36.7 | + | 35.8 | 81 4 39.4 | - 3.3 |
| 19 | 332 8 | 8.2 | 4.0 | 1.9 | 8.8 | 33 | .. | 395 | .. | 315 | .. | 69.4 | 27 47 35.2 | .. | + | 31.9 | 78 54 28.3 | .. |
| 20 | 2 18 | 11.5 | 8.2 | 7.2 | 11.1 | 39 | .. | 840 | .. | 800 | .. | 69.4 | 357 36 44.8 | .. | - | 2.5 | 48 43 3.5 | + 0.2 |
| 21 | 327 20 | 10.9 | 6.8 | 5.8 | 10.5 | 40 | .. | 445 | .. | 455 | .. | 69.4 | 32 34 53.2 | .. | + | 38.7 | 83 41 53.1 | + 26.0 |
| 22 | 323 46 | 8.5 | 5.5 | 3.9 | 10.2 | 33 | 760 | .. | .. | .. | 640 | 69.4 | 26 9 41.8 | .. | + | 44.2 | 87 16 47.2 | + 25.9 |
| 23 | 323 46 | 8.5 | 5.5 | 3.9 | 10.2 | 33 | .. | 845 | .. | 740 | .. | 69.4 | 36 9 43.2 | .. | + | 41.2 | 87 16 48.6 | - 1.5 |
| 24 | 283 12 | 10.5 | 5.2 | 7.0 | 11.4 | 35 | 715 | .. | .. | .. | 565 | 69.4 | 76 44 12.4 | .. | + | 4 12.0 | 127 54 45.6 | + 25.1 |
| 25 | 283 12 | 10.5 | 5.2 | 7.0 | 11.4 | 36 | .. | 000 | .. | 930 | .. | 69.4 | 76 44 17.7 | .. | + | 4 12.0 | 127 54 50.9 | + 25.1 |
| 26 | 198 14 | 8.9 | 7.7 | 5.4 | 8.0 | 35 | 375 | 335 | .. | .. | .. | 69.4 | 161 42 6.5 | .. | - | 20.0 | 69 24 34.7 | + 0.1 |
| 27 | 341 38 | 12.2 | 8.0 | 6.8 | 13.7 | 34 | .. | .. | .. | 210 | 170 | 69.4 | 18 17 53.5 | .. | + | 20.0 | 69 24 34.7 | + 0.1 |
| 28 | 169 24 | 8.3 | 6.0 | 6.0 | 8.6 | 33 | 360 | 300 | .. | .. | .. | 69.4 | 190 31 34.8 | .. | + | 11.3 | 40 34 35.1 | - 1.1 |
| 29 | 10 28 | 8.0 | 3.5 | 4.3 | 9.4 | 36 | .. | .. | .. | 565 | 490 | 69.4 | 349 28 25.8 | .. | - | 11.3 | 40 34 35.7 | - 0.5 |
| 30 | 68 44 | 7.0 | 1.8 | 1.0 | 4.0 | 37 | 340 | .. | .. | .. | 300 | 69.4 | 291 12 33.4 | .. | - | 2 35.1 | 342 16 19.5 | + 0.2 |
| 31 | 171 26 | 11.6 | 8.8 | 8.4 | 13.0 | 34 | 295 | 270 | .. | .. | .. | 69.4 | 188 29 52.6 | 35.5 | + | 9.1 | 42 36 19.5 | - 2.4 |
| 32 | 8 26 | 8.1 | 4.6 | 4.9 | 9.0 | 35 | .. | .. | .. | 480 | 460 | 69.4 | 351 30 10.0 | .. | - | 9.1 | 42 36 22.1 | + 0.2 |
| 33 | 195 6 | 10.0 | 8.5 | 7.0 | 9.2 | 35 | 660 | 630 | .. | .. | .. | 69.4 | 164 50 12.1 | .. | - | 16.4 | 66 16 25.5 | - 1.0 |
| 34 | 344 46 | 2.2 | 27.8 | 27.5 | 3.7 | 34 | .. | .. | .. | 535 | 490 | 69.4 | 15 9 48.6 | .. | + | 16.4 | 66 16 26.2 | - 0.3 |
| 35 | 187 18 | 8.9 | 7.5 | 6.2 | 8.0 | 33 | 450 | 390 | .. | .. | .. | 69.4 | 172 37 37.4 | .. | - | 7.8 | 58 28 51.6 | 0.0 |
| 36 | 352 34 | 9 29.0 | 22.0 | 22.5 | 26.6 | 36 | .. | .. | .. | .. | 970 | 69.4 | 7 22 21.3 | .. | + | 7.8 | 58 28 50.3 | - 1.3 |
| 37 | 356 2 | 10 7.5 | 3.5 | 2.5 | 8.2 | 38 | .. | 770 | .. | 705 | .. | 69.4 | 3 54 57.5 | .. | + | 4.2 | 55 1 22.9 | + 18.3 |
| 38 | 323 16 | 10.0 | 4.1 | 5.0 | 10.3 | 34 | 375 | 385 | .. | .. | .. | 69.4 | 56 39 51.4 | .. | + | 1 31.9 | 107 47 44.5 | + 25.1 |
| 39 | 303 16 | 10.0 | 4.1 | 5.0 | 10.3 | 31 | .. | .. | .. | 720 | 650 | 69.4 | 56 41 44.4 | .. | + | 1 32.0 | 107 49 37.6 | + 25.1 |
| 40 | 346 22 | 3.6 | 29.4 | 29.7 | 6.2 | 31 | 270 | .. | .. | .. | 160 | 69.4 | 13 32 59.3 | .. | + | 14.6 | 64 39 35.1 | + 18.3 |
| 41 | 346 22 | 3.6 | 29.4 | 29.7 | 6.2 | 30 | .. | 070 | .. | 010 | .. | 69.4 | 13 32 41.1 | .. | + | 14.6 | 64 39 16.9 | + 18.3 |
| 42 | 79 10 | 8.5 | 2.3 | 0.5 | 6.2 | 36 | 905 | 825 | .. | .. | .. | 69.4 | 280 46 25.7 | .. | - | 5 9.4 | 331 47 37.5 | - 1.0 |
| 43 | 71 58 | 7.7 | 1.0 | 29.5 | 5.7 | 38 | 435 | .. | .. | .. | 310 | 69.4 | 287 58 49.6 | 35.5 | - | 3 4.7 | 339 2 6.1 | - 0.8 |
| 44 | 58 46 | 5.5 | 1.4 | 2.0 | 6.3 | 33 | 430 | .. | 490 | .. | 495 | 69.4 | 501 9 35.3 | .. | - | 1 39.9 | 352 14 16.6 | + 0.1 |
| 45 | 172 58 | 8.6 | 6.0 | 7.5 | 11.0 | 37 | 045 | 925 | .. | .. | .. | 69.4 | 186 58 31.9 | .. | + | 7.4 | 44 7 41.9 | + 0.1 |
| 46 | 6 54 | 7.0 | 2.8 | 1.8 | 7.0 | 32 | .. | .. | .. | 840 | 790 | 69.4 | 353 1 27.3 | .. | - | 17.4 | 44 7 41.1 | - 0.7 |
| 47 | 283 42 | 10.0 | 6.0 | 7.8 | 12.2 | 33 | .. | 900 | .. | 855 | .. | 69.4 | 76 16 18.6 | .. | + | 4 4.0 | 127 26 43.8 | + 25.2 |
| 48 | 283 42 | 10.0 | 6.0 | 7.3 | 12.2 | 26 | .. | 330 | .. | 310 | .. | 69.4 | 76 0 17.0 | .. | + | 4 1.6 | 127 19 39.8 | + 25.1 |
| 49 | 319 2 | 7.9 | 3.0 | 3.0 | 9.0 | 32 | 150 | .. | .. | .. | 060 | 69.4 | 40 53 0.7 | .. | + | 52.5 | 92 0 14.4 | + 18.1 |
| 50 | 319 2 | 7.9 | 3.0 | 3.0 | 9.0 | 32 | .. | 335 | .. | 250 | .. | 69.4 | 40 53 3.6 | .. | + | 52.5 | 92 0 17.3 | + 18.1 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-------|
| 9 | in. | ° | | | | | |
| 12 | 30.31 | 42.4 | 19 | — 0.1 | | | — 0.1 |
| 18 | 30.30 | 41.7 | | | | | |
| 31 | 30.29 | 40.2 | | | | | |
| 43 | 30.26 | 38.7 | | | | | |
| | | 38.2 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|------------------|---------|------------------------------|-----------|--------------------------------|------|------|------|------|------|------|----------|----------|----------------|--------------|----------------|---------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted | | |
| 1876. Oct. 27 | 1 | η^1 Draconis, S. P. | P. | 28.2 | 20.0 | 15.3 | 54.9 | 48.3 | 41.4 | 21.4 | 16.5 | 8.3 | m. s. 44 48.26 | s. -4.41 | s. -38.82 | s. -38.82 | h. m. s. 17 44 5.03 | s. -0.16 |
| | 2 | η^2 Draconis, S. P. | P. | 29.6 | 21.7 | 17.0 | 56.6 | 49.7 | 43.1 | 23.2 | 18.3 | 10.0 | 44 49.91 | -4.41 | -38.82 | -38.82 | 17 44 6.68 | -3.62 |
| | 3 | B. A. C. 1910 | P. | 10.1 | 13.0 | 14.9 | 22.0 | 24.4 | 20.9 | 34.1 | 35.8 | 38.8 | 52 21.44 | -1.69 | -38.81 | -38.81 | 5 51 43.94 | -2.94 |
| | 4 | B. A. C. 1951 | P. | 45.0 | 47.9 | 49.4 | 56.3 | 58.4 | 0.6 | 7.3 | 9.0 | 11.8 | 59 58.42 | -0.47 | -38.81 | -38.81 | 5 59 19.14 | -4.05 |
| | 5 | Σ 853 ¹ | P. | 45.2 | 47.9 | 49.5 | 56.3 | 58.4 | 0.6 | 7.3 | 9.0 | 11.8 | 2 57.83 | -0.74 | -38.81 | -38.81 | 6 2 18.28 | -3.71 |
| | 6 | Σ 853 ² | P. | 54.0 | 56.2 | 58.3 | 0.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2.3 | 2 58.23 | -0.74 | -38.81 | -38.81 | 6 2 18.68 | -3.71 |
| | 7 | δ Ursæ Minoris, S. P. | P. | 57.7 | 23.0 | 16.5 | 13.9 | 39.8 | 12.0 | 19.5 | 21.1 | 23.9 | 12 48.10 | -19.93 | -38.81 | -38.81 | 18 11 49.36 | -0.65 |
| | 8 | μ Geminorum | P. | 57.4 | 0.2 | 1.9 | 8.5 | 10.8 | 12.9 | 19.5 | 21.1 | 23.9 | 16 10.69 | -0.48 | -38.73 | -38.81 | 6 15 31.40 | -0.12 |
| | 9 | γ Geminorum | P. | 3.2 | 6.0 | 7.5 | 13.9 | 15.9 | 18.1 | 24.5 | 26.2 | 28.9 | 31 16.02 | -0.62 | -38.78 | -38.81 | 6 30 36.59 | -0.06 |
| | 10 | α Canis Majoris | P. | 11.3 | 13.9 | 15.5 | 21.9 | 24.0 | 26.2 | 32.4 | 34.1 | 36.8 | 40 24.01 | -1.32 | -38.92 | -38.81 | 6 39 43.88 | +0.03 |
| 31 | 11 | Saturn I, S. | S. | 45.4 | 47.9 | 49.5 | 56.3 | 58.4 | 0.6 | 7.3 | 9.0 | 11.8 | 16 57.87 | -1.37 | -38.01 | -38.01 | 22 16 18.40 | . |
| | 12 | Saturn II, N. | S. | 54.9 | 57.0 | 59.0 | 1.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 16 59.07 | -1.37 | -38.01 | -38.01 | 22 16 19.69 | . |
| | 13 | η Draconis, S. P. | S. | 35.2 | 26.0 | 17.5 | 8.9 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 27 17.65 | -5.09 | -38.01 | -38.01 | 10 24 34.55 | -0.43 |
| | 14 | ζ Pegasi | S. | 46.4 | 48.9 | 50.5 | 56.7 | 58.7 | 0.8 | 7.0 | 8.7 | 11.2 | 35 58.77 | -0.93 | -38.05 | -38.01 | 22 35 19.83 | +0.10 |
| | 15 | ζ Cephei | S. | 45.3 | 50.2 | 55.2 | 0.3 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 45 55.23 | +1.14 | -38.00 | -38.00 | 22 45 18.37 | +0.09 |
| | 16 | α Piscis Australis | S. | 17.5 | 2.3 | 22.2 | 22.2 | 31.6 | 34.0 | 41.0 | 42.8 | 45.9 | 51 31.61 | -1.77 | -38.04 | -38.00 | 22 50 51.84 | +0.08 |
| | 17 | α Pegasi | S. | 4.6 | 7.0 | 8.7 | 15.0 | 17.0 | 19.2 | 25.6 | 27.0 | 29.7 | 59 17.09 | -0.84 | -37.92 | -38.00 | 22 58 38.25 | -0.05 |
| | 18 | α Cephei | S. | 1.0 | 6.0 | 12.0 | 17.1 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 14 11.87 | +1.34 | -38.00 | -38.00 | 23 13 35.21 | 0.20 |
| | 19 | Polaris | S. | 34.5 | 34.5 | 34.5 | 30.5 | 56.0 | 56.0 | 56.0 | 56.0 | 56.0 | 14 2.32 | +41.16 | -37.96 | -37.96 | 1 14 5.52 | -0.42 |
| | 20 | Moon I, S. | S. | 0.2 | 2.8 | 4.4 | 11.0 | 13.0 | 15.2 | 21.6 | 23.2 | 25.7 | 41 13.01 | -0.86 | -37.95 | -37.95 | 1 40 34.20 | +68.06 |
| 21 | 21 | α Arietis | S. | 40.7 | 43.3 | 45.0 | 51.6 | 53.8 | 56.0 | 2.7 | 4.4 | 7.2 | 0 53.86 | -0.67 | -37.89 | -37.95 | 20 0 15.24 | -0.05 |
| | 22 | Neptune | S. | 0.2 | 2.5 | 4.2 | 10.6 | 12.7 | 14.8 | 21.0 | 22.6 | 25.0 | 9 12.63 | -0.91 | -37.95 | -37.95 | 2 8 33.77 | . |
| | 23 | 5 Ursæ Minoris, S. P. | S. | 15.3 | 36.0 | 27.5 | 19.0 | 10.9 | 10.9 | 10.9 | 10.9 | 10.9 | 28 27.81 | -5.06 | -37.95 | -37.95 | 14 27 44.80 | -0.12 |
| | 24 | γ^2 Ceti | S. | 23.2 | 26.0 | 27.5 | 33.6 | 35.7 | 37.6 | 43.9 | 45.3 | 48.0 | 37 35.64 | -1.07 | -37.96 | -37.94 | 2 36 56.63 | +0.02 |
| | 25 | α Ceti | S. | 18.8 | 21.2 | 22.8 | 29.6 | 31.0 | 33.0 | 39.0 | 40.7 | 43.3 | 56 30.98 | -1.05 | -37.97 | -37.93 | 2 55 52.00 | +0.06 |
| | 26 | β Leonis | E. | 12.1 | 14.7 | 16.5 | 22.6 | 24.8 | 26.8 | 33.2 | 34.8 | 37.5 | 43 24.76 | -0.79 | -38.01 | -38.01 | . | . |
| | 27 | Venus II, S. | E. | 42.0 | 45.5 | 49.0 | 53.0 | 55.2 | 57.2 | 3.5 | 5.0 | 7.5 | 51 55.19 | -1.03 | -38.07 | -38.07 | 11 51 16.09 | -0.57 |
| | 28 | B. A. C. 4124 | E. | 2.7 | 4.7 | 7.0 | 8.9 | 11.0 | 11.0 | 11.0 | 11.0 | 11.0 | 10 6.87 | -1.40 | -38.06 | -38.06 | 12 9 27.41 | -1.50 |
| | 29 | η Virginis | E. | 10.5 | 12.5 | 14.7 | 16.6 | 18.8 | 22.8 | 24.3 | 26.9 | 14 14.63 | 14 14.63 | -1.08 | -38.12 | -38.12 | . | . |
| | 30 | Polaris, S. P. | E. | 53.0 | 25.5 | 58.5 | 31.0 | 40.5 | 33.5 | 44.0 | 15 26.64 | 15 26.64 | 15 26.64 | -40.19 | -38.02 | -38.02 | 1 11 7.43 | +1.53 |
| Nov. 1 | 31 | Mercury II, S. | E. | 3.9 | 6.5 | 8.2 | 14.3 | 16.3 | 18.4 | 24.7 | 26.1 | 28.8 | 24 16.36 | -1.22 | -38.01 | -38.01 | 13 23 37.13 | -0.19 |
| | 32 | Mercury N. | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 33 | η Ursæ Majoris (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 34 | η Ursæ Majoris | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 35 | Sun I, S. | E. | 15.9 | 18.5 | 20.2 | 26.3 | 28.4 | 30.6 | 36.6 | 38.5 | 41.3 | 28 28.51 | -1.40 | -37.97 | -37.97 | 14 27 49.14 | . |
| | 36 | Sun II, N. | E. | 20.9 | 32.4 | 34.0 | 40.4 | 42.5 | 44.5 | 51.0 | 52.5 | 55.0 | 30 42.47 | -1.40 | -37.97 | -37.97 | 14 30 3.10 | . |
| | 37 | α Scorpii | E. | 16.0 | 16.8 | 20.6 | 27.4 | 29.7 | 32.0 | 38.7 | 40.6 | 43.4 | 22 29.69 | -1.68 | -37.80 | -37.99 | 16 21 50.11 | -0.11 |
| | 38 | η Draconis | E. | . | . | . | . | . | . | . | . | . | 22 55.00 | +0.54 | -37.90 | -37.90 | 16 22 17.64 | 0.00 |
| | 39 | ζ Ophiuchi | E. | 48.5 | 51.0 | 52.0 | 58.0 | 1.0 | 3.1 | 9.2 | 10.7 | 13.4 | 31 0.93 | -1.35 | -37.98 | -37.89 | 16 30 21.69 | +0.09 |
| | 40 | η Herculis | E. | 1.8 | 5.0 | 7.0 | 14.5 | 17.5 | 20.2 | 28.1 | 30.0 | 33.3 | 39 17.52 | -0.40 | -37.96 | -37.89 | 16 35 39.23 | +0.02 |
| 41 | 41 | κ Ophiuchi | E. | 16.0 | 18.5 | 20.0 | 26.3 | 28.4 | 30.5 | 36.7 | 38.1 | 40.7 | 52 25.36 | -1.01 | -37.99 | -37.88 | 16 51 49.47 | +0.15 |
| | 42 | α^1 Herculis | E. | 27.1 | 29.8 | 31.4 | 37.7 | 39.9 | 42.0 | 48.2 | 49.8 | 52.5 | 9 39.82 | -0.92 | -37.91 | -37.87 | 17 9 1.03 | +0.06 |
| | 43 | μ Herculis | E. | 2.1 | 5.0 | 6.8 | 13.7 | 16.0 | 18.2 | 25.3 | 26.9 | 29.9 | 42 15.99 | -0.60 | -37.91 | -37.85 | 17 41 37.45 | +0.06 |
| | 44 | γ Draconis (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 45 | γ Draconis | E. | . | . | . | . | . | . | . | . | . | 37.0 | -0.06 | -37.84 | -37.84 | 17 53 43.58 | 0.00 |
| | 46 | Saturn I, N. | E. | 43.9 | 46.5 | 48.2 | . | . | . | 4.8 | 6.4 | 9.0 | 16 56.47 | -1.34 | -37.95 | -37.95 | 22 16 17.18 | . |
| | 47 | Saturn II, S. | E. | 53.4 | 55.5 | 57.6 | 59.8 | 1.9 | . | . | . | . | 16 57.65 | -1.34 | -37.95 | -37.95 | 22 16 18.36 | . |
| | 48 | Titan | E. | . | . | . | 11.3 | 13.4 | 17.5 | 19.0 | 21.7 | 17 0.16 | 17 0.16 | -1.34 | -37.95 | -37.95 | 22 16 29.87 | . |
| | 49 | ζ Pegasi | F. | 46.4 | 48.9 | 50.5 | 56.7 | 58.7 | 0.8 | 7.0 | 8.6 | 11.3 | 35 58.77 | -0.92 | -38.06 | -37.95 | 22 35 19.90 | +0.17 |
| | 50 | ι Cephei (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |

1, 2, 50. Thread B used.

1, 2, 13, 15, 18, 20, 23, 30. Bisections at sets B and D.

19. Telescope micrometer reading decreased five revolutions in reduction.

38. Telescope micrometer reading increased one revolution in reduction.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom't. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | | | | | |
| 1 | 68 48 | 10 8.0 | 3.0 | 2.9 | 5.8 | 28 | 560 | .. | .. | .. | 465 | 69.4 | 291 8 52.4 | 34.4 | - 2 35.1 | 342 12 38.5 | 0.0 |
| 2 | 68 48 | 8.0 | 3.0 | 2.9 | 5.8 | 30 | 490 | .. | .. | .. | 370 | 69.4 | 291 9 21.7 | .. | - 2 35.0 | 342 13 7.9 | + 5.5 |
| 3 | 289 40 | 6.7 | 2.2 | 4.0 | 8.2 | 29 | .. | 120 | .. | 980 | .. | 69.4 | 70 14 28.6 | .. | + 2 47.4 | 121 23 37.2 | + 23.2 |
| 4 | 344 42 | 7.5 | 3.5 | 3.4 | 9.0 | 36 | 275 | 255 | .. | .. | .. | 69.4 | 15 14 19.2 | .. | + 16.5 | 66 20 56.9 | + 9.1 |
| 5 | 332 44 | 4.0 | 0.0 | 0.2 | 5.5 | 34 | 950 | .. | .. | .. | 885 | 69.4 | 27 11 56.0 | .. | + 31.2 | 78 18 48.4 | + 12.3 |
| 6 | 332 44 | 4.0 | 0.0 | 0.2 | 5.5 | 36 | .. | 715 | .. | 625 | .. | 69.4 | 27 12 22.7 | .. | + 31.2 | 78 19 14.1 | + 12.3 |
| 7 | 54 24 | 5.2 | 0.8 | 0.2 | 4.9 | 33 | 900 | 860 | 875 | 840 | 860 | 69.4 | 305 31 40.0 | .. | - 1 24.7 | 356 36 36.5 | - 0.1 |
| 8 | 343 38 | 5.8 | 1.0 | 0.0 | 6.1 | 37 | 855 | 840 | .. | 730 | 735 | 69.4 | 16 18 40.8 | .. | + 17.7 | 67 25 19.7 | - 1.2 |
| 9 | 337 34 | 5 0 | 29.5 | 0 3 | 5.5 | 38 | .. | 625 | .. | 550 | .. | 69.4 | 22 22 52.3 | 34.6 | + 25.0 | 73 29 38.5 | - 0.8 |
| 10 | 304 30 | 11.6 | 6.0 | 6.9 | 12.8 | 30 | .. | 005 | .. | 910 | .. | 69.4 | 55 24 46.5 | .. | + 1 27.7 | 106 32 35.4 | - 0.7 |
| 11 | 308 22 | 8.0 | 6.0 | 5.8 | 10.4 | 33 | .. | 560 | .. | 480 | .. | 70.1 | 51 33 40.2 | .. | + 1 13.2 | 102 41 14.6 | .. |
| 12 | 308 22 | 8.0 | 6.0 | 5.8 | 10.4 | 32 | 450 | .. | .. | .. | 365 | 70.1 | 51 33 23.1 | .. | + 1 13.1 | 102 40 57.4 | .. |
| 13 | 64 40 | 4.4 | 1.5 | 29.5 | 4.0 | 36 | 190 | .. | .. | .. | 120 | 70.1 | 295 16 15.1 | 53.0 | - 2 2.7 | 346 20 33.6 | + 0.2 |
| 14 | 331 14 | 7.7 | 5.1 | 4.0 | 9.1 | 33 | .. | 455 | .. | 380 | .. | 70.1 | 28 41 37.7 | .. | + 31.9 | 79 48 30.8 | + 2.6 |
| 15 | 26 34 | 6.5 | 3.5 | 3.5 | 7.5 | 29 | 710 | .. | .. | .. | 730 | 70.1 | 333 20 40.0 | .. | - 29.2 | 24 26 32.0 | - 2.1 |
| 16 | 290 48 | 10.7 | 8.5 | 6.8 | 12.5 | 33 | .. | 360 | .. | 210 | .. | 70.1 | 69 7 38.6 | .. | + 2 31.6 | 120 16 31.4 | - 1.1 |
| 17 | 335 36 | 8.3 | 6.5 | 3.9 | 10.3 | 36 | .. | 660 | .. | 615 | .. | 70.1 | 24 20 27.8 | .. | + 26.4 | 75 27 15.4 | - 0.1 |
| 18 | 28 28 | 8.6 | 5.5 | 4.6 | 6.5 | 33 | 390 | .. | .. | .. | 370 | 70.1 | 331 27 37.1 | .. | - 31.7 | 22 33 20.6 | - 2.6 |
| 19 | 49 40 | 2.5 | 29.7 | 27.3 | 27.7 | 38 | .. | .. | .. | 140 | 200 | 70.1 | 310 15 27.0 | 49.3 | - 1 9.2 | 1 20 39.9 | - 0.8 |
| 20 | 334 26 | 12.8 | 9.4 | 6.4 | 11.5 | 35 | 730 | .. | 540 | .. | 295 | 70.1 | 25 30 13.4 | .. | + 28.0 | 76 37 2.6 | .. |
| 21 | 343 56 | 10.1 | 8.2 | 5.4 | 10.1 | 36 | .. | 310 | .. | 235 | .. | 70.1 | 16 0 23.4 | .. | + 16.8 | 67 7 1.4 | - 0.4 |
| 22 | 332 6 | 7.0 | 4.5 | 1.7 | 6.7 | 34 | .. | .. | .. | 320 | 360 | 70.1 | 27 49 51.2 | .. | + 31.0 | 78 56 43.1 | .. |
| 23 | 64 46 | 7.6 | 3.7 | 3.5 | 6.2 | 35 | 850 | .. | .. | .. | 860 | 70.1 | 295 10 13.4 | .. | - 2 4.3 | 346 14 30.3 | + 1.5 |
| 24 | 323 46 | 8.3 | 6.0 | 3.5 | 9.2 | 33 | .. | 920 | .. | 840 | .. | 70.1 | 36 9 45.0 | .. | + 42.9 | 87 16 49.1 | - 1.1 |
| 25 | 324 40 | 5.7 | 3.2 | 29.2 | 6.6 | 36 | .. | 670 | .. | 580 | .. | 70.1 | 35 16 24.0 | 48.6 | + 41.5 | 86 23 26.7 | - 0.8 |
| 26 | 336 18 | 10 9 | 6.6 | 5.9 | 10.4 | 32 | .. | 680 | .. | 950 | .. | 69.7 | 23 37 32.3 | 51.5 | + 25.5 | 74 44 19.0 | + 0.1 |
| 27 | 323 26 | 5.8 | 1.2 | 1.3 | 7.6 | 32 | .. | 730 | .. | 625 | .. | 69.6 | 36 29 23.3 | .. | + 43.1 | 87 36 27.6 | .. |
| 28 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 29 | 321 4 | 8.8 | 6.0 | 4.8 | 9.5 | 33 | .. | 830 | .. | 800 | .. | 69.5 | 38 51 43.8 | .. | + 46.7 | 89 58 51.7 | + 1.3 |
| 30 | 52 22 | 3.5 | 27.3 | 28.0 | 4.0 | 36 | .. | .. | 160 | .. | 485 | 69.0 | 307 34 13.7 | .. | - 1 14.4 | 358 39 20.5 | + 0.1 |
| 31 | 314 36 | 8.1 | 4.0 | 5.3 | 12.7 | 36 | 720 | .. | .. | .. | 810 | 69.0 | 45 20 28.6 | .. | + 57.9 | 96 27 47.7 | .. |
| 32 | 314 36 | 8.1 | 4.0 | 5.3 | 12.7 | 36 | .. | 395 | .. | 375 | .. | 69.0 | 45 20 22.9 | .. | + 57.9 | 96 27 42.0 | .. |
| 33 | 168 54 | 5.3 | 4.1 | 5.3 | 7.6 | 34 | 345 | 325 | .. | .. | .. | 68.8 | 191 1 48.0 | .. | + 11.1 | 40 4 22.1 | - 0.1 |
| 34 | 10 58 | 6.7 | 3.9 | 3.5 | 8.3 | 35 | .. | .. | .. | 555 | 595 | 68.8 | 348 58 10.0 | .. | - 11.1 | 40 4 20.1 | - 2.1 |
| 35 | 306 4 | 9.2 | 5.3 | 5.0 | 12 0 | 32 | 210 | 140 | .. | .. | .. | 68.5 | 53 51 17.7 | 65.4 | + 1 17.3 | 104 58 56.2 | .. |
| 36 | 306 38 | 6.0 | 4.4 | 3.8 | 10.8 | 39 | .. | .. | .. | 020 | 980 | 68.5 | 53 19 1.6 | .. | + 1 15.8 | 104 26 38.6 | .. |
| 37 | 294 54 | 7.3 | 2.5 | 4.3 | 10.1 | 31 | 790 | 770 | .. | .. | .. | 67.6 | 65 1 8.5 | .. | + 2 0.2 | 116 9 29.9 | - 0.4 |
| 38 | 22 50 | 29.3 | 27.1 | 29.8 | 0.0 | 36 | .. | .. | .. | 010 | 930 | 67.6 | 337 6 24.0 | .. | - 23.8 | 28 12 21.4 | - 1.4 |
| 39 | 310 44 | 4.3 | 2.8 | 2.3 | 8.3 | 33 | .. | 570 | .. | 505 | .. | 67.6 | 49 11 34.8 | .. | + 1 5.1 | 100 19 1.1 | + 1.2 |
| 40 | 0 12 | 10.5 | 9.0 | 6.4 | 8 3 | 35 | 530 | 495 | .. | 405 | 380 | 67.5 | 359 44 8.7 | .. | - 0.3 | 50 50 29.6 | - 0.3 |
| 41 | 330 36 | 8.0 | 4.5 | 4.3 | 9.8 | 31 | .. | 375 | .. | 320 | .. | 67.4 | 29 19 3.5 | .. | + 31.6 | 80 25 56.3 | + 1.4 |
| 42 | 335 34 | 6.9 | 5.3 | 3.5 | 9.5 | 32 | .. | 260 | .. | 240 | .. | 67.3 | 24 21 16.8 | .. | + 25.4 | 75 28 3.4 | 0.0 |
| 43 | 348 50 | 6.5 | 4.3 | 4 0 | 8.2 | 34 | .. | 245 | .. | 170 | .. | 67.1 | 11 5 46.1 | .. | + 11.0 | 62 12 1.3 | + 0.3 |
| 44 | 167 20 | 2.5 | 3.1 | 2.7 | 1.1 | 37 | 455 | 410 | .. | .. | .. | 67.0 | 192 36 30.3 | .. | + 12.6 | 38 29 38.3 | - 1.5 |
| 45 | 12 32 | 6.9 | 5.0 | 5.0 | 6.0 | 33 | .. | .. | .. | 160 | 130 | 67.0 | 347 23 31.1 | .. | - 12 6 | 38 29 39.7 | - 0.1 |
| 46 | 308 22 | 10.0 | 7.7 | 4.5 | 11.5 | 32 | 435 | .. | .. | .. | 440 | 65.7 | 51 33 20.0 | .. | + 1 11.4 | 102 40 52.6 | .. |
| 47 | 308 22 | 10.0 | 7.7 | 4.5 | 11.5 | 33 | .. | 670 | .. | 705 | .. | 65.7 | 51 33 39.2 | .. | + 1 11.4 | 102 41 11.8 | .. |
| 48 | 308 22 | 10.0 | 7.7 | 4.5 | 11.5 | 34 | .. | .. | .. | .. | 700 | 65.7 | 51 33 55.7 | .. | + 1 11.4 | 102 41 28.3 | .. |
| 49 | 331 14 | 14.8 | 11.3 | 9.3 | 15.2 | 33 | 395 | 380 | .. | 265 | 250 | 65.7 | 28 41 38.0 | 63.0 | + 31.1 | 79 48 30.3 | - 1.5 |
| 50 | 153 18 | 13.0 | 11.2 | 11.6 | 13.7 | 30 | 140 | 995 | .. | .. | .. | 65.7 | 266 39 18.9 | .. | + 28.5 | 24 26 33.8 | - 0.1 |

| No. | Barom. | Ther. | No. | Parallax. | Semi-d. am. | Defective Illumination. | Sum. |
|-----|--------|-------|-----|-----------|-------------|-------------------------|---------|
| 1 | 30.24 | 37.5 | 11 | - 0.8 | - 8.6 | .. | 9.4 |
| 9 | 30.22 | 37.7 | 12 | - 0.8 | + 8.6 | .. | 7.8 |
| 13 | 30.14 | 54.5 | 20 | - 24 54.2 | - 15 54.8 | .. | 40 49.0 |
| 19 | 30.14 | 51.5 | 22 | - 0.1 | .. | .. | 0.1 |
| 25 | 30.13 | 50.6 | 27 | - 5.2 | - 8.6 | .. | 13.8 |
| 26 | 30.14 | 51.5 | 31 | - 5.8 | - 3.0 | .. | 8.8 |
| 35 | 30.03 | 61.8 | 32 | - 5.8 | + 3.0 | 0.3 | 3.1 |
| 49 | 30.02 | 65.0 | 35 | - 7.2 | - 16 8.8 | .. | 16 16.0 |
| | | | 36 | - 7.2 | + 16 8.8 | .. | 16 1.6 |
| | | | 46 | - 0.8 | + 9.6 | .. | 8.8 |
| | | | 47 | - 0.8 | - 9.6 | .. | 10.4 |
| | | | 48 | - 0.8 | .. | .. | 0.8 |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. |
|-----------------|---------|--------------------------------------|---------------------------|--------------------------------|-------|-------|-------|-------|-------|-------|--------|----------|------------|--------------|----------------|----------------|---------------------------|-------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | m. | |
| 1876. Nov. 1 | 1 | <i>ε</i> Cephei | E. | . . . | 45.8 | 51.0 | 56.0 | 0.9 | 5.9 | 15.6 | 19.4 | 25.5 | 45 55.91 | + 1.00 | . . . | -37.95 | 22 45 18.96 | + 0.70 | |
| | 2 | <i>α</i> Piscis Australis . | E. | 17.3 | 20.4 | 22.0 | 29.0 | 31.5 | 33.8 | 41.0 | 42.8 | 45.7 | 51 31.50 | - 1.74 | -37.98 | -37.95 | 22 50 51.81 | + 0.07 | |
| | 3 | <i>α</i> Pegasi | E. | 4.5 | 7.2 | 8.8 | 15 | 0 | 17.2 | 19.4 | 25.7 | 27.2 | 29.9 | - 0.84 | -38.05 | -37.95 | 22 58 38.42 | + 0.13 | |
| | 4 | <i>η</i> Piscium (R) . . . | E. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | |
| | 5 | <i>η</i> Piscium | E. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | |
| | 6 | <i>ε</i> Piscium (R) . . . | E. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | |
| | 7 | <i>ε</i> Piscium | E. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | |
| | 8 | B. A. C. 136 ¹ . . . | E. | 8.2 | 11.2 | 13.1 | . . . | . . . | . . . | 33.2 | 35.1 | 38.4 | 28 23.20 | - 1.88 | . . . | -37.97 | 0 27 43.35 | - 4.35 | |
| | 9 | B. A. C. 136 ² . . . | E. | . . . | . . . | 18.2 | 20.9 | 23.5 | 25.9 | 28.5 | . . . | . . . | 28 23.41 | - 1.88 | . . . | -37.97 | 0 27 43.56 | - 4.35 | |
| | 10 | B. A. C. 192 . . . | E. | 13.3 | 15.6 | 18.7 | 26.5 | 29.1 | 31.8 | 39.8 | 42.7 | 45.0 | 37 29.17 | - 2.00 | . . . | -37.97 | 0 36 49.20 | - 4.45 | |
| | 11 | B. A. C. 202 . . . | E. | 40.8 | 44.0 | 46.0 | 53.9 | 56.6 | 59.2 | 7.3 | 9.3 | 12.6 | 38 56.63 | - 2.00 | . . . | -37.97 | 0 38 16.66 | - 4.45 | |
| | 12 | Weisse (2) 1062 . . | E. | 56.6 | 58.7 | 3.9 | 6.7 | 9.5 | 11.8 | 14.7 | 20.0 | 21.9 | 43 9.31 | - 0.28 | . . . | -37.97 | 0 42 31.06 | - 3.85 | |
| | 13 | B. A. C. 227 . . . | E. | 25.0 | 28.5 | 30.6 | 38.6 | 41.3 | 43.8 | 51.9 | 54.0 | 57.5 | 43 41.24 | - 0.28 | . . . | -37.97 | 0 43 2.99 | - 3.86 | |
| | 14 | B. A. C. 272 . . . | E. | 7.5 | 10.5 | 12.3 | 19.3 | 21.7 | 24.0 | 31.0 | 32.8 | 35.9 | 53 21.67 | - 1.74 | . . . | -37.97 | 0 52 41.96 | - 4.21 | |
| | 15 | B. A. C. 289 . . . | E. | 0.6 | 3.6 | 5.4 | 12.6 | 15.0 | 17.4 | 24.6 | 26.4 | 29.6 | 57 15.02 | - 1.79 | . . . | -37.97 | 0 56 35.26 | - 4.25 | |
| | 16 | Maia | E. | . . . | 12.5 | 14.4 | 16.6 | 18.7 | 20.7 | 24.8 | 26.2 | . . . | 5 16.56 | - 0.97 | . . . | -37.97 | 1 4 37.62 | . . . | |
| | 17 | Polaris | E. | . . . | . . . | . . . | 41.5 | 19.5 | 35.0 | 2.5 | . . . | . . . | 14 9.32 | + 37.04 | . . . | -37.97 | 1 14 8.39 | + 2.53 | |
| | 18 | Phocæa | E. | 25.9 | 28.5 | 30.0 | 36.4 | 38.3 | 40.5 | 46.7 | 48.4 | 51.0 | 44 38.41 | - 0.93 | . . . | -37.98 | 1 43 59.50 | . . . | |
| | 19 | Sirona | E. | . . . | . . . | . . . | . . . | . . . | . . . | 49.0 | 1.9 | 49 24.56 | - 0.99 | . . . | -37.98 | 1 48 45.59 | . . . | | |
| | 20 | <i>α</i> Arctis | E. | 40.7 | 43.5 | 45.3 | 51.8 | 54.0 | 56.3 | 3.0 | 4.6 | 7.5 | 0 54.08 | - 0.73 | -38.04 | -37.98 | 2 0 15.37 | + 0.07 | |
| | 21 | Danaë | E. | 1.0 | 4.2 | 6.0 | 14.2 | 17.2 | 20.1 | 28.0 | 30.0 | 33.6 | 7 17.14 | - 0.30 | . . . | -37.98 | 2 6 38.86 | . . . | |
| | 22 | Neptune | E. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | |
| | 23 | Lalande 4830 . . . | E. | 5.5 | 8.7 | 10.7 | 18.4 | 21.0 | 23.5 | 31.3 | 33.0 | 36.3 | 31 20.93 | - 0.42 | . . . | -37.99 | 2 30 42.52 | - 4.53 | |
| | 24 | Moon I, N. . . . | E. | 34.9 | 37.8 | 39.6 | 46.0 | 48.3 | 50.5 | 57.2 | 58.8 | 1.8 | 36 48.32 | - 0.80 | . . . | -37.99 | 2 36 9.53 | + 70.98 | |
| | 25 | Moon II | E. | 57.0 | 59.6 | 1.5 | 8.0 | 10.2 | 12.5 | 19.0 | 20.9 | 23.6 | 39 10.26 | - 0.80 | . . . | -37.99 | 2 38 31.47 | - 70.96 | |
| | 26 | B. A. C. 878 ¹ . . . | E. | . . . | . . . | 19.7 | 22 | 3.24 | 8.27 | 6.30 | 1. . . | . . . | 44 24.91 | - 1.99 | . . . | -37.99 | 2 43 44.93 | - 4.12 | |
| | 27 | B. A. C. 878 ² . . . | E. | . . . | . . . | . . . | . . . | . . . | . . . | 35.5 | 37.5 | 40.6 | 44 25.15 | - 1.99 | . . . | -37.99 | 2 43 45.17 | - 4.12 | |
| | 28 | <i>α</i> Ceti | E. | 18.8 | 21.3 | 22.8 | 29.0 | 31.0 | 33.0 | 39.9 | 40.7 | 43.3 | 56 30.99 | - 1.08 | -37.93 | -37.99 | 2 55 51.92 | - 0.04 | |
| | 29 | <i>ε</i> Cephei | E. | 30.8 | 42.0 | 49.0 | 17.1 | 26.4 | 35.3 | 2.9 | 10.0 | 21.8 | 5 26.14 | + 2.85 | . . . | -37.99 | 3 4 51.00 | + 1.11 | |
| | 30 | <i>ε</i> Arctis | E. | 16.4 | 19.1 | 20.8 | 27.5 | 29.6 | 31.8 | 38.5 | 40.0 | 42.9 | 8 29.62 | - 0.78 | -38.02 | -37.99 | 3 7 50.85 | - 0.01 | |
| | 31 | Venus II, S. . . . | F. | 3.0 | 5.6 | 7.4 | 13.5 | 15.4 | 17.5 | 23.6 | 25.0 | 27.8 | 56 15.42 | - 1.07 | . . . | -37.94 | 11 55 36.41 | - 0.57 | |
| | 32 | 12 ² Canum Venat. . | F. | 37.7 | 41.0 | 43.0 | 50.7 | 53.4 | 56.0 | 4.0 | 5.9 | 9.0 | 50 53.41 | - 0.41 | -37.96 | -37.94 | 12 50 15.06 | + 0.02 | |
| | 33 | Polaris, S. P. . . . | F. | . . . | . . . | 11.0 | 43.0 | . . . | 50.0 | 22.0 | . . . | . . . | 15 15.82 | - 32.38 | . . . | -37.95 | 1 14 5.49 | - 0.33 | |
| | 34 | <i>η</i> Bootis | F. | 14.0 | 16.9 | 18.5 | 24.9 | 27.0 | 29.1 | 35.6 | 37.3 | 40.0 | 49 27.63 | - 0.81 | -37.99 | -37.95 | 13 48 48.27 | - 0.01 | |
| | 35 | <i>α</i> Draconis | F. | 9.9 | 15.9 | 19.4 | 34.2 | 35.9 | 43.5 | 58.0 | 1.6 | 8.0 | 1 38.82 | + 0.73 | . . . | -37.95 | 14 1 1.60 | + 0.05 | |
| | 36 | <i>α</i> Bootis | F. | 27.3 | 30.0 | 31.7 | 38.0 | 40.3 | 42.5 | 49.0 | 50.7 | 53.2 | 10 40.30 | - 0.80 | -37.90 | -37.95 | 14 10 1.55 | - 0.05 | |
| | 2 | 37 | Sun I, N | F. | 11.8 | 14.4 | 16.0 | 22.3 | 24.5 | 26.7 | 33.0 | 34.6 | 37.3 | 32 24.51 | - 1.36 | . . . | -37.96 | 14 31 45.19 | . . . |
| | 38 | Sun II, S. . . . | F. | 26.2 | 28.7 | 30.4 | 36.7 | 38.8 | 40.9 | 47.2 | 48.7 | 51.5 | 34 38.79 | - 1.36 | . . . | -37.96 | 14 33 59.47 | . . . | |
| | 39 | <i>μ</i> ¹ Bootis | F. | 12.0 | 15.3 | 17.2 | 25.0 | 27.6 | 30.2 | 37.9 | 39.7 | 43.0 | 20 27.54 | - 0.47 | -37.98 | -37.96 | 15 19 49.11 | + 0.01 | |
| | 40 | <i>α</i> Coronæ Borealis . | F. | 52.0 | 55.0 | 56.8 | 3.7 | 5.9 | 8.2 | 15.6 | 16.8 | 19.7 | 30 5.90 | - 0.68 | -37.93 | -37.96 | 15 26 27.26 | - 0.03 | |
| | 41 | <i>α</i> Serpentis | F. | 37.7 | 40.3 | 41.8 | 48.0 | 50.0 | 52.0 | 58.2 | 59.8 | 2.4 | 38 50.02 | - 1.01 | -37.98 | -37.96 | 15 38 11.05 | + 0.04 | |
| | 3 | 42 | <i>ο</i> Virginis | P. | 21.9 | 26.0 | 30.0 | 32.3 | 34.4 | 36.4 | 38.4 | 42.6 | 46.7 | 59 34.30 | - 0.80 | -38.04 | -38.06 | 11 58 55.44 | - 0.04 |
| | 43 | 4 | Draconis | P. | . . . | . . . | 36.4 | 46.8 | 56.7 | 6.9 | . . . | . . . | 6 56.79 | + 3.95 | . . . | -38.06 | 12 6 22.68 | - 0.40 | |
| | 44 | B. A. C. 4124 . . . | P. | . . . | 2.5 | 4.7 | 6.8 | 8.9 | 11.0 | 15.2 | 16.8 | 19.5 | 10 6.75 | - 1.31 | . . . | -38.06 | 12 9 27.35 | - 1.58 | |
| | 45 | <i>η</i> Virginis | P. | 2.2 | 4.7 | 6.3 | 12.4 | 14.5 | 16.5 | 22.7 | 24.2 | 26.8 | 14 14.48 | - 0.98 | -38.00 | -38.06 | 12 13 35.44 | - 0.08 | |
| | 46 | B. A. C. 4211 . . . | P. | 55.0 | 57.9 | 59.5 | 5.8 | 7.9 | 10.0 | 16.4 | 18.0 | 20.7 | 24 7.91 | - 1.29 | . . . | -38.05 | 12 23 28.57 | - 1.56 | |
| | 47 | <i>β</i> Corvi | P. | 20.0 | 22.9 | 24.6 | 31.3 | 33.5 | 35.7 | 42.3 | 44.0 | 46.7 | 28 33.44 | - 1.44 | -38.02 | -38.05 | 12 27 53.95 | - 0.07 | |
| | 48 | <i>κ</i> Draconis | P. | . . . | . . . | . . . | . . . | . . . | . . . | 17.0 | 24.6 | . . . | 28 48.00 | + 1.9 | . . . | -38.05 | 12 28 11.86 | + 0.05 | |
| | 49 | 12 | Canum Venat . . . | P. | 37.7 | 40.9 | 42.8 | 50.8 | 53.3 | 56.0 | 3.9 | 5.8 | 9.0 | 50 53.36 | - 0.15 | -38.13 | -38.04 | 12 50 15.17 | + 0.09 |
| | 50 | B. A. C. 4367 . . . | P. | 28.1 | 30.8 | 32.4 | 38.7 | 40.8 | 42.9 | 49.0 | 50.6 | 53.1 | 56 40.71 | - 0.78 | . . . | -38.04 | 12 56 1.89 | - 1.66 | |

1. Thread B used.
11, 16, 18, 21. Thread A used.
24. Bisections at threads II-VI.
29, 35, 48. Bisections at sets B and D.
43. Bisections at set C.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | |
| | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | " | ° ' " | ° ' " | ° ' " | ° ' " | " |
| 1 | 26 40 | 10 7.0 | 3.0 | 4.7 | 8.5 | 43 | .. | .. | .. | 375 | 285 | 65.7 | 333 29 38.8 | .. | — 28.5 | 24 26 31.5 | — 2.4 |
| 2 | 290 48 | 18.2 | 14.3 | 12.3 | 17.9 | 33 | .. | 490 | .. | 480 | .. | 65.7 | 69 7 43.2 | .. | + 2 27.9 | 120 16 32.3 | 0.0 |
| 3 | 335 36 | 12.5 | 9.8 | 8.0 | 14.7 | 36 | .. | 815 | .. | 765 | .. | 65.7 | 24 20 29.7 | .. | + 25.7 | 75 27 16.6 | + 1.1 |
| 4 | 213 6 | 16.1 | 14.8 | 15.2 | 17.3 | 31 | 730 | 720 | .. | .. | .. | 65.7 | 146 49 15.7 | .. | — 37.2 | 84 17 42.7 | + 0.8 |
| 5 | 326 46 | 16.2 | 13.1 | 10.7 | 17.3 | 37 | .. | .. | .. | 505 | 480 | 65.7 | 33 10 44.4 | .. | + 37.2 | 84 17 42.8 | + 0.9 |
| 6 | 213 52 | 13.0 | 10.5 | 9.3 | 12.4 | 37 | 470 | 450 | .. | .. | .. | 65.7 | 146 4 39.0 | .. | — 38.2 | 85 2 20.4 | + 0.5 |
| 7 | 326 0 | 10.7 | 8.0 | 5.3 | 12.8 | 32 | .. | .. | .. | 320 | 295 | 65.7 | 33 55 19.8 | .. | + 38.2 | 85 2 19.2 | — 0.7 |
| 8 | 285 26 | 18.7 | 14.5 | 14.0 | 18.5 | 35 | 090 | .. | .. | .. | 030 | 65.7 | 74 30 7.8 | .. | + 3 22.3 | 125 39 51.3 | + 17.2 |
| 9 | 285 26 | 18.7 | 14.5 | 14.0 | 18.5 | 35 | .. | .. | .. | 380 | .. | 65.7 | 74 30 13.7 | .. | + 3 22.3 | 125 39 57.2 | + 17.2 |
| 10 | 281 58 | 14.5 | 10.3 | 11.2 | 15.7 | 33 | .. | 415 | .. | 285 | .. | 65.7 | 77 57 38.3 | .. | + 4 20.5 | 129 8 20.0 | + 17.1 |
| 11 | 281 58 | 14.5 | 10.3 | 11.2 | 15.7 | 34 | .. | 510 | .. | 460 | .. | 65.7 | 77 55 22.2 | .. | + 19.7 | 129 6 3.1 | + 17.2 |
| 12 | 1 26 | 10.7 | 7.8 | 7.0 | 11.6 | 30 | .. | 290 | .. | 190 | .. | 65.7 | 358 28 47.6 | .. | — 1.5 | 49 35 7.3 | + 30.5 |
| 13 | 1 26 | 10.7 | 7.8 | 7.0 | 11.6 | 30 | .. | .. | .. | 855 | 850 | 65.7 | 358 28 58.0 | .. | — 1.5 | 49 35 17.7 | + 30.5 |
| 14 | 291 4 | 13.8 | 8.7 | 10.0 | 14.2 | 37 | .. | 010 | .. | 980 | .. | 65.7 | 68 52 33.0 | .. | + 2 26.4 | 120 1 20.6 | + 20.0 |
| 15 | 288 52 | 8.1 | 4.4 | 3.2 | 8.5 | 34 | .. | 350 | .. | 220 | .. | 65.7 | 71 3 45.8 | .. | + 2 44.5 | 122 12 51.5 | + 19.7 |
| 16 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 17 | 49 40 | 3.2 | 2.6 | 29.2 | 1.8 | 32 | 960 | .. | 030 | .. | 070 | 65.7 | 310 15 23.1 | .. | — 1 7.3 | 1 20 37.0 | — 2.4 |
| 18 | 332 20 | 6.6 | 4.3 | 29.3 | 6.1 | 33 | .. | 955 | .. | 920 | .. | 65.7 | 27 33 5.4 | .. | + 29.8 | 78 39 56.4 | — 3.2 |
| 19 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 20 | 343 56 | 17.4 | 13.2 | 9.9 | 16.3 | 36 | .. | 280 | .. | 230 | .. | 65.7 | 16 0 24.5 | 59.5 | + 16.4 | 67 7 2.1 | + 0.5 |
| 21 | 2 8 | 16.0 | 12.3 | 10.5 | 13.8 | 33 | .. | 700 | .. | 660 | .. | 65.7 | 357 45 10.7 | .. | — 2.2 | 48 51 29.7 | + 0.2 |
| 22 | 332 6 | 13.1 | 9.4 | 5.1 | 10.2 | 36 | .. | .. | .. | 600 | 550 | 65.7 | 27 50 25.5 | .. | + 30.2 | 78 57 16.9 | .. |
| 23 | 358 11 | 16.0 | 12.5 | 10.3 | 14.8 | 34 | .. | 050 | .. | 020 | .. | 65.7 | 1 41 49.8 | .. | + 1.7 | 52 48 12.7 | + 25.5 |
| 24 | 310 44 | 14.4 | 11.5 | 7.9 | 13.5 | 35 | 320 | 090 | 880 | 740 | 520 | 65.7 | 19 12 1.4 | .. | + 19.9 | 70 18 42.5 | .. |
| 25 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 26 | 283 12 | 15.2 | 12.0 | 10.6 | 15.3 | 36 | .. | 650 | .. | 600 | .. | 65.7 | 76 44 28.8 | .. | + 3 57.8 | 127 54 47.8 | + 23.9 |
| 27 | 283 12 | 15.2 | 12.0 | 10.6 | 15.3 | 36 | .. | .. | .. | 920 | 835 | 65.7 | 76 44 33.5 | .. | + 3 57.8 | 127 54 52.5 | + 23.9 |
| 28 | 324 40 | 8.0 | 4.8 | 1.3 | 8.3 | 36 | .. | 805 | .. | 760 | .. | 65.7 | 35 16 23.8 | 58.5 | + 40.4 | 86 23 25.4 | — 2.2 |
| 29 | 38 18 | 15.2 | 8.6 | 9.5 | 13.3 | 32 | 935 | .. | 930 | .. | 955 | 65.7 | 321 37 31.3 | .. | — 45.3 | 12 43 7.2 | — 1.8 |
| 30 | 341 38 | 15.5 | 12.3 | 7.7 | 15.5 | 34 | .. | 335 | .. | 320 | .. | 65.7 | 18 17 53.5 | .. | + 18.9 | 69 24 33.6 | — 0.7 |
| 31 | 323 2 | 9.5 | 5.0 | 4.0 | 12.6 | 36 | .. | .. | .. | 762 | 772 | 64.9 | 36 54 25.9 | 62.2 | + 42.0 | 88 1 29.7 | .. |
| 32 | 0 0 | 13.6 | 9.4 | 7.6 | 13.5 | 29 | .. | 678 | .. | 580 | .. | 64.9 | 359 54 39.2 | .. | — 0.1 | 51 1 0.3 | — 1.5 |
| 33 | 52 22 | 11.1 | 6.4 | 7.9 | 10.5 | 35 | 748 | 754 | .. | 790 | 800 | 64.9 | 307 34 10.7 | .. | + 1 12.9 | 358 39 19.0 | — 1.8 |
| 34 | 340 4 | 9.5 | 7.9 | 4.0 | 10.8 | 36 | .. | 458 | .. | 422 | .. | 64.9 | 19 52 20.4 | .. | + 20.2 | 70 59 1.8 | — 0.9 |
| 35 | 26 0 | 12.9 | 9.7 | 9.5 | 11.7 | 36 | .. | .. | .. | 062 | 058 | 64.9 | 333 56 17.8 | 69.2 | — 27.3 | 25 2 11.7 | — 3.2 |
| 36 | 340 52 | 8.7 | 7.0 | 2.8 | 9.5 | 34 | .. | .. | .. | 602 | 584 | 64.9 | 19 3 51.1 | 70.4 | + 19.2 | 70 10 31.5 | — 0.2 |
| 37 | 306 18 | 11.0 | 11.0 | 8.9 | 10.2 | 34 | 680 | 680 | .. | .. | .. | 64.9 | 53 37 54.9 | .. | + 1 15.2 | 104 45 31.3 | .. |
| 38 | 305 46 | 10.0 | 9.6 | 7.0 | 9.6 | 35 | .. | .. | .. | 980 | 998 | 64.9 | 54 10 14.7 | 71.9 | + 1 16.7 | 105 17 52.6 | .. |
| 39 | 358 50 | 11.6 | 8.6 | 8.5 | 14.3 | 31 | .. | 146 | .. | 082 | .. | 64.9 | 1 5 1.6 | .. | + 1.0 | 52 11 23.8 | — 0.7 |
| 40 | 348 10 | 13.6 | 9.6 | 9.3 | 14.0 | 33 | .. | .. | .. | 508 | 486 | 64.9 | 11 45 39.9 | .. | + 11.5 | 62 52 12.6 | + 1.9 |
| 41 | 327 52 | 9.7 | 6.2 | 5.8 | 14.1 | 36 | .. | 034 | .. | 950 | .. | 64.9 | 32 4 14.3 | 75.2 | + 34.5 | 83 11 10.0 | + 1.6 |
| 42 | 330 28 | 5.9 | 2.4 | 0.3 | 5.6 | 35 | .. | 200 | .. | 130 | .. | 67.0 | 29 27 58.4 | 47.3 | + 33.4 | 80 34 53.0 | — 2.0 |
| 43 | 39 20 | 13.6 | 8.5 | 8.4 | 10.1 | 37 | .. | 235 | .. | 230 | .. | 67.0 | 320 36 36.6 | .. | — 48.5 | 11 42 9.3 | — 2.9 |
| 44 | 304 12 | 0.0 | 24.4 | 21.7 | 28.5 | 33 | .. | 800 | .. | 730 | .. | 67.0 | 55 43 30.2 | .. | + 1 26.4 | 106 51 17.8 | — 8.7 |
| 45 | 321 4 | 9 28.4 | 24.0 | 22.6 | 26.4 | 34 | .. | 530 | .. | 435 | .. | 67.0 | 38 51 39.7 | .. | + 47.5 | 89 58 18.4 | — 2.4 |
| 46 | 305 14 | 10 13.9 | 9.6 | 9.0 | 14.0 | 34 | .. | 270 | .. | 210 | .. | 67.0 | 54 41 52.2 | .. | + 1 23.1 | 105 49 36.5 | — 9.6 |
| 47 | 298 22 | 7.9 | 5.0 | 4.8 | 9.8 | 37 | 260 | 275 | .. | .. | .. | 67.0 | 61 34 32.8 | .. | + 1 48.5 | 112 42 42.5 | — 3.3 |
| 48 | 31 30 | 13.1 | 9.5 | 8.8 | 11.0 | 36 | .. | .. | .. | 240 | 285 | 67.0 | 328 26 22.7 | .. | — 36.2 | 19 32 7.7 | — 2.9 |
| 49 | 0 0 | 10.9 | 7.5 | 6.2 | 10.3 | 29 | .. | .. | .. | 705 | 655 | 67.0 | 359 54 40.8 | 49.3 | — 0.1 | 51 1 1.9 | — 0.6 |
| 50 | 332 40 | 5.5 | 2.4 | 1.0 | 5.2 | 34 | 560 | 515 | .. | 475 | 430 | 67.0 | 27 15 48.2 | .. | + 30.3 | 78 22 39.7 | — 15.7 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | ' " | ' " | ' " | ' " |
| 20 | 29.97 | 61.5 | 22 | — 0.1 | .. | .. | — 0.1 |
| 28 | 29.96 | 60.5 | 24 | — 19 10.8 | + 16 5.3 | .. | — 3 5.5 |
| 31 | 29.90 | 62.5 | 31 | — 5.3 | — 8.6 | .. | — 13.9 |
| 35 | 29.87 | 68.0 | 37 | — 7.2 | + 16 10.6 | .. | + 16 3.4 |
| 36 | 29.85 | 69.4 | 38 | — 7.2 | — 16 10.6 | .. | — 16 17.8 |
| 38 | 29.82 | 68.4 | | | | | |
| 41 | 29.79 | 71.6 | | | | | |
| 42 | 30.25 | 46.8 | | | | | |
| 49 | 30.24 | 49.1 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. | | | | |
|--------|---------|----------------------|----------------------------------|--------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|------------|--------------|----------------|----------------|---------------------------|----------------------------|-------------|--------|--|--|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | | | | | |
| 1876. | | | | | | | | | | | | | m. | s. | | | | | | | | |
| Nov. 3 | 1 | Polaris, S. P. . . . | P. | | 22.1 | 53.8 | 24.9 | 0.4 | 32.9 | | | | 15 | 26.36 | -43.05 | . . . | -38.04 | 1 14 5.27 | - 1.29 | | | |
| | 2 | Virginis | P. | 8.0 | 10.6 | 12.1 | 18.3 | 20.5 | 22.6 | 28.8 | 30.4 | 32.9 | 19 | 20.47 | - 1.20 | -38.02 | -38.03 | 13 18 41.24 | - 0.03 | | | |
| | 3 | Mercury II, N. . . . | P. | 31.0 | 33.7 | 35.3 | 41.4 | 43.6 | 45.5 | 51.8 | 53.3 | 55.9 | 39 | 43.50 | - 1.15 | . . . | -38.03 | 13 39 4.32 | - 0.20 | | | |
| | 4 | Mercury S. | P. | | | | | | | | | | | | . . . | . . . | . . . | . . . | . . . | | | |
| | 4 | 5 | Sun I, N. | P. | 6.3 | 9.0 | 10.7 | 16.9 | 19.0 | 21.1 | 27.5 | 29.0 | 31.7 | 40 | 19.02 | - 1.31 | . . . | -38.00 | 14 39 39.71 | . . . | | |
| | | 6 | Sun II, S. | P. | 20.9 | 23.6 | 25.0 | 31.5 | 33.6 | 35.7 | 42.0 | 43.6 | 46.3 | 42 | 33.58 | - 1.31 | . . . | -38.00 | 14 41 54.27 | . . . | | |
| | | 7 | B. A. C. 5216 | P. | 55.0 | 57.7 | 59.3 | 5.7 | 7.9 | 10.6 | 16.4 | 17.9 | 20.6 | 41 | 7.83 | - 0.72 | . . . | -37.98 | 15 40 29.13 | - 1.23 | | |
| | | 8 | Coronæ Borealis . . | P. | 52.8 | 55.7 | 57.3 | 4.4 | 6.8 | 8.9 | 15.9 | 17.5 | 20.5 | 53 | 6.64 | - 0.49 | . . . | -37.98 | 15 52 28.17 | - 0.14 | | |
| | | 9 | B. A. C. 5437 | P. | 14.0 | 16.5 | 18.0 | 24.2 | 26.4 | 28.4 | 34.4 | 36.0 | 38.6 | 12 | 26.28 | - 1.11 | . . . | -37.97 | 16 11 47.20 | - 1.56 | | |
| | | 10 | B. A. C. 5466 | P. | 53.7 | 56.5 | 58.0 | 4.6 | 6.7 | 8.9 | 15.5 | 17.0 | 19.8 | 17 | 6.74 | - 0.65 | . . . | -37.97 | 16 16 28.12 | - 1.15 | | |
| | | 11 | Dracōis | P. | 28.7 | 34.0 | 37.4 | 50.4 | 54.8 | 59.0 | 12.0 | 15.2 | 20.6 | 22 | 54.68 | + 0.85 | . . . | -37.97 | 16 22 17.56 | - 0.02 | | |
| | | 12 | B. A. C. 5525 | P. | 19.7 | 22.6 | 24.2 | 30.8 | 33.0 | 35.3 | 41.9 | 43.5 | 46.2 | 25 | 33.02 | - 0.61 | . . . | -37.96 | 16 24 54.45 | - 1.10 | | |
| | | 13 | Dracōis | P. | | | | 47.5 | 53.3 | 58.9 | | 14.6 | 21.6 | 28 | 47.51 | + 1.62 | . . . | -37.96 | 16 28 11.17 | - 0.03 | | |
| | | 14 | B. A. C. 5731 | P. | 57.7 | 0.0 | 2.5 | 9.6 | 12.0 | 14.4 | 21.4 | 23.2 | 26.3 | 56 | 11.97 | - 0.41 | . . . | -37.95 | 16 55 33.61 | - 0.82 | | |
| | | 15 | Ursæ Minoris | P. | | | | 47.6 | 3.6 | 18.2 | 33.3 | | 59 | 3.12 | + 6.08 | . . . | -37.95 | 16 58 31.25 | - 0.33 | | | |
| | | 16 | Herculis | P. | 27.0 | 29.6 | 31.2 | 37.5 | 39.7 | 41.8 | 48.0 | 49.6 | 52.3 | 9 | 39.63 | - 0.77 | -37.89 | -37.95 | 17 9 0.91 | - 0.04 | | |
| | | 17 | B. A. C. 5834 | P. | 7.3 | 10.4 | 12.3 | 19.9 | 22.4 | 25.0 | 32.8 | 34.7 | 37.9 | 11 | 22.52 | - 0.27 | . . . | -37.95 | 17 10 44.30 | - 0.59 | | |
| | | 18 | Ophiuchi | P. | 38.4 | 41.0 | 42.5 | 48.0 | 50.9 | 53.0 | 59.3 | 0.9 | 3.5 | 29 | 50.93 | - 0.80 | -37.96 | -37.94 | 17 29 12.19 | + 0.05 | | |
| | | 19 | Dracōis | P. | 40.3 | 47.4 | 51.8 | 8.4 | 14.3 | 20.0 | 36.7 | 41.2 | 48.0 | 38 | 14.23 | + 1.50 | . . . | -37.93 | 17 37 37.80 | - 0.01 | | |
| | | 20 | Herculis | P. | 1.9 | 4.8 | 6.6 | 13.5 | 15.7 | 18.0 | 25.0 | 26.7 | 29.6 | 42 | 15.76 | - 0.50 | -37.91 | -37.93 | 17 41 37.33 | - 0.02 | | |
| | | 21 | Dracōis (R) | P. | | | | | | | | | | . . . | . . . | . . . | . . . | . . . | . . . | | | |
| | | 22 | Dracōis | P. | | | | 21.0 | 24.4 | 27.6 | 34.1 | 36.6 | 40.7 | 54 | 21.04 | + 0.22 | . . . | -37.93 | 17 53 43.33 | - 0.17 | | |
| | | 23 | Sagittarii | P. | 18.4 | 21.3 | 23.0 | 30.0 | 32.5 | 34.9 | 42.0 | 43.8 | 46.7 | 58 | 32.51 | - 1.68 | -37.89 | -37.93 | 17 57 52.90 | - 0.03 | | |
| | | 24 | Serpentis | P. | 22.3 | 24.9 | 26.4 | 32.5 | 34.6 | 36.6 | 42.8 | 44.3 | 46.9 | 15 | 34.59 | - 1.09 | -37.98 | -37.92 | 18 14 55.58 | + 0.12 | | |
| | 5 | 25 | Polaris | E. | | | | 5.0 | 33.0 | 0.0 | 26.0 | 54.0 | | 14 | 0.06 | +41.25 | . . . | -37.92 | 1 14 3.39 | - 1.86 | | |
| | | 26 | Piscium | E. | 20.8 | 23.5 | 25.0 | 31.5 | 33.6 | 35.6 | 41.9 | 43.7 | 46.4 | 25 | 33.56 | - 0.65 | -37.97 | -37.91 | 1 24 55.00 | - 0.13 | | |
| | | 27 | Phocæa | E. | 33.7 | 36.1 | 37.9 | 44.0 | 46.2 | 48.4 | 54.3 | 56.0 | 58.5 | 41 | 46.12 | - 0.73 | . . . | -37.91 | 1 41 7.48 | . . . | | |
| | | 28 | Sirona | E. | 53.8 | 56.2 | 57.9 | 4.0 | 6.2 | 8.6 | 14.4 | 16.5 | 18.6 | 46 | 6.24 | - 0.78 | . . . | -37.91 | 1 45 27.55 | . . . | | |
| | | 29 | Ærietis | E. | 16.9 | 19.7 | 21.5 | 28.0 | 30.1 | 32.4 | 38.6 | 40.5 | 43.3 | 48 | 30.11 | - 0.54 | -37.93 | -37.91 | 1 47 51.66 | + 0.04 | | |
| | | 30 | Ærietis | E. | 40.2 | 43.2 | 44.9 | 51.4 | 53.6 | 55.8 | 2.6 | 4.0 | 7.0 | 0 | 53.63 | - 0.47 | -37.82 | -37.90 | 2 0 15.26 | - 0.07 | | |
| | | 31 | Danæ | E. | | | | 46.9 | 49.7 | 52.6 | 55.5 | 57.8 | | 2 | 52.51 | - 0.02 | . . . | -37.90 | 2 2 14.59 | . . . | | |
| | | 32 | Neptune | E. | 28.0 | 30.5 | 32.0 | 38.4 | 40.5 | 42.6 | 48.9 | 50.4 | 53.0 | 8 | 40.48 | - 0.71 | . . . | -37.90 | 2 8 1.87 | . . . | | |
| | | 33 | B. A. C. 937 | E. | | 4.7 | 6.9 | 15.0 | 17.7 | 20.2 | 28.4 | 30.4 | | 54 | 17.62 | - 1.85 | . . . | -37.87 | 2 53 37.90 | - 4.14 | | |
| | | 34 | B. A. C. 938 | E. | | 5.7 | 7.7 | 15.7 | 18.3 | 20.9 | 29.2 | 31.3 | | 54 | 18.40 | - 1.85 | . . . | -37.87 | 2 53 38.68 | - 4.14 | | |
| | | 35 | Persei (R.) | E. | | | | | | | | | | . . . | . . . | . . . | . . . | . . . | . . . | | | |
| | | 36 | Persei | E. | | | | | | | | | | . . . | . . . | . . . | . . . | . . . | . . . | | | |
| | | 37 | Persei (R.) | E. | | | | | | | | | | . . . | . . . | . . . | . . . | . . . | . . . | | | |
| | | 38 | Persei | E. | | | | | | | | | | . . . | . . . | . . . | . . . | . . . | . . . | | | |
| | | 39 | Persei (R.) | E. | | | | | | | | | | . . . | . . . | . . . | . . . | . . . | . . . | | | |
| | | 40 | Persei | E. | | | | | | | | | | . . . | . . . | . . . | . . . | . . . | . . . | | | |
| | | 41 | B. A. C. 1294 | E. | 40.7 | 42.6 | 47.4 | 50.0 | 52.8 | 55.3 | 57.9 | 2.9 | 4.7 | 6 | 52.70 | - 1.68 | . . . | -37.84 | 4 6 13.18 | - 3.76 | | |
| | | 42 | B. A. C. 1312 | E. | 56.0 | 59.5 | 1.6 | 9.1 | 11.7 | 14.5 | 21.9 | 24.0 | 27.0 | 10 | 11.70 | - 1.73 | . . . | -37.84 | 4 9 32.13 | - 3.74 | | |
| | | 43 | B. A. C. 1333 | E. | 40.6 | 43.7 | 45.7 | 53.0 | 55.5 | 57.9 | 5.4 | 7.3 | 10.3 | 13 | 55.49 | - 1.64 | . . . | -37.84 | 4 13 16.01 | - 3.72 | | |
| | | 44 | B. A. C. 1341 ¹ . . . | E. | 31.5 | 34.2 | 36.0 | 42.9 | 45.0 | 47.2 | 53.8 | 55.8 | 58.6 | 15 | 45.00 | - 0.43 | . . . | -37.84 | 4 15 6.73 | - 4.52 | | |
| | | 45 | B. A. C. 1341 ² . . . | E. | 32.3 | 34.9 | 36.8 | 43.6 | 45.7 | 48.0 | 54.6 | 56.4 | 59.2 | 15 | 45.72 | - 0.43 | . . . | -37.84 | 4 15 7.45 | - 4.53 | | |
| | | 46 | Feronia | E. | 35.9 | 38.7 | 40.5 | 46.8 | 49.0 | 51.2 | 57.5 | 59.0 | 1.9 | 22 | 48.94 | - 0.61 | . . . | -37.83 | 4 22 10.50 | . . . | | |
| | | 47 | B. A. C. 1882 | E. | 9.9 | 12.8 | 14.6 | 21.5 | 23.8 | 26.3 | 33.2 | 34.9 | 37.9 | 49 | 23.88 | - 0.34 | . . . | -37.80 | 5 48 45.74 | - 4.54 | | |
| | | 48 | B. A. C. 1951 | E. | 44.4 | 47.0 | 48.8 | 55.4 | 57.6 | 59.9 | 0.6 | 8.2 | 11.0 | 59 | 57.66 | - 0.46 | . . . | -37.79 | 5 59 19.41 | - 4.33 | | |

11, 13, 14, 15, 17, 19, 22, 35. Bisections at sets B and D.

28, 31, 46. Thread A used.

31. Telescope micrometer reading decreased one revolution in reduction.

44, 45. Telescope micrometer reading decreased five revolutions in reduction.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | ° ' " | r. " | " | " | " | | | | | | | " | ° ' " | ° | ' " | ° ' " | " | |
| 1 | 52 22 | 10 9.7 | 5.1 | 5.6 | 7.4 | 36 | 020 | 005 | 005 | 015 | 005 | 67.0 | 307 34 14.5 | . . | - 1 | 16.2 | 358 39 19.5 | - 2.1 |
| 2 | 310 32 | 7.7 | 5.4 | 3.2 | 9.2 | 33 | . . | . . | . . | 015 | 995 | 67.0 | 49 23 28.9 | 50.3 | + 1 | 8.4 | 100 30 58.5 | - 1.5 |
| 3 | 312 58 | 12.1 | 9.0 | 7.9 | 13.2 | 33 | 660 | . . | . . | . . | 695 | 67.0 | 46 57 42.5 | . . | + 1 | 2.7 | 98 5 6.4 | . . |
| 4 | 312 58 | 12.1 | 9.0 | 7.9 | 13.2 | 34 | . . | 015 | . . | 080 | . . | 67.0 | 46 57 48.2 | 51.2 | + 1 | 2.7 | 98 5 12.1 | . . |
| 5 | 305 40 | 4.7 | 2.0 | 2.7 | 6.2 | 31 | 230 | 210 | . . | . . | . . | 67.0 | 51 14 57.7 | . . | + 1 | 21.1 | 105 22 40.0 | . . |
| 6 | 305 8 | 9.6 | 6.3 | 6.0 | 9.1 | 32 | . . | . . | . . | 020 | 015 | 67.0 | 54 47 14.7 | 52.1 | + 1 | 22.8 | 105 54 58.7 | . . |
| 7 | 336 50 | 7.7 | 3.8 | 2.9 | 9.5 | 30 | . . | 080 | . . | 060 | . . | 67.0 | 23 4 42.8 | 53.4 | + 1 | 24.9 | 74 11 28.9 | - 10.9 |
| 8 | 348 16 | 10.6 | 5.9 | 4.4 | 10.2 | 32 | . . | 330 | . . | 290 | . . | 67.0 | 11 39 19.0 | . . | + 1 | 12.0 | 62 45 52.2 | + 1.1 |
| 9 | 316 40 | 7.0 | 3.3 | 3.7 | 10.0 | 35 | . . | 970 | . . | 980 | . . | 67.0 | 43 16 13.2 | . . | + 1 | 54.8 | 94 23 29.2 | - 10.6 |
| 10 | 340 30 | 4.5 | 1.6 | 29.8 | 5.5 | 38 | . . | 055 | . . | 965 | . . | 67.0 | 19 26 41.3 | 54.4 | + 1 | 20.6 | 70 33 23.1 | - 8.1 |
| 11 | 22 50 | 8.0 | 5.2 | 4.5 | 8.3 | 36 | 790 | . . | . . | . . | 730 | 67.0 | 337 6 25.8 | . . | - 1 | 24.6 | 28 12 22.4 | - 1.4 |
| 12 | 342 48 | 6.6 | 3.3 | 1.9 | 7.1 | 34 | . . | 400 | . . | 345 | . . | 67.0 | 17 7 47.5 | . . | + 1 | 18.0 | 68 14 26.7 | - 7.3 |
| 13 | 30 4 | 8.5 | 5.3 | 3.5 | 7.4 | 35 | . . | . . | . . | 500 | 490 | 67.0 | 329 52 6.5 | . . | - 1 | 33.8 | 20 57 53.9 | - 1.5 |
| 14 | 352 10 | 10.0 | 6.8 | 4.9 | 9.7 | 38 | . . | . . | . . | 765 | 720 | 67.0 | 7 46 57.7 | . . | + 1 | 8.0 | 58 53 26.9 | - 3.6 |
| 15 | 43 16 | 9.0 | 3.5 | 3.7 | 5.0 | 36 | . . | . . | . . | 335 | 325 | 67.0 | 316 40 18.7 | 54.4 | - 1 | 54.9 | 7 45 45.0 | - 0.6 |
| 16 | 335 34 | 8.8 | 6.0 | 3.9 | 9.7 | 32 | . . | 270 | . . | 205 | . . | 67.0 | 24 21 17.2 | . . | + 1 | 26.3 | 75 28 4.7 | + 0.9 |
| 17 | 358 0 | 9.5 | 7.5 | 5.9 | 8.5 | 37 | . . | . . | . . | 505 | 465 | 67.0 | 1 56 38.5 | . . | + 1 | 2.0 | 55 3 1.7 | - 1.5 |
| 18 | 333 42 | 7.0 | 4.4 | 3.2 | 8.1 | 35 | . . | 565 | . . | 510 | . . | 67.0 | 26 14 6.2 | 54.5 | + 1 | 28.7 | 77 20 56.1 | + 0.7 |
| 19 | 29 50 | 7.5 | 3.8 | 3.1 | 6.5 | 32 | 165 | . . | . . | . . | 115 | 67.0 | 339 5 13.9 | . . | - 1 | 33.5 | 21 11 1.6 | - 2.9 |
| 20 | 348 50 | 9.0 | 5.5 | 4.0 | 8.0 | 34 | 180 | 205 | . . | 140 | 090 | 67.0 | 11 5 46.2 | . . | + 1 | 11.4 | 62 12 18.8 | + 0.3 |
| 21 | 167 20 | 7.2 | 6.5 | 5.2 | 6.3 | 37 | 195 | 140 | . . | . . | . . | 67.0 | 192 36 30.2 | . . | + 1 | 13.0 | 38 29 38.0 | - 2.4 |
| 22 | 12 32 | 10.1 | 7.4 | 5.9 | 9.3 | 33 | . . | . . | . . | 105 | 120 | 67.0 | 347 23 31.9 | . . | - 1 | 13.0 | 38 29 40.1 | - 0.3 |
| 23 | 290 40 | 8.1 | 5.7 | 5.7 | 8.8 | 37 | . . | 680 | . . | 625 | . . | 67.0 | 69 16 39.8 | . . | + 2 | 32.8 | 120 25 33.8 | - 1.3 |
| 24 | 318 8 | 5.1 | 1.0 | 1.1 | 5.7 | 37 | 565 | 545 | . . | . . | . . | 67.0 | 41 48 33.7 | 53.8 | + 1 | 52.1 | 92 55 47.0 | 0.0 |
| 25 | 49 40 | 10.7 | 3.8 | 4.5 | 8.7 | 32 | 925 | . . | 875 | . . | 870 | 68.4 | 310 15 28.5 | . . | - 1 | 11.0 | 1 20 38.7 | + 0.9 |
| 26 | 335 46 | 6.3 | 0.5 | 28.6 | 5.3 | 36 | . . | 800 | . . | 670 | . . | 68.4 | 24 10 23.0 | 39.5 | + 1 | 27.0 | 75 17 11.2 | + 1.5 |
| 27 | 331 18 | 13.8 | 8.0 | 5.7 | 12.5 | 32 | . . | 990 | . . | . . | 970 | 68.4 | 28 37 33.0 | . . | + 1 | 32.8 | 79 44 27.0 | - 3.2 |
| 28 | 328 56 | 11.7 | 6.1 | 5.8 | 12.2 | 38 | . . | 180 | . . | 075 | . . | 68.4 | 30 58 17.0 | . . | + 1 | 36.1 | 82 5 14.3 | - 2.3 |
| 29 | 341 14 | 14.0 | 7.7 | 7.0 | 14.0 | 29 | . . | 975 | . . | 870 | . . | 68.4 | 18 40 46.7 | . . | + 1 | 20.3 | 69 47 28.2 | + 0.8 |
| 30 | 343 56 | 8.0 | 2.7 | 2.5 | 8.3 | 36 | . . | 530 | . . | 500 | . . | 68.4 | 16 0 22.4 | . . | + 1 | 17.3 | 67 7 0.9 | - 0.4 |
| 31 | 1 58 | 12.8 | 7.6 | 7.5 | 12.0 | 41 | . . | . . | . . | 940 | 870 | 68.4 | 357 57 2.0 | . . | - 1 | 2.1 | 49 3 21.1 | + 0.2 |
| 32 | 332 4 | 9.9 | 4.9 | 4.3 | 10.8 | 37 | . . | . . | . . | 250 | 240 | 68.4 | 27 52 36.5 | . . | + 1 | 31.8 | 78 59 29.5 | . . |
| 33 | 280 20 | 3.1 | 27.3 | 29.2 | 4.0 | 35 | 800 | . . | . . | . . | 695 | 68.4 | 79 36 5.4 | . . | + 5 | 17.8 | 130 47 44.4 | + 22.9 |
| 34 | 280 20 | 3.1 | 27.3 | 29.2 | 4.0 | 35 | . . | 820 | . . | 650 | . . | 68.4 | 79 36 5.5 | . . | + 5 | 17.8 | 130 47 44.5 | + 22.9 |
| 35 | 169 24 | 9.0 | 6.2 | 5.6 | 8.5 | 33 | 630 | . . | 500 | . . | . . | 68.4 | 190 31 38.7 | . . | + 1 | 11.2 | 40 34 31.3 | - 2.9 |
| 36 | 10 28 | 19.9 | 13.9 | 14.3 | 19.0 | 35 | . . | . . | . . | . . | 690 | 68.4 | 349 28 22.9 | . . | - 1 | 11.2 | 40 34 32.9 | - 1.3 |
| 37 | 171 26 | 6.2 | 3.8 | 3.7 | 7.1 | 34 | 780 | 715 | . . | . . | . . | 68.4 | 188 29 53.5 | . . | + 1 | 9.0 | 42 36 18.7 | - 1.4 |
| 38 | 8 26 | 11.5 | 5.9 | 6.6 | 9.6 | 35 | . . | . . | . . | 275 | 235 | 68.4 | 351 30 7.4 | . . | - 1 | 9.0 | 42 36 19.6 | - 0.5 |
| 39 | 187 18 | 10.4 | 8.3 | 7.0 | 9.7 | 33 | 620 | 570 | . . | . . | . . | 68.4 | 172 37 39.8 | . . | - 1 | 7.8 | 58 28 49.2 | - 1.4 |
| 40 | 252 34 | 9.3 | 4.2 | 4.0 | 9.0 | 36 | . . | . . | . . | 215 | 165 | 68.4 | 7 22 19.1 | . . | + 1 | 7.8 | 58 28 48.1 | - 2.5 |
| 41 | 245 30 | 4.8 | 0.5 | 1.4 | 6.3 | 32 | . . | 935 | . . | 915 | . . | 68.4 | 74 25 24.9 | . . | + 3 | 32.7 | 125 35 18.8 | + 24.1 |
| 42 | 283 46 | 11.8 | 5.5 | 6.5 | 13.2 | 34 | . . | 310 | . . | 260 | . . | 68.4 | 76 9 51.7 | . . | + 4 | 0.0 | 127 20 12.9 | + 24.1 |
| 43 | 287 0 | 7.5 | 2.0 | 2.8 | 8.3 | 35 | 540 | 490 | . . | . . | . . | 68.4 | 72 56 5.4 | . . | + 3 | 13.6 | 124 5 40.2 | + 24.0 |
| 44 | 346 22 | 7.2 | 3.0 | 3.2 | 9.2 | 36 | . . | . . | . . | 065 | 000 | 68.4 | 13 32 59.7 | . . | + 1 | 14.5 | 64 39 35.4 | + 18.8 |
| 45 | 346 22 | 7.2 | 3.0 | 3.2 | 9.2 | 34 | . . | . . | . . | 800 | 770 | 68.4 | 13 32 40.6 | . . | + 1 | 14.5 | 64 39 16.3 | + 18.8 |
| 46 | 338 0 | 1.2 | 25.8 | 25.5 | 0.5 | 32 | . . | 725 | . . | 670 | . . | 68.4 | 21 53 43.2 | . . | + 1 | 24.2 | 73 0 28.6 | - 2.4 |
| 47 | 349 58 | 9.0 | 3.0 | 2.5 | 9.5 | 35 | . . | 400 | . . | 370 | . . | 68.4 | 9 58 5.7 | . . | + 1 | 10.6 | 61 4 37.5 | + 8.8 |
| 48 | 314 42 | 8.3 | 3.0 | 3.3 | 10.0 | 36 | . . | 370 | . . | 330 | . . | 68.4 | 15 14 20.0 | . . | + 1 | 16.4 | 66 20 58.2 | + 8.9 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " " | " " | " " | " " |
| 2 | 30.24 | 50.3 | 3 | - 5.7 | + 2.9 | - 0.1 | - 2.9 |
| 4 | 30.25 | 50.6 | 4 | - 5.7 | - 2.9 | . . | - 8.6 |
| 6 | 30.25 | 51.9 | 5 | - 7.2 | + 16 9.3 | . . | + 16 2.1 |
| 7 | 30.24 | 52.8 | 6 | - 7.3 | - 16 9.3 | . . | - 16 16.6 |
| 10 | 30.24 | 55.5 | 32 | - 0.1 | . . | . . | - 0.1 |
| 15 | 30.23 | 56.3 | | | | | |
| 18 | 30.23 | 55.1 | | | | | |
| 24 | 30.24 | 53.5 | | | | | |
| 26 | 30.32 | 45.0 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|--------|---------|---------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|-----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock apparent. | Clock adopted. | | |
| | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| 1876. | | | | | | | | | | | | | | | | | | |
| Nov. 5 | 1 | Σ 853 ¹ | E. | 44.5 | 47.0 | 48.6 | ... | ... | ... | 5.5 | 7.0 | 9.5 | 2 57.02 | -0.70 | ... | -37.79 | 6 2 18.53 | -3.97 |
| | 2 | Σ 853 ² | E. | ... | ... | 53.0 | 55.3 | 57.4 | 59.5 | 1.5 | ... | ... | 2 57.35 | -0.70 | ... | -37.79 | 6 2 18.86 | -3.97 |
| | 3 | δ Ursæ Minoris, S. P. | E. | ... | 52.4 | 17.0 | 40.0 | ... | 31.9 | 25.5 | ... | 16.2 | 12 42.18 | -17.74 | ... | -37.79 | 18 11 46.65 | +0.02 |
| | 4 | μ Geminorum | E. | 56.7 | 59.4 | 1.2 | 7.8 | 10.0 | 12.3 | 18.8 | 20.5 | 23.3 | 16 10.00 | -0.49 | -37.75 | -37.78 | 6 15 31.73 | -0.07 |
| | 5 | γ Geminorum | E. | 2.4 | 5.2 | 6.8 | 13.0 | 15.1 | 17.3 | 23.7 | 25.4 | 27.9 | 31 15.20 | -0.61 | -37.69 | -37.78 | 6 30 36.81 | -0.12 |
| | 6 | α Canis Majoris | E. | 10.5 | 13.0 | 14.6 | 20.9 | 23.0 | 25.2 | 31.8 | 33.3 | 36.0 | 40 23.14 | -1.22 | -37.89 | -37.77 | 6 39 44.15 | +0.04 |
| | 7 | 51 Cephei | E. | ... | ... | ... | 7.7 | 47.2 | 32.1 | 14.0 | ... | ... | 42 49.08 | +19.73 | ... | -37.77 | 6 42 31.04 | +0.98 |
| | 8 | B. A. C. 2282 | E. | 45.7 | 48.9 | 51.0 | 58.4 | 0.8 | 3.3 | 10.7 | 12.6 | 16.0 | 53 0.82 | -1.65 | ... | -37.77 | 6 52 21.40 | -2.73 |
| | 9 | Moon II, S. | E. | 37.4 | 40.4 | 42.2 | 49.2 | 51.6 | 53.8 | 0.9 | 2.7 | 5.8 | 1 51.56 | -0.40 | ... | -37.76 | 7 1 13.40 | -76.85 |
| | 10 | Saturn I, S. | S. | 43.5 | 46.0 | 47.5 | ... | ... | ... | 4.4 | 5.9 | 8.4 | 16 55.95 | -1.30 | ... | -37.37 | 22 16 17.28 | ... |
| | 11 | Saturn II, N. | S. | ... | ... | 53.0 | 55.1 | 57.2 | 59.3 | 1.4 | ... | ... | 16 57.21 | -1.30 | ... | -37.37 | 22 16 18.54 | ... |
| | 12 | 226 Cephei | S. | ... | ... | 24.0 | 32.4 | 40.5 | 48.2 | 56.7 | ... | ... | 30 40.40 | +3.13 | ... | -37.37 | 22 30 6.16 | +0.16 |
| | 13 | ξ Pegasi | S. | 45.5 | 48.2 | 49.8 | 55.9 | 58.0 | 0.0 | 6.2 | 7.8 | 10.5 | 35 57.99 | -0.85 | -37.41 | -37.37 | 22 35 19.77 | +0.10 |
| | 14 | ι Cephei (R.) | S. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | 15 | ι Cephei | S. | ... | ... | ... | 54.6 | 59.3 | 4.4 | 14.4 | 17.8 | 24.0 | 45 54.50 | +1.33 | ... | -37.37 | 22 45 18.46 | +0.43 |
| | 16 | α Ursæ Majoris, S. P. | S. | ... | 55.6 | 51.3 | 46.8 | 42.5 | 38.2 | 29.4 | 25.8 | 20.3 | 56 46.87 | -2.97 | ... | -37.37 | 10 56 6.53 | -0.33 |
| | 17 | α Pegasi | S. | 3.9 | 6.4 | 7.9 | 14.3 | 16.4 | 18.5 | 24.8 | 26.3 | 29.0 | 59 16.39 | -0.76 | -37.37 | -37.37 | 22 58 38.26 | +0.03 |
| | 18 | ο Cephei | S. | ... | ... | 0.3 | 5.5 | 11.0 | 16.3 | 21.5 | ... | ... | 14 10.95 | +1.55 | ... | -37.37 | 23 13 35.13 | +0.13 |
| | 19 | γ Pegasi (R.) | S. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | 20 | γ Pegasi | S. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| | 21 | Lalande 512 | S. | 32.7 | 35.2 | 36.9 | 42.9 | 44.9 | 47.0 | 53.1 | 54.7 | 57.3 | 10 44.97 | -1.02 | ... | -37.36 | 0 19 6.59 | -3.71 |
| | 22 | B. A. C. 136 ¹ | S. | 7.4 | 10.6 | 12.6 | ... | ... | ... | 32.6 | 34.5 | 37.7 | 28 22.57 | -1.87 | ... | -37.36 | 0 27 43.34 | -4.30 |
| | 23 | B. A. C. 136 ² | S. | ... | ... | 17.7 | 20.2 | 22.8 | 25.3 | 27.7 | ... | ... | 28 22.75 | -1.87 | ... | -37.36 | 0 27 43.52 | -4.30 |
| | 24 | B. A. C. 192 | S. | 12.9 | 16.0 | 18.2 | 26.0 | 28.6 | 31.2 | 39.2 | 41.2 | 44.4 | 37 28.63 | -1.98 | ... | -37.36 | 0 36 49.29 | -4.40 |
| | 25 | B. A. C. 202 | S. | 40.0 | 43.3 | 45.4 | 53.4 | 56.0 | 58.6 | 6.6 | 8.6 | 11.8 | 38 55.97 | -1.98 | ... | -37.36 | 0 38 16.63 | -4.40 |
| | 26 | B. A. C. 259 | S. | 18.4 | 21.6 | 23.6 | 31.3 | 33.8 | 36.5 | 44.4 | 46.0 | 49.4 | 50 33.89 | -0.18 | ... | -37.36 | 0 49 50.35 | -3.87 |
| | 27 | B. A. C. 272 | S. | 7.0 | 9.8 | 11.5 | 18.5 | 21.0 | 23.6 | 30.5 | 32.1 | 35.0 | 53 21.00 | -1.70 | ... | -37.36 | 0 52 41.94 | -4.18 |
| | 28 | Maia | S. | 23.1 | 25.3 | 26.6 | 33.1 | 35.3 | 37.5 | 43.6 | 45.3 | 47.7 | 1 35.28 | -0.87 | ... | -37.36 | 1 0 57.05 | ... |
| | 29 | Polaris | S. | ... | ... | ... | 31.5 | 58.5 | 24.0 | 52.0 | ... | ... | 13 57.92 | +44.32 | ... | -37.36 | 1 14 4.88 | +0.27 |
| | 30 | Phocæa | S. | 14.4 | 17.3 | 18.9 | 25.0 | 27.2 | 29.0 | 35.6 | 37.1 | 39.6 | 40 27.12 | -0.84 | ... | -37.36 | 1 39 48.92 | ... |
| | 31 | Sirona | S. | 18.4 | 21.0 | 22.4 | 28.4 | 30.5 | 32.7 | 38.9 | 40.4 | 42.8 | 44 30.61 | -0.88 | ... | -37.36 | 1 43 52.37 | ... |
| | 32 | Danite | S. | 28.0 | 31.8 | 33.6 | 41.9 | 44.3 | 47.0 | 55.4 | 57.4 | 0.7 | 0 44.46 | -0.08 | ... | -37.36 | 2 0 7.02 | ... |
| | 33 | Neptune | S. | 14.8 | 17.6 | 19.0 | 25.2 | 27.3 | 29.5 | 35.7 | 37.2 | 39.9 | 8 27.36 | -0.82 | ... | -37.35 | 2 7 49.19 | ... |
| | 34 | Lalande 4528 | S. | 11.9 | 14.4 | 16.0 | 22.5 | 24.6 | 26.6 | 33.0 | 34.6 | 37.3 | 21 24 54 | -0.71 | ... | -37.35 | 2 20 46.48 | -4.16 |
| | 35 | Lalande 4803 | S. | 47.0 | 49.6 | 51.0 | 55.2 | 57.5 | 59.6 | 1.5 | 3.6 | ... | 29 59.42 | -0.91 | ... | -37.35 | 2 29 21.16 | -4.50 |
| | 36 | Lalande 4830 | S. | 4.5 | 7.9 | 9.8 | 17.5 | 20.2 | 22.7 | 30.4 | 32.3 | 35.4 | 31 20.08 | -0.19 | ... | -37.35 | 2 30 42.54 | -4.60 |
| | 37 | γ ² Ceti | S. | 22.8 | 25.3 | 26.9 | 33.0 | 35.0 | 37.0 | 43.2 | 44.7 | 47.3 | 37 35.02 | -0.98 | -37.36 | -37.35 | 2 36 56.69 | +0.01 |
| | 38 | α Ceti | S. | 18.0 | 20.7 | 22.0 | 28.3 | 30.4 | 32.4 | 38.5 | 39.9 | 42.6 | 56 30.31 | -0.97 | -37.30 | -37.35 | 2 55 51.99 | -0.03 |
| | 39 | η Tauri | S. | 36.0 | 38.7 | 40.2 | 46.9 | 49.4 | 51.6 | 58.2 | 59.8 | 2.7 | 40 49.28 | -0.54 | -37.33 | -37.35 | 3 40 11.39 | -0.02 |
| | 40 | ζ Persei | S. | 48.3 | 51.5 | 53.2 | 0.5 | 2.7 | 5.2 | 12.4 | 14.2 | 17.2 | 47 2.80 | -0.35 | -37.32 | -37.35 | 3 46 25.10 | -0.04 |
| | 41 | γ ¹ Eridani | S. | 44.6 | 47.3 | 48.9 | 55.2 | 57.3 | 59.4 | 5.7 | 7.4 | 10.1 | 52 57.32 | -1.31 | -37.38 | -37.35 | 3 52 18.66 | +0.07 |
| | 42 | Moon II, S. | S. | ... | ... | 14.0 | 16.8 | 19.0 | 21.2 | 23.6 | ... | ... | 7 19.05 | -0.63 | ... | -37.33 | 9 6 41.09 | -71.36 |
| | 43 | α Cephei, S. P. | S. | ... | ... | 26.4 | 22.0 | 17.5 | 13.4 | 9.2 | ... | ... | 16 17.68 | -3.01 | ... | -37.33 | 21 15 37.34 | -0.26 |
| | 44 | 1 Draconis | S. | ... | ... | ... | 42.3 | 57.7 | 12.6 | 26.9 | ... | ... | 19 57.57 | -6.61 | ... | -37.33 | 9 19 26.85 | +0.54 |
| | 45 | ε Leonis | S. | 16.3 | 18.9 | 20.6 | 27.3 | 29.7 | 31.9 | 38.6 | 40.3 | 43.0 | 39 29.62 | -0.51 | -37.37 | -37.32 | 9 38 51.79 | -0.01 |
| | 46 | α Leonis | S. | 14.3 | 16.9 | 18.5 | 24.7 | 26.9 | 29.0 | 35.1 | 36.9 | 39.2 | 2 26.83 | -0.77 | -37.30 | -37.32 | 10 1 48.74 | -0.06 |
| | 47 | γ ¹ Leonis | S. | 35.7 | 38.5 | 40.0 | 46.6 | 48.7 | 50.9 | 57.4 | 59.1 | 1.9 | 13 45.76 | -0.60 | -37.30 | -37.32 | 10 13 10.84 | -0.04 |
| | 48 | η Virginis | P. | 1.8 | 4.3 | 5.9 | 12.0 | 14.1 | 16.1 | 22.2 | 23.7 | 26.2 | 14 14.03 | -1.04 | -37.40 | -37.41 | 12 13 35.58 | -0.03 |
| | 49 | Venus II, N. | P. | 11.4 | 13.9 | 15.5 | 21.7 | 23.7 | 25.8 | 32.0 | 33.4 | 36.0 | 22 23.71 | -1.05 | ... | -37.41 | 12 21 45.25 | -0.54 |
| | 50 | Venus S. | P. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |

8, 12, 20, 25, 26, 30, 31, 32. Thread A used.

9. Bisections at threads II-VI.

12. Bisections at threads V and VI.

14. Thread B used.

16. Bisections at threads III and VI.

18, 42. Bisections at sets B and D.

45. Telescope micrometer reading increased one revolution in reduction.

46. Telescope micrometer reading decreased one revolution in reduction.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | ° ' " | ° ' " | " " | " " | " " | | | | | | " | ° ' " | ° ' " | " " | ° ' " | " " | | |
| 1 | 332 44 | 10 9.3 | 3.0 | 3.3 | 8.5 | 34 | 820 | .. | .. | 720 | 68.4 | 27 11 56.3 | .. | + | 30.9 | 78 18 48.4 | +11.7 | |
| 2 | 332 44 | 9.3 | 3.0 | 3.3 | 8.5 | 36 | .. | 480 | .. | 450 | 68.4 | 27 12 22.2 | .. | + | 30.9 | 78 19 14.3 | +11.7 | |
| 3 | 54 24 | 10.5 | 4.3 | 4.5 | 8.8 | 33 | 580 | .. | 520 | .. | 570 | 68.4 | 305 31 38.4 | .. | - 1 | 24.2 | 356 36 35.4 | + 0.2 |
| 4 | 343 38 | 13.8 | 7.3 | 5.9 | 12.8 | 37 | .. | 515 | .. | 465 | 68.4 | 16 18 41.8 | .. | + | 17.6 | 67 25 20.6 | - 0.6 | |
| 5 | 337 34 | 8.0 | 2.3 | 2.5 | 8.8 | 38 | .. | 590 | .. | 530 | 68.4 | 22 22 53.6 | 39.0 | + | 24.8 | 73 29 39.6 | - 0.4 | |
| 6 | 304 30 | 1.4 | 25.1 | 26.3 | 3.3 | 30 | .. | 880 | .. | 740 | 68.4 | 55 24 48.4 | .. | + | 1 27.1 | 106 32 36.7 | - 0.9 | |
| 7 | 48 16 | 12.0 | 4.4 | 6.3 | 9.8 | 38 | .. | .. | 405 | .. | 385 | 68.4 | 311 40 53.9 | .. | - 1 | 7.5 | 2 46 7.6 | - 1.8 |
| 8 | 285 54 | 6.5 | 0.2 | 1.6 | 7.5 | 39 | .. | 540 | .. | 530 | 68.4 | 74 0 33.3 | .. | + | 3 27.2 | 125 10 21.7 | +18.8 | |
| 9 | 317 58 | 14.0 | 6.8 | 6.0 | 12.0 | 38 | 760 | 820 | 945 | 010 | 6 4 | 11 59 3.6 | .. | + | 12.8 | 63 5 37.6 | .. | |
| 10 | 308 24 | 2.9 | 28.5 | 26.5 | 4.3 | 38 | .. | 625 | .. | 655 | 68.7 | 51 32 50.2 | .. | + | 1 13.5 | 102 40 24.9 | .. | |
| 11 | 308 24 | 2.9 | 28.5 | 26.5 | 4.3 | 37 | .. | .. | .. | 480 | 68.7 | 51 32 33.4 | 45.1 | + | 1 13.4 | 102 40 8.0 | .. | |
| 12 | 36 36 | 9.7 | 3.9 | 2.7 | 7.5 | 39 | .. | .. | .. | 370 | 310 | 68.7 | 323 18 34.3 | .. | - | 43.6 | 14 24 11.9 | - 0.9 |
| 13 | 331 14 | 9.0 | 4.8 | 3.0 | 9.4 | 33 | .. | .. | .. | 565 | 480 | 68.7 | 28 41 38.8 | .. | + | 32.0 | 79 48 32.0 | + 0.2 |
| 14 | 153 18 | 10.0 | 7.6 | 6.4 | 11.0 | 30 | 360 | 250 | .. | .. | 68.7 | 206 39 21.1 | .. | + | 29.4 | 24 26 30.7 | - 2.1 | |
| 15 | 26 34 | 9.2 | 5.5 | 5.5 | 8.8 | 29 | .. | .. | .. | 570 | 460 | 68.7 | 333 20 39.3 | .. | - | 29.4 | 24 26 31.1 | - 1.7 |
| 16 | 78 32 | 8.3 | 3.9 | 0.4 | 6.8 | 31 | 585 | .. | .. | 490 | 68.7 | 281 23 5.6 | .. | - 4 | 43.2 | 332 24 43.6 | + 0.5 | |
| 17 | 335 36 | 9.2 | 5.4 | 3.1 | 9.4 | 36 | .. | .. | .. | 710 | 670 | 68.7 | 24 20 27.6 | .. | + | 26.5 | 75 27 15.3 | - 0.1 |
| 18 | 28 28 | 8.1 | 4.3 | 3.7 | 7.3 | 33 | .. | .. | .. | 450 | 68.7 | 331 27 36.6 | .. | - | 31.9 | 22 33 25.9 | - 2.0 | |
| 19 | 204 20 | 5.6 | 4.0 | 1.9 | 5.0 | 38 | 710 | 680 | .. | .. | 68.7 | 155 36 53.6 | .. | - | 26.6 | 75 29 54.2 | + 1.2 | |
| 20 | 335 32 | 4.7 | 0.0 | 28.5 | 3.9 | 41 | .. | .. | .. | 552 | 638 | 68.7 | 24 23 4.4 | 42.4 | + | 26.6 | 75 29 52.2 | - 0.8 |
| 21 | 322 18 | 11.1 | 8.5 | 5.2 | 10.3 | 32 | .. | 030 | .. | 960 | 68.7 | 37 37 16.7 | .. | + | 45.3 | 88 44 23.2 | +24.7 | |
| 22 | 285 26 | 8.3 | 6.3 | 6.0 | 11.4 | 34 | 950 | 040 | .. | .. | 68.7 | 74 30 0.6 | .. | + | 3 29.1 | 125 39 50.9 | +16.0 | |
| 23 | 285 26 | 8.3 | 6.3 | 6.0 | 11.4 | 35 | .. | .. | .. | 350 | 410 | 68.7 | 74 30 8.3 | .. | + | 3 29.1 | 125 39 58.6 | +16.0 |
| 24 | 281 58 | 10.2 | 6.6 | 7.1 | 11.1 | 32 | 820 | 814 | .. | .. | 68.7 | 77 57 28.0 | .. | + | 4 29.3 | 129 8 18.5 | +15.8 | |
| 25 | 281 58 | 10.2 | 6.6 | 7.1 | 11.1 | 33 | .. | 890 | .. | 795 | 68.7 | 77 55 11.2 | .. | + | 4 28.5 | 129 6 0.9 | +15.9 | |
| 26 | 358 52 | 8.5 | 3.6 | 2.0 | 7.6 | 33 | .. | 170 | .. | 130 | 68.7 | 1 3 31.3 | .. | + | 1.1 | 52 9 53.6 | +31.2 | |
| 27 | 291 4 | 7.5 | 3.4 | 3.5 | 7.8 | 36 | .. | .. | .. | 830 | 740 | 68.7 | 68 52 27.4 | .. | + | 2 31.3 | 120 1 19.9 | +18.9 |
| 28 | 329 36 | 6.9 | 3.0 | 0.4 | 5.6 | 28 | .. | .. | .. | 440 | 580 | 68.7 | 30 15 46.2 | .. | + | 34.1 | 81 22 41.8 | - 2.0 |
| 29 | 49 40 | 4.1 | 28.9 | 28.1 | 0.5 | 32 | .. | 950 | 968 | 965 | 68.7 | 310 15 23.2 | .. | - 1 | 9.5 | 1 20 44.9 | + 7.9 | |
| 30 | 330 46 | 8.2 | 5.7 | 2.8 | 9.5 | 38 | 545 | 520 | .. | .. | 68.7 | 29 8 20.2 | .. | + | 32.9 | 80 15 14.3 | - 3.4 | |
| 31 | 328 50 | 7.1 | 3.4 | 0.6 | 7.2 | 39 | .. | 670 | .. | 580 | 68.7 | 31 4 35.9 | .. | + | 35.5 | 82 11 32.6 | - 2.3 | |
| 32 | 1 50 | 4.3 | 1.4 | 0.5 | 3.6 | 39 | 210 | 125 | .. | .. | 68.7 | 358 4 26.2 | .. | - | 2.0 | 49 10 45.4 | + 0.2 | |
| 33 | 332 2 | 7.6 | 3.2 | 2.1 | 7.3 | 33 | .. | 850 | .. | 840 | 68.7 | 27 53 41.4 | .. | + | 31.2 | 70 0 33.8 | .. | |
| 34 | 337 8 | 9.4 | 6.8 | 4.1 | 10.1 | 33 | 225 | 150 | .. | .. | 68.7 | 22 47 33.1 | 40.4 | + | 24.8 | 73 54 19.1 | +26.6 | |
| 35 | 327 20 | 5.5 | 1.5 | 0.0 | 4.5 | 30 | 905 | 950 | .. | .. | 68.7 | 32 34 53.7 | .. | + | 37.7 | 83 41 52.6 | +25.8 | |
| 36 | 358 14 | 10.5 | 7.5 | 6.9 | 10.8 | 34 | .. | .. | .. | 080 | 095 | 68.7 | 1 41 50.2 | .. | + | 1.8 | 52 48 13.2 | + 6.5 |
| 37 | 323 46 | 8.3 | 5.6 | 3.0 | 10.8 | 33 | .. | .. | .. | 910 | 950 | 68.7 | 36 9 45.4 | .. | + | 43.2 | 87 16 49.8 | - 0.8 |
| 38 | 324 40 | 5.6 | 1.4 | 29.0 | 6.4 | 36 | .. | 740 | .. | 770 | 68.7 | 35 16 23.8 | .. | + | 41.8 | 86 23 26.8 | - 1.1 | |
| 39 | 344 46 | 4.6 | 2 4 | 0.5 | 6.1 | 34 | .. | 370 | .. | 280 | 68.7 | 15 9 47.2 | .. | + | 16.0 | 66 16 24.4 | - 1.3 | |
| 40 | 352 34 | 6.0 | 2.0 | 0.5 | 5.3 | 36 | .. | 500 | .. | 450 | 68.7 | 7 22 20.2 | .. | + | 7.7 | 58 28 49.1 | - 1.3 | |
| 41 | 307 12 | 9.5 | 5.9 | 5.0 | 10.4 | 33 | .. | 670 | .. | 570 | 68.7 | 52 43 40.4 | 38.8 | + | 1 17.7 | 103 51 19.3 | - 1.6 | |
| 42 | 340 12 | 5.6 | 2.3 | 0.5 | 7.0 | 39 | 150 | .. | 380 | .. | 470 | 68.7 | 19 45 4.2 | .. | + | 21.4 | 70 51 46.8 | .. |
| 43 | 78 54 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | |
| 44 | 42 54 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 36.0 | .. | .. | .. | |
| 45 | 345 24 | 4.0 | 28.9 | 29.8 | 4.5 | 37 | 905 | 870 | .. | .. | 68.7 | 14 32 54.6 | .. | + | 15.8 | 65 39 31.6 | - 1.2 | |
| 46 | 333 38 | 7.9 | 1.6 | 0.1 | 6.6 | 38 | 860 | 835 | .. | .. | 68.7 | 26 18 56.2 | .. | + | 29.5 | 77 25 46.9 | - 1.2 | |
| 47 | 341 30 | 4.0 | 28.9 | 26.5 | 4.4 | 33 | .. | .. | .. | 021 | 025 | 68.7 | 18 25 25.7 | 35.2 | + | 19.9 | 69 32 6.8 | - 0.8 |
| 48 | 321 1 | 5.8 | 2.0 | 1.3 | 5.9 | 33 | .. | 950 | .. | 840 | 68.5 | 38 51 40.5 | 40.8 | + | 47.5 | 89 58 49.2 | - 2.3 | |
| 49 | 320 28 | 8.2 | 3.5 | 3.8 | 8.4 | 33 | .. | 005 | .. | 955 | 68.5 | 39 27 28.7 | .. | + | 48.5 | 90 34 38.4 | .. | |
| 50 | 320 28 | 8.2 | 3.5 | 3.8 | 8.4 | 34 | .. | 015 | .. | 985 | 68.5 | 39 27 41.4 | .. | + | 48.5 | 90 34 54.1 | .. | |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " " | " " | " " | " " |
| 5 | 30.28 | 35.0 | 9 | -12 11.7 | - 16 18.0 | .. | - 28 29.7 |
| 11 | 29.79 | 47.5 | 10 | - 0.8 | - 8.4 | .. | - 9.2 |
| 20 | 29.80 | 45.3 | 11 | - 0.8 | + 8.4 | .. | + 7.6 |
| 34 | 29.79 | 43.1 | 33 | - 0.1 | .. | .. | - 0.1 |
| 41 | 29.79 | 42.4 | 42 | -19 46.8 | - 16 8.6 | .. | - 35 55.4 |
| 44 | 29.78 | 38.5 | 49 | - 5.4 | + 8.2 | - 0.7 | + 2.1 |
| 47 | 29.80 | 38.1 | 50 | - 5.4 | - 8.2 | .. | - 13.6 |
| 48 | 29.81 | 41.2 | | | | | |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS | | | Apparent Right Ascension. | Miscellaneous Corrections |
|--------|---------|--|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|-------------|---------------|-----------------|---------------------------|---------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't | Clock. adopted. | | |
| | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| 1876. | | | | | | | | | | | | | | | | | | |
| Nov. 7 | 1 | β Corvi | P. | 19.6 | 22.5 | 24.2 | 30.7 | 32.9 | 35.2 | 41.9 | 43.4 | 46.3 | 28 32.97 | - 1.55 | -37.35 | -37.41 | 12 27 54.01 | - 0.10 |
| | 2 | 12 Canum Venat. | P. | 36.9 | 40.2 | 42.2 | 50.0 | 52.8 | 55.3 | 3.3 | 5.2 | 8.5 | 50 52.71 | - 0.07 | -37.47 | -37.40 | 12 50 15.24 | + 0.07 |
| | 3 | Polaris, S. P. | P. | | | | | | 38.2 | 41.9 | 38.6 | 47.5 | 15 31.18 | -40.62 | | -37.40 | 1 14 4.16 | - 0.26 |
| | 4 | Polaris, S. P. | P. | 12.5 | | 18.9 | | | | | | | 15 30.30 | -49.62 | | -37.40 | 1 14 3.28 | - 1.14 |
| | 5 | ζ Virginis | P. | 50.4 | 52.9 | 54.5 | 0.6 | 2.6 | 4.7 | 10.8 | 12.4 | 14.9 | 29 2.64 | - 1.04 | -37.46 | -37.40 | 13 28 24.20 | + 0.06 |
| | 6 | η Ursæ Majoris (R.) | P. | | | | | | | | | | | | | | | |
| | 7 | η Ursæ Majoris | P. | | | | | 20.5 | 23.6 | 30.0 | 32.3 | 36.3 | 43 17.29 | + 0.36 | | -27.40 | 13 42 40.25 | + 0.11 |
| | 8 | Mercury II, N. | P. | 57.5 | 0.0 | 1.7 | 7.9 | 10.0 | 12.1 | 18.2 | 19.9 | 22.4 | 2 9.97 | - 1.26 | | -37.39 | 14 1 31.32 | - 0.19 |
| | 9 | Mercury, S. | P. | | | | | | | | | | | | | | | |
| | 10 | α Bootis (R.) | P. | | | | | | | | | | | | | | | |
| | 11 | α Bootis | P. | | | | | | | 48.4 | 50.0 | 52.8 | 10 39.74 | - 0.62 | -37.45 | -37.39 | 14 10 1.73 | + 0.06 |
| | 12 | Sun I, S. | P. | 5.1 | 7.8 | 9.3 | 15.8 | 17.9 | 20.0 | 26.4 | 27.8 | 30.6 | 56 17.86 | - 1.44 | | -37.39 | 14 55 39.03 | |
| | 13 | Sun II, N. | P. | 20.4 | 23.4 | 24.8 | 29.1 | 33.5 | 37.7 | 41.9 | 43.5 | 46.1 | 58 33.38 | - 1.44 | | -37.39 | 14 57 54.55 | |
| | 14 | B. A. C. 5284 | P. | 10.2 | 12.9 | 14.1 | 20.8 | 22.9 | 25.0 | 31.5 | 33.0 | 35.8 | 51 22.94 | - 0.74 | | -37.38 | 15 50 44.82 | - 1.23 |
| | 15 | B. A. C. 5437 | P. | 13.5 | 16.0 | 17.7 | 23.7 | 25.8 | 27.9 | 33.9 | 35.5 | 38.2 | 12 25.80 | - 1.17 | | -37.37 | 16 11 47.26 | - 1.57 |
| | 16 | B. A. C. 5525 | P. | 19.3 | 22.0 | 23.6 | 30.3 | 32.1 | 34.6 | 41.2 | 43.9 | 45.7 | 25 32.44 | - 0.62 | | -37.37 | 16 24 54.45 | - 1.08 |
| | 17 | B. A. C. 5731 | P. | 57.0 | 0.0 | 1.8 | 8.9 | 11.4 | 13.6 | 20.9 | 22.6 | 25.6 | 56 11.31 | - 0.40 | | -37.37 | 16 55 33.54 | - 0.79 |
| | 18 | ϵ Ursæ Minoris | P. | | | 31.4 | 46.2 | 1.4 | 16.3 | 31.5 | | | 59 1.44 | + 6.91 | | -37.37 | 16 58 30.98 | - 0.15 |
| | 19 | α^1 Herculis (R.) | P. | | | | | | | | | | | | | | | |
| | 20 | α^1 Herculis | P. | | | | | | | | | | | | | | | |
| | 21 | α Ophiuchi (R-) | P. | | | | | | | | | | | | | | | |
| | 22 | α Ophiuchi | P. | | | | | | | | | | | | | | | |
| | 23 | B. A. C. 5906 | P. | 48.6 | 51.2 | 52.6 | 58.8 | 0.9 | 2.9 | 9.0 | 10.6 | 13.3 | 38 0.88 | - 1.00 | | -37.36 | 17 37 22.52 | - 1.61 |
| | 24 | μ Herculis | P. | 1.3 | 4.3 | 6.0 | 12.9 | 15.2 | 17.4 | 24.4 | 26.0 | 28.9 | 42 15.16 | - 0.49 | -37.36 | -37.36 | 17 41 37.31 | 0.00 |
| | 25 | α Lyre | P. | 6.9 | | 12.0 | 17.3 | 20.0 | 22.7 | 25.2 | 33.1 | 35.0 | 33 22.60 | - 0.19 | -37.34 | -37.36 | 18 32 45.05 | 0.00 |
| | 26 | β Lyre | P. | 57.2 | 59.0 | 3.9 | 6.5 | 8.8 | 11.3 | 13.7 | 18.5 | 20.4 | 46 8.81 | - 0.35 | -37.37 | -37.36 | 18 45 31.10 | + 0.04 |
| | 27 | α^1 Geminorum | P. | 8.3 | 11.4 | 13.2 | | | | 32.5 | 34.3 | 37.3 | 27 22.83 | - 0.27 | | -37.40 | 7 26 45.16 | - 4.36 |
| | 28 | α^2 Geminorum | P. | | | 18.3 | 20.8 | 23.3 | 25.6 | 28.0 | | | 27 23.21 | - 0.27 | -37.47 | -37.40 | 7 26 45.54 | - 0.31 |
| | 29 | α Canis Minoris | P. | 18.0 | 20.6 | 22.3 | 28.2 | 30.4 | 32.5 | 38.6 | 40.0 | 42.6 | 33 30.36 | - 0.02 | -37.12 | -37.40 | 7 32 52.04 | - 0.14 |
| | 30 | β Geminorum | P. | 11.5 | 14.5 | 16.2 | 23.2 | 25.6 | 27.9 | 34.8 | 36.5 | 39.4 | 38 25.51 | - 0.38 | -37.46 | -37.40 | 7 37 47.73 | + 0.03 |
| | 31 | λ Ursæ Minoris, S. P. | P. | | | 5.9 | 11.2 | 21.0 | 32.0 | 42.6 | | | 48 21.96 | -65.86 | | -37.40 | 19 46 38.70 | - 0.70 |
| | 32 | B. A. C. 2717 | P. | 43.6 | 46.5 | 48.5 | 55.9 | 58.4 | 0.8 | 8.0 | 10.0 | 12.0 | 0 58.29 | - 1.87 | | -37.40 | 8 0 19.02 | - 2.44 |
| | 33 | B. A. C. 2719 ¹ | P. | 24.6 | 27.9 | 29.7 | | | | 49.2 | 51.0 | 54.0 | 1 39.40 | - 1.87 | | -37.40 | 8 1 0.13 | - 2.43 |
| | 34 | B. A. C. 2719 ² | P. | | | 36.0 | 38.7 | 41.1 | 43.6 | 46.1 | | | 1 41.11 | - 1.87 | | -37.40 | 8 1 1.84 | - 2.43 |
| | 35 | κ^1 Cephei, S. P. | P. | 36.6 | 25.0 | 17.8 | 50.0 | 40.8 | 31.6 | 3.3 | 56.5 | 45.0 | 13 40.73 | - 6.33 | | -37.40 | 20 12 57.00 | + 0.14 |
| | 36 | κ^2 Cephei, S. P. | P. | 38.6 | 27.3 | 20.0 | 52.0 | 42.8 | 33.5 | 5.5 | 58.6 | 46.7 | 13 42 78 | - 6.33 | | -37.10 | 20 12 59.04 | + 4.58 |
| | 37 | Lacaille 3373 | P. | | | 7.5 | 10.0 | 13.0 | 15.1 | 18.1 | | | 27 12.81 | - 2.06 | | -37.40 | 8 26 33.35 | - 2.11 |
| | 38 | B. A. C. 2877 | P. | | | 26.0 | 29.0 | 31.5 | 34.0 | 36.8 | | | 27 31.47 | - 2.06 | | -37.40 | 8 26 52.01 | - 2.11 |
| | 39 | Groom, 3241, S. P. | P. | 51.5 | 43.0 | 38.3 | 18.5 | 11.6 | 5.1 | 45.0 | 40.2 | 31.7 | 31 11.66 | - 4.69 | | -37.40 | 20 30 29.57 | + 0.10 |
| | 40 | ϵ^2 Hydræ (R.) | P. | | | | | | | | | | | | | | | |
| | 41 | ϵ^2 Hydræ | P. | | | | | | | 2.0 | 3.7 | 6.3 | 40 53.90 | - 0.90 | -37.31 | -37.40 | 8 40 15.60 | - 0.13 |
| | 42 | ι Ursæ Majoris (R.) | P. | | | | | | | | | | | | | | | |
| | 43 | ι Ursæ Majoris | P. | | | | | | 30.1 | 36.6 | 38.8 | 42.8 | 51 24.17 | + 0.34 | | -37.40 | 8 50 47.11 | + 0.09 |
| | 44 | σ^2 Ursæ Majoris (R.) | P. | | | | | | | | | | | | | | | |
| | 45 | σ^2 Ursæ Majoris | P. | | | | | | | | | | | | | | | |
| | 46 | α Hydræ | P. | 58.5 | 1.0 | 2.6 | 8.8 | 10.8 | 13.0 | 19.0 | 20.6 | 23.1 | 22 10.82 | - 1.22 | -37.35 | -37.40 | 9 21 32.20 | - 0.05 |
| | 47 | ϵ Leonis (R.) | P. | | | | | | | | | | | | | | | |
| | 48 | ϵ Leonis | P. | | | | | | | 38.6 | 40.3 | 43.2 | 39 29.67 | - 0.48 | -37.41 | -37.41 | 9 38 51.78 | - 0.06 |
| | 49 | Uranus | P. | 45.3 | 48.0 | 49.6 | 56.0 | 58.0 | 0.2 | 6.5 | 8.0 | 10.7 | 48 58.03 | - 0.74 | | -37.41 | 9 48 19.88 | |

3, 4, 7, 35, 36, 37, 38, 39, 44, 45. Bisections at sets B and D.

18. Bisections at set C.

33, 34. Thread A used.

31, 35, 36, 39, 48. Thread B used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|---------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | |
| 1 | 298 22 | 10 7.4 | 3.4 | 4.2 | 9.0 | 37 | .. | 415 | .. | 285 | .. | 68.5 | 61 34 35.5 | .. + 1 48.3 | 112 42 45.0 | - 0.9 |
| 2 | 0 0 | 6.3 | 2.9 | 2.2 | 5.6 | 30 | .. | 050 | .. | 940 | .. | 68.5 | 359 54 41.6 | 44.3 - 1 0.1 | 51 1 2.7 | - 1.1 |
| 3 | 52 22 | 5.5 | 0.8 | 2.0 | 3.8 | 36 | .. | .. | .. | 335 | 435 | 68.5 | 307 34 15.2 | .. - 1 15.9 | 358 39 20.5 | - 2.7 |
| 4 | 52 22 | 3.3 | 28.0 | 29.6 | 1.2 | 36 | 740 | 585 | .. | .. | .. | 68.5 | 307 34 17.6 | 46.3 - 1 15.9 | 358 39 22.9 | - 0.3 |
| 5 | 321 6 | 8.0 | 4.3 | 3.0 | 7.9 | 38 | .. | 015 | .. | 880 | .. | 68.5 | 38 50 44.6 | .. + 1 46.9 | 89 57 52.7 | - 1.1 |
| 6 | 168 54 | 9.3 | 8.1 | 7.5 | 8.7 | 34 | 060 | 075 | .. | .. | .. | 68.5 | 191 1 46.3 | .. + 1 11.3 | 40 4 23.6 | - 1.1 |
| 7 | 10 58 | 6.0 | 3.0 | 3.1 | 6.6 | 36 | .. | .. | .. | 010 | 980 | 68.5 | 348 58 14.0 | 48.0 - 1 11.3 | 40 4 23.9 | - 0.8 |
| 8 | 310 36 | 5.0 | 1.8 | 1.5 | 6.6 | 38 | 345 | .. | .. | .. | 190 | 68.5 | 49 20 47.3 | .. + 1 7.6 | 100 28 16.1 | .. |
| 9 | 310 36 | 5.0 | 1.8 | 1.5 | 6.6 | 38 | .. | 705 | .. | 720 | .. | 68.5 | 49 20 54.2 | .. + 1 7.6 | 100 28 23.0 | .. |
| 10 | 199 0 | 8.9 | 7.7 | 5.8 | 5.5 | 35 | 515 | 420 | .. | .. | .. | 68.5 | 160 56 6.8 | .. - 1 20.1 | 70 10 34.5 | + 1.3 |
| 11 | 340 52 | 6.0 | 2.4 | 1.7 | 6.8 | 34 | .. | .. | .. | 525 | 515 | 68.5 | 19 3 51.6 | 48.8 + 1 20.1 | 70 10 32.9 | - 0.3 |
| 12 | 303 58 | 0.3 | 24.4 | 27.2 | 0.3 | 36 | 820 | 710 | .. | .. | .. | 68.5 | 55 58 18.1 | .. + 1 25.5 | 107 6 4.8 | .. |
| 13 | 304 36 | 7.3 | 5.1 | 4.8 | 9.7 | 34 | .. | .. | .. | 950 | 900 | 68.5 | 55 26 0.0 | 50.3 + 1 23.3 | 106 33 45.0 | .. |
| 14 | 337 6 | 5.8 | 2.8 | 2.0 | 8.0 | 32 | .. | 695 | .. | 610 | .. | 68.5 | 22 49 22.5 | 51.9 + 1 24.3 | 73 56 8.0 | - 11.0 |
| 15 | 316 40 | 3.0 | 29.0 | 29.9 | 6.0 | 36 | .. | 320 | .. | 120 | .. | 68.5 | 43 16 14.3 | 51.6 + 1 51.2 | 94 23 29.7 | - 10.9 |
| 16 | 342 48 | 8.1 | 5.6 | 3.9 | 9.1 | 34 | 300 | 285 | .. | 215 | 180 | 68.5 | 17 7 49.0 | .. + 1 17.8 | 68 14 28.0 | - 8.1 |
| 17 | 352 10 | 7.1 | 4.5 | 2.6 | 8.5 | 38 | .. | 920 | .. | 850 | .. | 68.5 | 7 46 59.1 | 52.3 + 1 7.9 | 58 53 28.2 | - 4.6 |
| 18 | 43 16 | 8.0 | 2.9 | 4.5 | 8.3 | 36 | 365 | .. | 390 | .. | 310 | 68.5 | 316 40 20.4 | .. - 1 54.2 | 7 45 47.4 | + 0.6 |
| 19 | 204 18 | 11.8 | 11.0 | 9.3 | 9.6 | 37 | 515 | .. | .. | .. | .. | 68.5 | 155 38 41.8 | .. - 1 26.0 | 75 28 5.4 | + 0.9 |
| 20 | 335 34 | 6.5 | 3.8 | 2.0 | 7.6 | 32 | .. | .. | .. | .. | 205 | 68.5 | 24 21 17.1 | 52.3 + 1 26.0 | 75 28 4.3 | - 0.2 |
| 21 | 206 10 | 8.5 | 8.2 | 6.5 | 7.4 | 34 | 620 | 565 | .. | .. | .. | 68.5 | 153 45 54.1 | .. - 1 28.4 | 77 20 55.5 | 0.0 |
| 22 | 333 42 | 6.2 | 3.0 | 1.8 | 6.9 | 35 | .. | .. | .. | 510 | 470 | 68.5 | 26 14 6.7 | .. + 1 28.4 | 77 20 56.3 | + 0.8 |
| 23 | 325 40 | 4.2 | 1.5 | 0.0 | 4.4 | 34 | .. | 545 | .. | 445 | .. | 68.5 | 34 15 48.5 | .. + 1 39.2 | 85 22 48.9 | - 4.2 |
| 24 | 348 50 | 6.5 | 2.5 | 1.5 | 5.3 | 34 | 465 | 420 | .. | .. | .. | 68.5 | 11 5 48.5 | .. + 1 11.3 | 62 12 21.0 | + 1.7 |
| 25 | 359 42 | 8.8 | 5.4 | 3.5 | 8.9 | 32 | 540 | 525 | .. | 470 | 400 | 68.5 | 0 13 22.2 | 51.6 + 1 0.2 | 51 19 43.6 | + 1.1 |
| 26 | 354 16 | 6.1 | 4.0 | 2.6 | 7.0 | 36 | .. | 010 | .. | 915 | .. | 68.5 | 5 40 13.6 | 51.7 + 1 5.7 | 56 46 49.5 | + 0.2 |
| 27 | 353 12 | 6.8 | 2.1 | 1.6 | 8.0 | 35 | 580 | .. | .. | .. | 435 | 69.4 | 6 44 7.5 | 38.7 + 1 7.0 | 57 50 35.7 | - 3.1 |
| 28 | 353 12 | 6.8 | 2.1 | 1.6 | 8.0 | 35 | .. | 345 | .. | 210 | .. | 69.4 | 6 44 3.7 | .. + 1 7.0 | 57 50 31.9 | - 0.8 |
| 29 | 326 36 | 7.0 | 2.8 | 0.7 | 7.7 | 36 | 880 | 825 | .. | 730 | 670 | 69.4 | 33 20 26.5 | .. + 1 39.0 | 84 27 26.7 | - 1.4 |
| 30 | 349 22 | 7.5 | 1.8 | 1.5 | 8.6 | 35 | 345 | 325 | .. | 260 | 200 | 69.4 | 10 34 4.1 | .. + 1 11.0 | 61 40 36.3 | - 0.1 |
| 31 | 52 6 | 7.2 | 2.0 | 1.2 | 6.1 | 29 | 960 | 950 | 895 | 920 | 915 | 69.4 | 307 51 13.3 | 38.4 - 1 16.2 | 358 56 18.3 | - 0.3 |
| 32 | 287 50 | 6.1 | 0.9 | 2.4 | 7.2 | 30 | 370 | 343 | .. | .. | .. | 69.4 | 72 4 46.6 | .. + 1 1.6 | 123 14 9.4 | + 13.3 |
| 33 | 287 50 | 6.1 | 0.9 | 2.4 | 7.2 | 34 | .. | .. | .. | 640 | .. | 69.4 | 72 3 20.4 | .. + 1 1.4 | 123 12 43.0 | + 13.3 |
| 34 | 287 50 | 6.1 | 0.9 | 2.4 | 7.2 | 34 | .. | .. | .. | 575 | .. | 69.4 | 72 3 19.4 | .. + 1 1.4 | 123 12 42.0 | + 13.3 |
| 35 | 63 42 | 8.1 | 2.1 | 2.4 | 7.1 | 33 | 830 | .. | .. | .. | 745 | 69.4 | 296 16 13.0 | .. - 1 59.8 | 347 20 34.4 | 0.0 |
| 36 | 63 42 | 8.1 | 2.1 | 2.4 | 7.1 | 33 | .. | 520 | .. | 495 | .. | 69.4 | 296 16 8.6 | .. - 1 59.8 | 347 20 30.0 | - 22.2 |
| 37 | 282 28 | 8.4 | 3.9 | 4.4 | 9.5 | 33 | 680 | 710 | .. | .. | .. | 69.4 | 77 27 41.0 | .. + 1 21.4 | 128 38 23.6 | + 12.5 |
| 38 | 282 28 | 8.4 | 3.9 | 4.4 | 9.5 | 34 | .. | .. | .. | 230 | 170 | 69.4 | 77 27 49.3 | .. + 1 21.4 | 128 38 31.9 | + 12.5 |
| 39 | 68 54 | 2.5 | 26.5 | 26.4 | 28.0 | 30 | 480 | .. | .. | .. | 415 | 69.4 | 291 3 15.4 | .. - 2 33.2 | 342 7 3.4 | - 2.2 |
| 40 | 211 56 | 9.9 | 7.5 | 7.0 | 9.4 | 32 | 100 | 060 | .. | .. | .. | 69.4 | 147 59 17.4 | .. - 1 37.1 | 83 7 40.9 | + 1.0 |
| 41 | 327 6 | 7.5 | 2.4 | 0.3 | 7.3 | 37 | .. | .. | .. | 695 | 705 | 69.4 | 32 0 41.3 | .. + 1 37.1 | 83 7 39.6 | - 0.3 |
| 42 | 170 18 | 10.5 | 8.5 | 8.0 | 10.0 | 33 | 080 | 040 | .. | .. | .. | 69.4 | 189 37 32.7 | .. + 1 10.1 | 41 28 38.4 | - 2.2 |
| 43 | 9 34 | 5.5 | 2.0 | 1.4 | 5.7 | 36 | .. | .. | .. | 895 | 860 | 69.4 | 350 22 28.6 | .. - 1 10.1 | 41 28 39.7 | - 0.9 |
| 44 | 151 12 | 8.6 | 6.2 | 4.7 | 9.6 | 33 | 365 | 310 | .. | .. | .. | 69.4 | 208 43 36.0 | .. + 1 32.6 | 22 22 12.6 | - 2.9 |
| 45 | 28 40 | 4.3 | 28.0 | 29.4 | 3.0 | 36 | .. | .. | .. | 830 | 835 | 69.4 | 331 16 24.4 | .. - 1 32.6 | 22 22 13.0 | - 2.5 |
| 46 | 312 56 | 7.1 | 3.2 | 2.3 | 9.0 | 34 | .. | 625 | .. | 485 | .. | 69.4 | 46 59 53.2 | 37.4 + 1 3.7 | 98 7 18.1 | - 0.9 |
| 47 | 194 28 | 7.6 | 6.8 | 4.3 | 5.9 | 31 | 315 | .. | .. | .. | .. | 69.4 | 165 27 3.0 | .. - 1 15.4 | 65 39 33.6 | + 0.6 |
| 48 | 345 24 | 3.8 | 29.6 | 28.9 | 5.0 | 28 | .. | .. | .. | .. | 800 | 69.4 | 14 32 55.4 | .. + 1 15.4 | 65 39 32.0 | - 1.0 |
| 49 | 335 4 | 5.2 | 0.2 | 29.5 | 5.8 | 33 | .. | 845 | .. | 780 | .. | 69.4 | 24 51 39.2 | .. + 1 27.6 | 75 58 28.0 | .. |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " " | " " | " " | " " |
| 2 | 29.82 | 43.5 | 8 | - 5.4 | + 3.5 | - 0.1 | - 2.0 |
| 4 | 29.82 | 45.3 | 9 | - 5.4 | - 3.5 | .. | - 8.9 |
| 7 | 29.82 | 46.8 | 12 | - 7.4 | - 16 9.9 | .. | - 16 17.3 |
| 11 | 29.81 | 47.5 | 13 | - 7.4 | + 16 9.9 | .. | + 16 2.5 |
| 13 | 29.80 | 48.8 | 49 | - 0.2 | .. | .. | 0.2 |
| 14 | 29.78 | 50.4 | | | | | |
| 15 | 29.77 | 51.6 | | | | | |
| 17 | 29.77 | 52.3 | | | | | |
| 20 | 29.76 | 52.4 | | | | | |
| 25 | 29.77 | 51.8 | | | | | |
| 26 | 29.76 | 51.7 | | | | | |
| 27 | 29.83 | 41.4 | | | | | |
| 31 | 29.83 | 41.0 | | | | | |
| 46 | 29.85 | 39.9 | | | | | |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|-----------------|---------|--------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|-----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar'nt. | Clock adopted. | | |
| | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| 1876. Nov. 8 | 1 | Moon II, S. | P. | | | 0.0 | 2.2 | 4.4 | 6.5 | 8.7 | | | 3 4.37 | - 0.75 | | -37.41 | 10 2 26.21 | -68.56 |
| | 2 | γ^1 Leonis | P. | 36.0 | 38.6 | 40.3 | 46.8 | 49.0 | 51.2 | 57.7 | 59.3 | 2.0 | 13 48.99 | - 0.58 | -37.52 | -37.41 | 10 13 11.00 | + 0.09 |
| | 3 | ρ Leonis | P. | 45.3 | 47.9 | 49.5 | 55.7 | 57.8 | 59.8 | 6.0 | 7.6 | 10.1 | 26 57.74 | - 0.83 | -37.47 | -37.41 | 10 26 19.50 | - 0.01 |
| | 4 | Venus II, S. | E. | 31.4 | 36.8 | 38.5 | 44.5 | 46.6 | 48.5 | 54.9 | 56.5 | 59.0 | 26 40.63 | - 1.14 | | -37.46 | 12 26 8.03 | - 0.54 |
| | 5 | Venus, N. | E. | | | | | | | | | | | | | | | |
| | 6 | 12 Canum Venat. | E. | 37.0 | 40.0 | 42.2 | 50.0 | 52.8 | 55.4 | 3.2 | 5.3 | 8.4 | 50 52.70 | - 0.12 | -37.39 | -37.45 | 12 50 15.13 | - 0.06 |
| | 7 | B. A. C. 4637 | E. | 27.7 | 30.4 | 31.9 | 38.3 | 40.3 | 42.3 | 48.6 | 50.2 | 52.7 | 56 40.27 | - 0.86 | | -37.45 | 12 56 1.96 | - 1.76 |
| | 8 | Polaris, S. P. | E. | | 29.0 | 58.5 | 32.0 | 7.0 | 38.5 | 14.5 | 37.5 | 49.0 | 15 32.25 | -51.54 | | -37.45 | 1 14 3.26 | - 0.75 |
| | 9 | α Virginis | E. | 7.6 | 10.2 | 11.8 | 18.0 | 20.2 | 22.2 | 28.4 | 30.0 | 32.6 | 19 20.11 | - 1.36 | -37.40 | -37.45 | 13 18 41.30 | - 0.07 |
| | 10 | ζ Virginis | E. | 51.0 | 53.2 | 54.7 | 0.8 | 2.8 | 4.8 | 10.8 | 12.4 | 14.9 | 29 2.82 | - 1.12 | -37.54 | -37.44 | 13 28 24.26 | + 0.10 |
| | 11 | η Ursæ Majoris (R.) | E. | | | | | | | | | | | | | | | |
| | 12 | η Ursæ Majoris. | E. | | | | | | | | | | | | | | | |
| | 13 | η Bootis | E. | 13.5 | 16.0 | 17.7 | 24.1 | 26.4 | 28.5 | 35.1 | 36.7 | 39.5 | 49 26.39 | - 0.67 | -37.39 | -37.44 | 13 48 48.28 | - 0.10 |
| | 14 | Mercury | E. | 47.3 | 50.0 | 51.8 | 57.9 | 0.0 | 2.0 | 8.2 | 10.0 | 12.5 | 7 59.97 | - 1.37 | | -37.44 | 14 7 21.16 | - 0.02 |
| | 15 | α Bootis (R.) | E. | | | | | | | | | | | | | | | |
| | 16 | α Bootis | E. | | | | | | | 48.4 | 50.0 | 52.8 | 10 39.74 | - 0.67 | -37.39 | -37.43 | 14 10 1.64 | - 0.04 |
| 9 | 17 | Sun I, N | E. | 7 2 | 9.8 | 11.4 | 17.8 | 19.9 | 22.0 | 28.4 | 30.1 | 32.0 | 0 19.94 | - 1.52 | | -37.42 | 14 59 41.00 | |
| | 18 | Sun II, S. | E. | | | | 33.7 | 35.8 | 37.8 | 40.0 | 44.7 | | 2 35.83 | - 1.52 | | -37.42 | 15 1 56.89 | |
| | 19 | α^1 Herculis | E. | 26.5 | 29.1 | 30.7 | | | | | | | 9 39.14 | - 0.81 | -37.39 | -37.39 | 17 9 0.94 | + 0.02 |
| | 20 | α Ophiuchi | E. | 37.9 | 40.5 | 42.1 | 48.2 | 50.4 | 52.5 | 58.7 | 0.3 | 2.9 | 29 50.39 | - 0.86 | -37.39 | -37.39 | 17 29 12.14 | + 0.03 |
| | 21 | μ^1 Herculis | E. | 1.3 | 4.1 | 5.9 | 12.8 | 15.2 | 17.5 | 24.4 | 26.2 | 28.9 | 42 15.14 | - 0.49 | -37.35 | -37.38 | 17 41 37.27 | - 0.03 |
| | 22 | γ Draconis (R.) | E. | | | | | | | | | | | | | | | |
| | 23 | γ Draconis | E. | | | | | | | 33.4 | 35.8 | 40.1 | 54 20.32 | + 0.39 | | -37.38 | 17 53 43.33 | - 0.06 |
| | 24 | δ Ursæ Minoris | E. | | | 54.0 | 31.0 | | | | | | 12 4.30 | +18.58 | | -37.38 | 18 11 45.90 | + 0.57 |
| | 25 | η Serpentis | E. | 21.8 | 24.4 | 26.0 | 32.0 | 31.0 | 36.1 | 42.2 | 43.9 | 46.4 | 15 34.09 | - 1.20 | -37.41 | -27.37 | 18 14 55.52 | + 0.10 |
| | 26 | ι Aquilæ | E. | 56.0 | 58.4 | 0.1 | 6.4 | 8.4 | 10.5 | 16.4 | 18.1 | 20.8 | 29 8.34 | - 1.33 | -37.37 | -37.37 | 18 28 29.64 | + 0.07 |
| | 27 | α Lyre | E. | 6.8 | 10.2 | 12.2 | 20.0 | 22.6 | 25.2 | 33.1 | 34.9 | 38.4 | 33 22.60 | - 0.16 | -37.37 | -37.37 | 18 32 45.07 | + 0.02 |
| | 28 | Moon II, S. | E. | 55.1 | 57.7 | 59.3 | 5.6 | 7.7 | 9.8 | 16.1 | 17.7 | 20.4 | 55 7.71 | - 0.89 | | -37.43 | 10 54 29.39 | -66.47 |
| | 29 | δ Leonis | E. | 57.5 | 0.8 | 2.4 | 8.9 | 11.2 | 13.4 | 20.0 | 21.6 | 24.5 | 8 11.18 | - 0.55 | -37.40 | -37.43 | 11 7 33.20 | - 0.09 |
| | 30 | δ Crateris | E. | 36.6 | 39.3 | 40.8 | 47.2 | 49.4 | 51.5 | 57.9 | 59.3 | 2.0 | 13 49.33 | - 1.38 | -37.45 | -37.43 | 11 13 10.52 | 0.00 |
| | 31 | τ Leonis | E. | 2.0 | 4.5 | 6.1 | 12.2 | 14.2 | 16.2 | 22.4 | 24.1 | 26.6 | 22 14.26 | - 0.97 | -37.47 | -37.43 | 11 21 35.86 | + 0.02 |
| 10 | 32 | ν Leonis | E. | 4.4 | 6.8 | 8.4 | 14.5 | 16.6 | 18.6 | 24.7 | 26.2 | 28.7 | 31 16.54 | - 1.05 | -37.39 | -37.43 | 11 30 38.06 | - 0.08 |
| | 33 | β Leonis | E. | 11.6 | 14.3 | 15.0 | 20.1 | 22.1 | 24.4 | 26.1 | 28.5 | | 43 24.32 | - 0.70 | -37.43 | -37.43 | 11 42 46.19 | - 0.02 |
| | 34 | Venus II, N. | S. | 57.4 | 10.0 | 1.5 | 7.7 | 9.8 | 11.5 | 18.0 | 19.6 | 22.0 | 31 9.76 | - 1.19 | | -37.13 | 12 30 31.44 | - 0.53 |
| | 35 | Venus S. | S. | | | | | | | | | | | | | | | |
| | 36 | 12 Canum Venat. | S. | 36.7 | 40.0 | 41.9 | 49.8 | 52.4 | 55.0 | 3.0 | 5.0 | 8.2 | 50 52.44 | - 0.13 | | -37.09 | | |
| | 37 | Polaris, S. P. | S. | | | 30.5 | 1.0 | 33.0 | 6.0 | 38.0 | | | 15 33.22 | -53.28 | | -37.13 | 1 14 2.81 | - 0.78 |
| | 38 | Polaris, S. P. | E. | 16.5 | 27.5 | 21.5 | | | | 46.5 | 40.5 | 52.0 | 15 34.03 | -53.28 | | | | |
| | 39 | α Virginis | S. | 7.5 | 10.0 | 11.5 | 17.7 | 19.9 | 22.0 | 28.2 | 29.8 | 32.4 | 19 19.89 | - 1.40 | | -37.13 | | |
| | 40 | ζ Virginis | E. | 50.4 | 53.0 | 54.5 | 0.7 | 2.8 | 4.7 | 10.8 | 12.4 | 14.9 | 39 2.69 | - 1.16 | -37.35 | | | |
| | 41 | Sun I, S. | S. | | 12.4 | | 22.6 | 24.0 | 27.0 | 31.2 | 33.0 | 35.6 | 4 22.69 | - 1.58 | | -37.14 | 15 3 43.97 | |
| | 42 | Sun II, N. | S. | 25.8 | 28.6 | 30.2 | 36.6 | 38.7 | 40.7 | 47.3 | 48.8 | 51.5 | 6 38.69 | - 1.58 | | -37.14 | 15 5 59.97 | |
| | 43 | ζ Ophiuchi | S. | | | | | | | | | | | | | | | |
| | 44 | ι Piscium (R.) | S. | | | | | | | | | | | | | | | |
| | 45 | ι Piscium | S. | | | | | | | | | | | | | | | |
| | 46 | ω Piscium (R.) | S. | | | | | | | | | | | | | | | |
| | 47 | ω Piscium | S. | | | | | | | | | | | | | | | |
| | 48 | α Andromedæ | S. | 28.9 | 30.6 | 35.1 | 37.6 | 39.9 | 42.3 | 44.6 | 49.2 | 51.0 | 2 39.91 | - 0.40 | -37.17 | -37.22 | 0 2 2.23 | - 0.03 |
| | 49 | γ Pegasi | S. | 20.0 | 22.7 | 24.5 | 30.6 | 32.7 | 31.8 | 41.1 | 42.7 | 45.3 | 7 32.69 | - 0.82 | -37.21 | -37.22 | 0 6 54.65 | - 0.01 |
| | 50 | α Cassiopeiæ (R.) | S. | | | | | | | | | | | | | | | |

1. Bisections at sets B and D.

6. Telescope micrometer reading decreased five revolutions in reduction.

38. Bisections at threads B₁, B₂, and B₃.

45. Thread A used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | |
| | | 10 | " | " | " | | | | | | | | | | | |
| 1 | 334 24 | 4.9 | 0.0 | 0.2 | 7.1 | 33 | 565 | .. | 790 | .. | 975 | 69.4 | 25 31 39.0 | 37.3 | + 28.4 | 76 38 28.6 |
| 2 | 341 30 | 4.0 | 29.0 | 27.9 | 6.5 | 33 | .. | .. | .. | 080 | 005 | 69.4 | 18 25 27.6 | .. | + 19.8 | 69 32 8.6 |
| 3 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 37.3 | .. | .. |
| 4 | 320 2 | 5.1 | 0.9 | 1.9 | 7.4 | 34 | 230 | .. | .. | .. | 195 | 68.1 | 39 53 45.1 | 44.0 | + 49.2 | 91 0 55.5 |
| 5 | 320 2 | 5.1 | 0.9 | 1.9 | 7.4 | 33 | .. | 135 | .. | 085 | .. | 68.1 | 39 53 28.2 | .. | + 49.2 | 91 0 38.6 |
| 6 | 0 0 | 3.4 | 28.8 | 29.0 | 1.0 | 35 | .. | 345 | .. | 210 | .. | 68.1 | 359 54 42.0 | .. | - 0.1 | 51 1 3.1 |
| 7 | 332 40 | 3.0 | 28.0 | 28.2 | 3.5 | 34 | .. | 800 | .. | 700 | .. | 68.1 | 27 15 50.3 | .. | + 30.3 | 78 22 41.8 |
| 8 | 52 22 | 5.4 | 27.5 | 0.0 | 4.8 | 36 | 465 | .. | 420 | .. | 475 | 68.1 | 307 34 17.2 | .. | - 1 16.1 | 358 39 22.3 |
| 9 | 310 32 | 9.1 | 3.8 | 4.0 | 10.8 | 33 | .. | 100 | .. | 960 | .. | 68.1 | 49 23 30.0 | .. | + 1 8.3 | 100 30 59.5 |
| 10 | 321 6 | 8.0 | 3.9 | 4.6 | 9.9 | 38 | .. | 670 | .. | 930 | .. | 68.1 | 38 50 45.9 | .. | + 47.2 | 89 57 54.3 |
| 11 | 168 54 | 4.5 | 2.0 | 3.2 | 3.0 | 34 | 490 | 380 | .. | .. | .. | 68.1 | 191 1 46.2 | .. | + 11.4 | 40 4 23.6 |
| 12 | 10 58 | 7.7 | 3.5 | 4.7 | 8.5 | 35 | .. | .. | .. | 940 | 890 | 68.1 | 348 58 15.0 | .. | - 11.4 | 40 4 24.8 |
| 13 | 340 4 | 6.0 | 0.5 | 2.0 | 4.6 | 36 | .. | 690 | .. | 585 | .. | 68.1 | 19 52 21.8 | .. | + 21.1 | 70 59 4.1 |
| 14 | 309 58 | 5.0 | 0.0 | 6.5 | 5.5 | 33 | .. | 735 | .. | 700 | .. | 68.1 | 49 57 36.4 | .. | + 1 9.4 | 101 5 7.0 |
| 15 | 199 0 | 7.7 | 6.0 | 2.7 | 5.2 | 35 | 635 | 575 | .. | .. | .. | 68.1 | 160 56 6.9 | .. | - 20.2 | 70 10 34.5 |
| 16 | 340 52 | 3.2 | 28.9 | 27.8 | 5.0 | 34 | .. | .. | .. | 815 | 740 | 68.1 | 19 3 52.2 | 48.0 | + 20.2 | 70 10 33.6 |
| 17 | 304 12 | 4.7 | 1.6 | 2.1 | 5.4 | 31 | 460 | 420 | .. | .. | .. | 68.1 | 55 43 1.6 | .. | + 1 25.2 | 106 50 48.0 |
| 18 | 303 40 | 4.7 | 1.6 | 2.9 | 6.5 | 32 | .. | .. | .. | 725 | 675 | 68.1 | 50 15 22.4 | 49.5 | + 1 26.9 | 107 23 10.5 |
| 19 | 335 34 | 1.0 | 27.8 | 27.0 | 1.0 | 32 | .. | 670 | .. | .. | .. | 68.1 | 24 21 16.2 | .. | + 26.2 | 75 28 3.6 |
| 20 | 333 42 | 5.8 | 0.3 | 1.7 | 7.2 | 35 | .. | 770 | .. | 640 | .. | 68.1 | 26 14 8.0 | .. | + 28.5 | 77 20 57.7 |
| 21 | 348 50 | 1.2 | 25.0 | 26.2 | 28.3 | 34 | .. | 700 | .. | 660 | .. | 68.1 | 11 5 46.3 | 52.5 | + 11.4 | 62 12 18.9 |
| 22 | 167 20 | 9.8 | 8.3 | 9.6 | 9.3 | 37 | 900 | 790 | .. | .. | .. | 68.1 | 192 36 29.3 | .. | + 12.9 | 33 29 39.0 |
| 23 | 12 32 | 10.1 | 6.0 | 6.7 | 10.2 | 33 | .. | .. | .. | 050 | 020 | 68.1 | 347 23 33.0 | .. | - 12.9 | 33 29 41.3 |
| 24 | 47 38 | 9.2 | 5.0 | 5.0 | 6.8 | 35 | 310 | .. | .. | .. | .. | 68.1 | 312 18 4.6 | .. | - 1 3.4 | 3 23 22.4 |
| 25 | 318 8 | 8.7 | 5.0 | 5.3 | 9.5 | 37 | .. | .. | .. | 130 | 090 | 68.1 | 41 48 33.6 | .. | + 51.7 | 92 55 46.5 |
| 26 | 312 44 | 5.8 | 1.8 | 3.4 | 6.7 | 36 | .. | 690 | .. | 640 | .. | 68.1 | 47 12 23.2 | .. | + 1 2.4 | 98 19 46.8 |
| 27 | 359 42 | 3.2 | 29.3 | 0.5 | 3.0 | 32 | .. | 850 | .. | 800 | .. | 68.1 | 0 13 21.8 | .. | + 0.2 | 51 19 43.2 |
| 28 | 328 0 | 3.0 | 26.1 | 27.2 | 3.2 | 39 | 160 | 340 | 600 | 780 | 950 | 69.8 | 31 57 4.9 | 36.0 | + 37.3 | 83 4 3.4 |
| 29 | 342 14 | 4.9 | 29.0 | 28.8 | 5.5 | 32 | .. | .. | .. | 980 | 970 | 69.8 | 17 41 27.2 | .. | + 19.1 | 68 48 7.5 |
| 30 | 306 56 | 7.8 | 1.3 | 2.9 | 10.0 | 30 | .. | 600 | .. | 580 | .. | 69.8 | 52 58 53.0 | .. | + 1 19.3 | 104 6 33.5 |
| 31 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 32 | 320 54 | 8.2 | 2.5 | 2.5 | 8.0 | 32 | .. | 610 | .. | 510 | .. | 69.8 | 39 1 23.0 | .. | + 48.3 | 90 8 32.5 |
| 33 | 336 18 | 3.7 | 29.5 | 0.0 | 5.2 | 33 | .. | 630 | .. | 500 | .. | 69.8 | 23 37 35.3 | .. | + 26.0 | 74 44 22.5 |
| 34 | 319 36 | 5.3 | 1.3 | 2.0 | 6.6 | 33 | .. | 430 | .. | 435 | .. | 68.1 | 40 19 33.1 | 42.0 | + 50.2 | 91 26 44.5 |
| 35 | 319 36 | 5.3 | 1.3 | 2.0 | 6.6 | 34 | 480 | .. | .. | .. | 435 | 68.1 | 40 19 48.8 | .. | + 50.2 | 91 27 0.2 |
| 36 | 0 0 | 3.1 | 28.6 | 29.2 | 0.5 | 30 | .. | .. | .. | 268 | 190 | 68.1 | 359 54 41.9 | .. | - 0.1 | 51 1 3.0 |
| 37 | 52 22 | 6.4 | 0.6 | 2.2 | 3.8 | 36 | 440 | .. | 435 | .. | 415 | 68.1 | 307 34 17.2 | .. | - 1 16.5 | 358 39 21.9 |
| 38 | 52 22 | 4.3 | 28.1 | 0.0 | 2.3 | 36 | 760 | 730 | 690 | .. | .. | 68.1 | 307 34 18.3 | .. | - 1 16.5 | 358 39 23.0 |
| 39 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 40 | 321 6 | 12.8 | 6.7 | 5.8 | 12.2 | 37 | .. | .. | .. | 960 | 905 | 68.1 | 38 50 48.5 | .. | + 47.4 | 89 57 57.1 |
| 41 | 303 24 | 3.5 | 28.2 | 28.7 | 2.8 | 35 | 960 | 918 | .. | .. | .. | 68.1 | 56 32 7.8 | .. | + 1 28.0 | 107 39 57.0 |
| 42 | 303 56 | 5.0 | 0.3 | 1.0 | 5.8 | 34 | .. | .. | .. | 510 | 582 | 68.1 | 55 59 49.7 | 48.8 | + 1 26.3 | 107 7 37.2 |
| 43 | 310 44 | 5.7 | 3.5 | 3.1 | 6.2 | 33 | .. | .. | .. | 325 | 370 | 68.1 | 49 11 33.4 | .. | + 1 7.4 | 100 19 2.0 |
| 44 | 213 52 | 8.8 | 5.3 | 5.0 | 6.6 | 37 | 760 | 700 | .. | .. | .. | 68.5 | 146 4 41.0 | 40.2 | - 39.9 | 85 2 20.1 |
| 45 | 326 0 | 3.8 | 28.9 | 28.5 | 4.1 | 42 | .. | .. | .. | 580 | 590 | 68.5 | 33 55 18.8 | .. | + 39.9 | 85 2 19.9 |
| 46 | 212 38 | 9.2 | 7.4 | 6.0 | 8.5 | 35 | 125 | 930 | .. | .. | .. | 68.5 | 147 18 1.0 | .. | - 38.1 | 83 48 58.3 |
| 47 | 327 14 | 7.5 | 2.9 | 1.6 | 7.3 | 31 | .. | .. | .. | 860 | 860 | 68.5 | 32 41 57.4 | .. | + 38.1 | 83 48 56.7 |
| 48 | 349 26 | 7.4 | 1.9 | 2.5 | 7.5 | 29 | .. | .. | .. | 392 | 380 | 68.5 | 10 28 33.8 | .. | + 11.0 | 61 35 6.0 |
| 49 | 335 32 | 7.4 | 1.9 | 2.1 | 5.1 | 31 | .. | 540 | .. | 531 | .. | 68.5 | 24 23 4.9 | .. | + 26.9 | 75 29 53.0 |
| 50 | 162 58 | 6.0 | 4.4 | 3.6 | 7.6 | 35 | 430 | 340 | .. | .. | .. | 68.5 | 196 58 3.4 | .. | + 18.2 | 34 7 59.6 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " | " | " | " |
| 1 | 29.86 | 39.7 | 1 | -25 | 6.5 | - 16 1.9 | - 41 8.4 |
| 3 | 29.89 | 39.6 | 4 | - | 5.4 | - 8.8 | - 14.2 |
| 4 | 29.92 | 44.0 | 5 | - | 5.4 | + 8.8 | + 2.7 |
| 16 | 29.94 | 48.0 | 14 | - | 5.4 | - | - 5.5 |
| 18 | 29.92 | 48.5 | 17 | - | 7.4 | + 16 11.2 | + 16 3.8 |
| 21 | 29.93 | 52.5 | 18 | - | 7.4 | - 16 11.2 | - 16 18.6 |
| 28 | 29.95 | 38.5 | 28 | -30 | 38.9 | - 15 54.5 | - 46 33.5 |
| 34 | 29.93 | 42.2 | 34 | - | 5.4 | + 8.2 | + 2.1 |
| 42 | 29.95 | 48.2 | 35 | - | 5.4 | - 8.2 | - 13.6 |
| 44 | 29.94 | 42.8 | 41 | - | 7.5 | - 16 9.9 | - 16 17.4 |
| | | | 42 | - | 7.4 | + 16 9.9 | + 16 2.5 |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. |
|---------|---------|--------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|---------------|----------------|---------------------------|----|-------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't | Clock adopted. | h. | m. | s. | |
| 1876. | | | | | | | | | | | | m. | s. | s. | s. | s. | s. | s. | | |
| Nov. 10 | 1 | <i>a</i> Cassiopeæ | S. | | | | | | | | | | | - 1.59 | -37.27 | -37.22 | 0 | 37 | 25.89 | + 0.10 |
| | 2 | <i>β</i> Ceti | S. | 51.8 | 54.5 | 56.0 | 2.6 | 4.7 | 6.8 | 13.3 | 14.9 | 17.7 | 38 4.70 | +51.41 | . | -37.22 | 1 | 14 | 2.49 | - 0.89 |
| | 3 | Polaris | S. | . | . | 54.5 | 21.0 | 18.0 | 15.5 | 10.0 | . | . | 13 48.30 | . | . | . | . | . | . | . |
| | 12 | 4 Venus II, S. | E. | 10.6 | 13.0 | 14.7 | 20.8 | 22.8 | 24.9 | 30.0 | 32.6 | 35.2 | 44 22.83 | - 1.27 | . | -37.07 | 12 | 43 | 44.49 | - 0.53 |
| | 5 | Venus N. | E. | . | . | . | . | . | . | . | . | . | . | - 0.14 | -37.06 | -37.07 | 12 | 50 | 15.28 | - 0.01 |
| | 6 | 12 ¹ Canum Venat. | E. | 39.7 | 39.8 | 42.0 | 50.0 | 52.5 | 55.1 | 3.0 | 5.0 | 8.3 | 50 52.49 | -54.82 | . | -37.07 | 1 | 14 | 2.01 | - 0.42 |
| | 7 | Polaris, S. P. | E. | . | . | 2 0 | 35.0 | 7.0 | 39.0 | 45.5 | 11.0 | 40.0 | 15 33.90 | - 1.45 | -37.05 | -37.07 | 13 | 18 | 41.40 | - 0.04 |
| | 8 | <i>a</i> Virginis | E. | 7.5 | 10.0 | 11.9 | 17.7 | 19.0 | 22.0 | 28.2 | 29.7 | 32.4 | 19 19.92 | . | . | . | . | . | . | . |
| | 9 | <i>η</i> Ursæ Majoris (R.) | E. | . | . | . | . | . | . | . | . | . | . | + 0.35 | . | -37.07 | 13 | 42 | 40.28 | + 0.05 |
| | 10 | <i>η</i> Ursæ Majoris | E. | . | . | . | . | . | . | . | . | . | . | - 0.51 | -37.03 | -37.07 | 14 | 39 | 35.53 | 0.00 |
| | 11 | <i>α</i> ² Bootis | E. | 59.3 | 2.0 | 4.0 | 10.9 | 13.0 | 15.4 | 22.4 | 24.0 | 27.0 | 40 13.11 | . | . | . | . | . | . | . |
| | 13 | 12 Sun I, N. | E. | 23.4 | 25.0 | 27.3 | 32.0 | 34.0 | 36.2 | . | 40.5 | . | 16 36.18 | - 1.62 | . | -37.07 | 15 | 15 | 57.49 | . |
| | 13 | Sun II, S. | E. | . | . | . | 53.0 | 55.3 | 57.6 | 1.8 | 3.6 | 6.0 | 18 53.18 | - 1.62 | . | -37.07 | 15 | 18 | 14.49 | . |
| | 14 | <i>η</i> Herculis | E. | 0.5 | 3.9 | 5.8 | 11.0 | 16.4 | 21.7 | 26.6 | 29.1 | 32.0 | 38 16.37 | - 0.13 | -37.09 | -37.07 | 16 | 38 | 39.17 | + 0.03 |
| | 21 | 15 <i>a</i> Draconis | F. | 7.9 | 13.9 | 17.6 | 32.0 | 37.1 | 41.8 | 56.1 | 59.8 | 6.0 | 1 36.91 | + 1.22 | . | -36.13 | 14 | 1 | 2.00 | + 0.06 |
| | 16 | <i>a</i> Bootis | F. | 25.6 | 28.5 | 30.0 | 39.0 | 38.8 | 40.9 | 47.3 | 49.0 | 51.7 | 10 38.71 | - 0.70 | -36.11 | -36.13 | 14 | 10 | 1.88 | - 0.02 |
| | 17 | <i>γ</i> Bootis | F. | . | . | . | . | . | . | . | 23.1 | 26.0 | 40 12.17 | - 0.52 | -36.00 | -36.13 | 14 | 39 | 35.52 | - 0.15 |
| | 18 | <i>a</i> ² Libræ | F. | . | 36.4 | 38.6 | 40.7 | 42.8 | 44.9 | 49.3 | 50.6 | 53.4 | 44 40.69 | - 1.44 | -36.28 | -36.13 | 14 | 44 | 3.12 | + 0.14 |
| | 19 | <i>a</i> Coronæ Borealis | F. | 50.3 | 53.1 | 54.8 | 1.8 | 4.0 | 6.4 | 13.2 | 15.0 | 17.9 | 30 4.06 | - 0.54 | -36.11 | -36.13 | 15 | 29 | 27.39 | - 0.02 |
| | 22 | 20 Sun I, S. | F. | 49.3 | 52.0 | 53.8 | 0.4 | 2.4 | 4.6 | 11.0 | 12.7 | 15.3 | 53 2.39 | - 1.56 | . | -36.12 | 15 | 52 | 24.71 | . |
| | 21 | Sun II, N. | F. | 8.4 | 11.2 | 12.9 | 19.3 | 21.5 | 23.7 | 30.2 | 31.8 | 34.5 | 50 21.50 | - 1.56 | . | -36.12 | 15 | 55 | 43.82 | . |
| | 22 | <i>a</i> ¹ Herculis | F. | 24.9 | 27.6 | 29.6 | 35.8 | 37.9 | 40.6 | 46.1 | 48.4 | 50.9 | 9 37.91 | - 0.82 | -36.16 | -36.12 | 17 | 9 | 0.97 | + 0.06 |
| | 23 | <i>μ</i> Herculis | F. | 0.1 | 2.9 | 4.6 | 11.0 | 13.8 | 16.1 | 23.0 | 24.8 | 27.7 | 42 13.84 | - 0.52 | -36.10 | -36.12 | 17 | 41 | 37.20 | - 0.02 |
| | 24 | <i>γ</i> Draconis (R.) | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 25 | <i>γ</i> Draconis | F. | . | . | . | . | . | . | 32.0 | 34.4 | 38.7 | 51 18.91 | + 0.27 | . | -36.12 | 17 | 53 | 43.06 | - 0.11 |
| | 26 | <i>α</i> Lyræ | F. | 5.5 | 8.8 | 10.7 | 18.6 | 21.2 | 23.8 | 31.7 | 33.6 | 36.9 | 33 21.20 | - 0.22 | -36.09 | -36.12 | 18 | 32 | 44.86 | - 0.01 |
| | 27 | Moon I, S. | F. | 36.5 | 39.4 | 40.9 | 47.5 | 49.6 | 51.0 | 58.5 | 0.2 | 2.8 | 21 49.70 | - 1.45 | . | -36.14 | 21 | 21 | 12.11 | +64.46 |
| | 28 | <i>μ</i> Capricorni. | F. | 0.1 | 2.8 | 4.3 | 10.6 | 12.8 | 15.0 | 21.2 | 22.7 | 25.4 | 47 12.77 | - 1.35 | -36.25 | -36.15 | 21 | 46 | 35.27 | + 0.13 |
| | 29 | 79 Draconis | F. | . | . | . | . | 58.0 | 4.8 | 19.0 | 24.4 | 33.4 | 51 51.93 | + 2.69 | . | -36.15 | 21 | 51 | 17.57 | - 0.50 |
| | 30 | <i>a</i> Aquarii. | F. | 52.7 | 55.2 | 56.8 | 3.0 | 5.0 | 7.0 | 13.0 | 14.6 | 17.2 | 0 4.94 | - 1.06 | -36.12 | -36.15 | 21 | 59 | 27.73 | 0.00 |
| | 31 | 32 Ursæ Majoris, S. P. | F. | 15.4 | 9.3 | 5.5 | 50.7 | 15.8 | 10.9 | 26.0 | 22.3 | 15.9 | 9 45.72 | - 3.37 | . | -36.15 | 10 | 9 | 6.20 | + 0.35 |
| | 32 | Titan | F. | 38.5 | 11.0 | 12.8 | . | . | . | . | . | 3.7 | 17 51.07 | - 1.31 | . | -36.15 | 22 | 17 | 13.61 | . |
| | 33 | Saturn I, S. | F. | 45.0 | 17.7 | 19.3 | . | . | . | 6.0 | 7.5 | 10.0 | 17 57.58 | - 1.31 | . | -36.15 | 22 | 17 | 20.12 | . |
| | 34 | Saturn II, N. | F. | . | . | 34.6 | 56.7 | 59.0 | 1.0 | 3.0 | . | . | 17 58.87 | - 1.31 | . | -36.15 | 22 | 17 | 21.41 | . |
| | 35 | <i>ζ</i> Pegasi | F. | 44.0 | 16.7 | 18.2 | 54.6 | 56.6 | 58.6 | 4.8 | 6.4 | 9.0 | 35 56.54 | - 0.83 | -36.15 | -36.16 | 22 | 35 | 19.55 | + 0.05 |
| | 36 | <i>λ</i> Aquarii (R.) | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 37 | <i>λ</i> Aquarii | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 38 | <i>a</i> Piscis Australis | F. | 15.4 | 18.0 | 20.0 | 27.0 | 29.3 | 31.7 | 38.9 | 40.6 | 43.7 | 51 29.40 | - 1.75 | -36.16 | -36.16 | 22 | 50 | 51.49 | + 0.04 |
| | 39 | <i>a</i> Pegasi | F. | 2.3 | 5.0 | 6.6 | 12.8 | 15.0 | 17.1 | 23.4 | 25.0 | 27.7 | 59 14.99 | - 0.73 | -36.17 | -36.16 | 22 | 59 | 38.10 | + 0.04 |
| | 40 | Weisse 103 | F. | . | . | 12.6 | 14.7 | 16.8 | 18.9 | 20.9 | . | . | 8 16.79 | - 1.24 | . | -36.17 | 23 | 7 | 39.38 | - 3.40 |
| | 41 | Weisse 104 | F. | 4.5 | 7.0 | 8.7 | . | . | . | 25.1 | ... | ... | 8 16.85 | - 1.24 | . | -36.17 | 23 | 7 | 39.44 | - 3.40 |
| | 42 | Weisse 109 | F. | . | . | . | 23.2 | . | . | 33.7 | 35.0 | 37.7 | 8 25.28 | - 1.24 | . | -36.17 | 23 | 7 | 47.87 | - 3.40 |
| | 43 | <i>θ</i> Piscium (R.) | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 44 | <i>θ</i> Piscium | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 45 | <i>γ</i> Cephei (R.) | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 46 | <i>γ</i> Cephei | F. | . | . | . | . | 59.2 | 9.0 | 26.6 | 33.9 | 44.7 | 34 59.66 | + 3.84 | . | -36.17 | 23 | 34 | 18.33 | + 0.21 |
| | 47 | 4 Ceti | F. | 51.6 | 54.1 | 55.7 | 1.8 | 3.8 | 5.8 | 11.9 | 13.5 | 16.0 | 2 3.80 | - 1.10 | . | -36.18 | 0 | 1 | 26.52 | - 3.57 |
| | 48 | 5 Ceti | F. | 19.6 | 22.0 | 23.7 | 29.9 | 32.0 | 34.0 | 40.0 | 41.7 | 44.3 | 2 31.91 | - 1.10 | . | -36.18 | 0 | 1 | 54.63 | - 3.57 |
| | 49 | Lacaille 81 | F. | 40.5 | 43.9 | 45.8 | 53.7 | 56.6 | 59.1 | 7.0 | 8.9 | 12.4 | 19 56.43 | - 2.07 | . | -36.18 | 0 | 19 | 18.18 | - 4.23 |

5. Telescope micrometer reading decreased one revolution in reduction.
7. Bisections at threads C₃, C₄, and D₃.
29, 31, 45, 46. Bisections at sets B and D.
33, 34. Telescope micrometer reading increased one revolution in reduction.
48. Thread A used.
49. Thread B used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|-------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | | |
| | o' " | r. " | " " | " " | " " | | | | | | | " " | o' " | " " | " " | o' " | " " | | |
| 1 | 16 54 | 10 | 7.0 | 1.5 | 3.2 | 7.0 | 35 | .. | .. | 850 | .. | 68.5 | 343 1 57.3 | .. | 18.2 | 34 8 0.3 | - 1.4 | | |
| 2 | 302 24 | | 8.6 | 3.4 | 4.2 | 9.1 | 34 | .. | 210 | .. | 060 | .. | 68.5 | 57 31 46.7 | .. | + 1 33.3 | 108 39 41.2 | - 1.2 | |
| 3 | 49 40 | | 1.7 | 26.3 | 26.1 | 27.9 | 33 | 175 | .. | 180 | .. | 200 | 68.5 | 310 15 24.2 | 37.0 | - 1 10.3 | 1 20 35.1 | - 0.9 | |
| 4 | 318 18 | | 8.5 | 3.0 | 4.5 | 8.6 | 36 | 868 | .. | .. | .. | 808 | 68.4 | 41 38 27.9 | .. | + | 52.6 | 92 45 41.7 | .. |
| 5 | 318 18 | | 8.5 | 3.0 | 4.5 | 8.6 | 36 | .. | 755 | .. | 730 | .. | 68.4 | 41 33 11.2 | .. | + | 52.6 | 92 45 25.0 | .. |
| 6 | 0 0 | | 4.7 | 28.6 | 29.0 | 1.7 | 30 | .. | 230 | .. | 190 | .. | 68.4 | 359 54 41.6 | 43.5 | - | 0.1 | 51 1 2.7 | - 2.7 |
| 7 | 52 22 | | 7.5 | 1.2 | 2.7 | 6.5 | 36 | 220 | .. | 300 | .. | 565 | 68.4 | 307 34 18.0 | .. | - 1 16.5 | 358 39 22.7 | - 2.1 | |
| 8 | 310 32 | | 6.6 | 2.0 | 2.2 | 8.7 | 33 | .. | 195 | .. | 105 | .. | 68.4 | 49 23 30.2 | .. | + | 1 8.7 | 100 31 0.1 | - 0.8 |
| 9 | 168 54 | | 7.3 | 6.9 | 4.5 | 9.5 | 34 | 095 | 065 | .. | .. | .. | 68.4 | 191 1 45.1 | .. | + | 11.4 | 40 4 24.7 | - 1.9 |
| 10 | 10 58 | | 3.8 | 27.5 | 0.9 | 7.1 | 36 | .. | .. | .. | 185 | 125 | 68.4 | 348 58 15.2 | .. | - | 11.4 | 40 4 25.0 | - 1.6 |
| 11 | 348 38 | | 4.5 | 27.5 | 28.3 | 4.3 | 34 | .. | .. | .. | 680 | 660 | 68.4 | 11 17 50.9 | .. | + | 11.6 | 62 24 23.7 | - 0.4 |
| 12 | 303 8 | | 6.1 | 1.8 | 1.9 | 8.0 | 36 | 505 | 375 | .. | .. | .. | 68.4 | 56 48 19.5 | .. | + | 1 28.1 | 107 56 8.8 | .. |
| 13 | 302 36 | | 7.4 | 3.9 | 3.6 | 9.5 | 37 | .. | .. | .. | 650 | 565 | 68.4 | 57 20 40.1 | 54.5 | + | 1 30.0 | 108 28 31.3 | .. |
| 14 | .. | | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 15 | 26 0 | | 9.3 | 2.6 | 3.5 | 8.3 | 36 | .. | 868 | .. | 766 | .. | 68.1 | 333 56 27.8 | .. | - | 28.4 | 25 2 20.6 | - 2.1 |
| 16 | 340 52 | | 4.2 | 29.8 | 28.9 | 4.4 | 34 | .. | 926 | .. | 840 | .. | 68.1 | 19 3 53.5 | 52.2 | + | 20.0 | 70 10 34.7 | - 2.3 |
| 17 | 348 38 | | 4.1 | 26.3 | 27.5 | 4.0 | 35 | .. | .. | .. | 884 | 868 | 68.1 | 11 17 53.1 | .. | + | 11.6 | 62 24 25.9 | - 0.9 |
| 18 | 305 32 | | 10.5 | 6.1 | 5.2 | 11.4 | 34 | .. | .. | .. | 922 | .. | 68.1 | 54 24 1.1 | 52.6 | + | 1 20.7 | 105 31 43.0 | - 1.0 |
| 19 | 348 10 | 9 | 28.6 | 21.0 | 19.9 | 25.1 | 34 | .. | .. | .. | 560 | 528 | 68.1 | 11 45 41.2 | .. | + | 12.0 | 62 52 14.4 | - 1.8 |
| 20 | 300 28 | 10 | 4.0 | 2.5 | 2.7 | 3.5 | 36 | 210 | 211 | .. | .. | .. | 68.1 | 59 28 14.3 | .. | + | 1 37.4 | 110 36 12.9 | .. |
| 21 | 301 0 | | 0.2 | 27.2 | 27.7 | 29.6 | 34 | .. | .. | .. | 858 | 842 | 68.1 | 55 55 50.1 | 54.6 | + | 1 35.4 | 110 3 46.7 | .. |
| 22 | 335 34 | | 4.0 | 29.5 | 29.2 | 4.9 | 32 | .. | .. | .. | 622 | 595 | 68.1 | 24 21 19.7 | 56.2 | + | 26.0 | 75 28 6.9 | - 0.1 |
| 23 | 348 50 | | 2.7 | 27.0 | 26.0 | 1.8 | 34 | .. | 890 | .. | 820 | .. | 68.1 | 11 5 50.7 | .. | + | 11.3 | 62 12 23.2 | + 0.9 |
| 24 | 167 20 | 9 | 29.3 | 26.5 | 26.5 | 29.4 | 37 | 425 | .. | .. | .. | .. | 68.1 | 192 36 26.4 | .. | + | 12.8 | 38 29 42.0 | - 3.0 |
| 25 | 12 32 | 10 | 2.0 | 25.6 | 27.2 | 0.1 | 33 | .. | .. | .. | 860 | 810 | 68.1 | 347 23 35.8 | .. | - | 12.8 | 38 29 44.2 | - 0.8 |
| 26 | 359 42 | | 4.5 | 29.8 | 0.6 | 3.4 | 32 | .. | 930 | .. | 800 | .. | 68.1 | 0 13 23.0 | 56.0 | + | 0.2 | 51 19 44.4 | - 1.0 |
| 27 | 302 2 | | 9.4 | 5.5 | 4.3 | 12.0 | 32 | .. | 700 | 254 | 940 | .. | 69.4 | 57 53 21.0 | .. | + | 1 32.1 | 109 1 14.3 | .. |
| 28 | 306 56 | | 6.3 | 4.3 | 1.8 | 8.7 | 35 | .. | .. | .. | 870 | 840 | 69.4 | 53 0 13.8 | 51.0 | + | 1 16.9 | 104 7 51.9 | - 0.3 |
| 29 | 34 8 | | 8.2 | 3.1 | 1.0 | 8.2 | 30 | .. | .. | .. | 264 | 254 | 69.4 | 325 46 47.7 | .. | - | 39.5 | 16 52 29.4 | - 2.5 |
| 30 | 320 9 | 8 | 9.4 | 3.6 | 2.3 | 12.8 | 38 | .. | 218 | .. | 108 | .. | 69.4 | 39 47 50.5 | .. | + | 48.4 | 90 55 0.1 | - 0.7 |
| 31 | 75 16 | 10 | 10.0 | 4.3 | 1.2 | 9.3 | 36 | 130 | 142 | .. | 175 | 194 | 69.4 | 284 40 18.5 | .. | - | 3 38.3 | 335 43 1.4 | - 1.2 |
| 32 | 308 32 | | 8.6 | 4.3 | 2.7 | 12.4 | 38 | .. | .. | .. | .. | 370 | 69.4 | 51 24 54.2 | .. | + | 1 12.7 | 102 32 28.1 | .. |
| 33 | 308 32 | | 8.6 | 4.3 | 2.7 | 12.4 | 37 | 938 | .. | .. | .. | 750 | 69.4 | 51 25 0.3 | .. | + | 1 12.7 | 102 32 34.2 | .. |
| 34 | 308 32 | | 8.6 | 4.3 | 2.7 | 12.4 | 36 | .. | 605 | .. | 410 | .. | 69.4 | 51 24 40.0 | .. | + | 1 12.7 | 102 32 13.9 | .. |
| 35 | 331 14 | | 12.5 | 9.2 | 5.5 | 14.2 | 33 | .. | .. | .. | 160 | 140 | 69.4 | 28 41 37.6 | .. | + | 31.8 | 79 48 30.6 | - 1.6 |
| 36 | 227 2 | | 8.8 | 4.4 | 4.4 | 9.4 | 32 | 380 | 364 | .. | .. | .. | 69.4 | 132 53 20.4 | .. | - | 1 2.6 | 98 14 3.4 | + 0.9 |
| 37 | 312 50 | | 11.0 | 8.4 | 5.5 | 14.0 | 37 | .. | .. | .. | 166 | 146 | 69.4 | 47 6 35.2 | .. | + | 1 2.6 | 98 14 2.0 | - 0.5 |
| 38 | 290 48 | | 6.3 | 2.1 | 0.8 | 10.5 | 33 | .. | .. | .. | 870 | 838 | 69.4 | 69 7 42.6 | 50.0 | + | 2 31.4 | 120 16 35.2 | + 0.9 |
| 39 | 335 36 | | 8.5 | 4.0 | 1.6 | 9.4 | 36 | .. | 884 | .. | 742 | .. | 69.4 | 24 20 25.4 | .. | + | 26.3 | 75 27 15.9 | + 0.4 |
| 40 | 311 26 | | 10.7 | 6.9 | 5.0 | 13.6 | 27 | .. | .. | .. | .. | 200 | 69.4 | 48 28 5.2 | .. | + | 1 5.7 | 99 35 32.1 | + 17.3 |
| 41 | 311 26 | | 10.7 | 6.9 | 5.0 | 13.6 | 29 | .. | 988 | .. | 838 | .. | 69.4 | 48 28 30.4 | .. | + | 1 5.7 | 99 35 57.3 | + 17.3 |
| 42 | 311 26 | | 10.7 | 6.9 | 5.0 | 13.6 | 30 | .. | .. | .. | .. | 758 | 69.4 | 48 28 59.7 | .. | + | 1 5.7 | 99 36 26.6 | + 17.3 |
| 43 | 213 6 | | 10.0 | 6.3 | 4.7 | 10.1 | 32 | 050 | .. | .. | .. | .. | 69.4 | 146 49 16.2 | .. | - | 38.1 | 84 17 43.1 | + 0.7 |
| 44 | 326 46 | | 7.0 | 3.1 | 1.3 | 9.8 | 37 | .. | .. | .. | .. | 786 | 69.4 | 33 10 43.8 | .. | + | 38.1 | 84 17 43.1 | + 0.7 |
| 45 | 141 54 | | 4.0 | 1.3 | 1.3 | 7.5 | 37 | 768 | 746 | .. | .. | .. | 69.4 | 218 2 39.8 | .. | + | 45.7 | 13 2 55.7 | - 1.7 |
| 46 | 37 58 | | 7.5 | 1.2 | 0.4 | 6.5 | 32 | .. | .. | .. | 438 | 420 | 69.4 | 321 57 19.8 | 48.6 | - | 45.7 | 13 2 55.3 | - 2.1 |
| 47 | 317 50 | | 7.8 | 2.2 | 1.7 | 9.8 | 37 | 926 | 896 | .. | .. | .. | 69.4 | 42 6 43.7 | .. | + | 52.9 | 93 13 57.8 | + 22.1 |
| 48 | 317 50 | | 7.8 | 2.2 | 1.7 | 9.8 | 23 | .. | .. | .. | 928 | 912 | 69.4 | 42 0 37.9 | .. | + | 52.7 | 93 7 51.8 | + 22.1 |
| 49 | 281 12 | | 12.6 | 8.0 | 7.2 | 13.1 | 30 | .. | 150 | .. | 990 | .. | 69.4 | 78 45 21.5 | .. | + | 46.6 | 129 56 29.3 | + 11.8 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|---------|
| | in. | ° | | " " | " " | " " | " " |
| 3 | 29.95 | 41.1 | 4 | - 5.4 | - 8.7 | - | 14.1 |
| 6 | 30.04 | 44.5 | 5 | + 5.4 | + 8.7 | - 0.7 | 2.6 |
| 13 | 30.02 | 50.7 | 12 | - 7.5 | + 16 11.2 | . | 16 3.7 |
| 16 | 29.97 | 52.6 | 13 | - 7.5 | - 16 11.2 | . | 16 18.7 |
| 18 | 29.97 | 52.8 | 20 | - 7.7 | - 16 13.1 | . | 16 20.8 |
| 21 | 29.95 | 55.2 | 21 | - 7.7 | + 16 13.1 | . | 16 5.4 |
| 22 | 29.93 | 56.8 | 27 | - 45 53.1 | - 14 50.2 | . | 60 43.3 |
| 26 | 29.95 | 57.4 | 32 | - 0.8 | - 10.2 | . | 11.0 |
| 28 | 29.95 | 53.4 | 33 | - 0.8 | + 10.2 | . | 9.4 |
| 38 | 29.96 | 52.5 | | | | | |
| 46 | 29.96 | 51.5 | | | | | |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. | | | |
|---------|---------|----------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|--------|----|----------------------------|-------|-------|------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| 1876. | | | | | | | | | | | | | m. | s. | | s. | s. | h. | m. | s. | | s. | |
| Nov. 22 | 1 | B. A. C. 136 ¹ | F. | 6.0 | 9.3 | 11.3 | | | | | 31.2 | 33.0 | 36.3 | 28 | 21.18 | -1.92 | | -36.18 | 0 | 27 | 43.08 | - | 4.14 |
| | 2 | B. A. C. 136 ² | F. | | | 16.2 | 18.7 | 21.3 | 23.7 | 26.3 | | | | 28 | 21.25 | -1.92 | | -36.18 | 0 | 27 | 43.15 | - | 4.14 |
| | 3 | B. A. C. 289 | F. | 58.4 | 1.6 | 3.3 | 10.7 | 13.3 | 15.5 | 22.7 | 24.4 | 27.3 | 57 | 13.02 | -1.81 | | -36.19 | 0 | 56 | 35.02 | - | 4.12 | |
| | 4 | Polaris | F. | | | 53.0 | 20.0 | 47.0 | 13.0 | 42.0 | | | 13 | 47.48 | +46.94 | | -36.19 | 1 | 13 | 58.23 | - | 0.27 | |
| | 5 | ^m Ceti | F. | 18.5 | 21.1 | 22.7 | 28.7 | 30.8 | 32.9 | 39.0 | 40.6 | 43.3 | 18 | 30.84 | -1.22 | -36.15 | -36.19 | 1 | 17 | 53.43 | - | 0.02 | |
| | 6 | Danŕe | F. | 8.4 | 11.7 | 13.7 | 21.8 | 24.5 | 26.9 | 34.6 | 36.9 | 40.1 | 47 | 24.29 | -0.06 | | -36.20 | 1 | 46 | 48.03 | - | | |
| | 7 | ^a Arietis | F. | 38.8 | 41.5 | 43.0 | 49.8 | 51.9 | 54.0 | 0.9 | 2.5 | 5.3 | 0 | 51.97 | -0.53 | -36.05 | -36.20 | 2 | 0 | 15.24 | - | 0.14 | |
| | 8 | Neptune | F. | | | | | | | | | | | | | | | | | | - | | |
| | 9 | Lalande 4528 | F. | 10.5 | 13.1 | 14.7 | 21.0 | 23.2 | 25.3 | 31.6 | 33.3 | 35.9 | 21 | 23.18 | -0.68 | | -36.21 | 2 | 20 | 46.29 | - | 4.23 | |
| | 10 | ^β Ursæ Minoris, S. P. | F. | 29.0 | 19.6 | 13.7 | 58.6 | 50.6 | 42.7 | 35.2 | | | 51 | 42.84 | -5.05 | | -36.22 | 14 | 51 | 1.57 | - | 0.15 | |
| | 11 | ^δ Persei (R.) | F. | | | | | | | | | | | | | | | | | | - | | |
| | 12 | ^δ Persei | F. | | | | | | | | | 2.3 | 6.0 | 34 | 47.94 | +0.25 | | -36.23 | 3 | 34 | 11.96 | + | 0.32 |
| | 13 | ^η Tauri | F. | | | | | | | | 57.3 | 58.8 | 1.8 | 40 | 48.34 | -0.49 | -36.24 | -36.23 | 3 | 40 | 11.62 | + | 0.01 |
| | 14 | ^η Persei | F. | 47.5 | 50.4 | 52.3 | 59.6 | 2.0 | 4.3 | 11.4 | 13.3 | 16.3 | 47 | 1.90 | -0.29 | -36.25 | -36.23 | 3 | 46 | 25.38 | + | 0.01 | |
| | 15 | ^γ Eridani. | F. | 43.8 | 46.4 | 47.8 | 54.3 | 56.3 | 58.4 | 4.7 | 6.4 | 9.0 | 52 | 56.34 | -1.31 | -36.21 | -36.23 | 3 | 52 | 18.80 | + | 0.02 | |
| | 16 | Feronia | F. | 7.9 | 10.5 | 12.0 | 16.2 | 20.4 | 24.6 | 29.0 | 30.5 | 33.3 | 5 | 20.49 | -0.69 | | -36.24 | 4 | 4 | 43.56 | - | | |
| 23 | 17 | Polaris, S. P. | S. | | | 20.0 | 51.5 | 24.5 | 57.0 | 31.0 | | | 15 | 24.34 | -53.44 | | -35.79 | 1 | 13 | 55.11 | - | 2.47 | |
| | 18 | ^a Virginis | S. | | | | | 20.9 | 22.9 | 27.0 | 28.7 | 31.0 | 19 | 18.73 | -1.25 | -35.79 | -35.78 | 13 | 18 | 41.70 | - | 0.01 | |
| | 19 | ^γ Virginis | S. | | | | | 3.4 | 5.4 | 9.4 | 11.0 | 13.5 | 29 | 1.30 | -1.01 | -35.79 | -35.78 | 13 | 28 | 24.51 | + | 0.01 | |
| | 20 | Venus II, N. | S. | 22.6 | 25.2 | 26.8 | 33.0 | 35.0 | 37.0 | 43.3 | 44.8 | 47.4 | 33 | 35.01 | -1.18 | | -35.78 | 13 | 32 | 58.05 | - | 0.50 | |
| | 21 | Venus S. | S. | | | | | | | | | | | | | | | | | | - | | |
| | 22 | ^η Ursæ Majoris (R.) | S. | | | | | | | | | | | | | | | | | | - | | |
| | 23 | ^η Ursæ Majoris. | S. | | 9.4 | 12.6 | 15.8 | 19.0 | 22.1 | 28.5 | 30.8 | 34.9 | 43 | 15.80 | +0.47 | | -35.77 | 13 | 42 | 40.50 | + | 0.01 | |
| | 24 | ^η Bootis | S. | 12.0 | 14.7 | 16.4 | 22.7 | 25.0 | 27.0 | 33.5 | 35.1 | 38.0 | 49 | 24.93 | -0.56 | -35.75 | -35.77 | 13 | 48 | 48.60 | - | 0.07 | |
| | 25 | ^a Bootis (R.) | S. | | | | | | | | | | | | | | | | | | - | | |
| | 26 | ^a Bootis | S. | | | | | | | | | | | | | | | | | | - | | |
| | 27 | ^ε Bootis | S. | 58.0 | 0.9 | 2.5 | 9.5 | 11.8 | 14.0 | 21.0 | 22.8 | 25.8 | 40 | 11.81 | -0.36 | -35.77 | -35.76 | 14 | 39 | 35.69 | - | 0.01 | |
| 24 | 28 | Sun I, S. | S. | 16.7 | 19.4 | 20.9 | 27.6 | 29.8 | 32.0 | 38.5 | 40.3 | 43.0 | 2 | 29.80 | -1.53 | | -35.70 | 16 | 1 | 52.57 | - | | |
| | 29 | Sun II, N. | S. | 35.7 | 40.3 | 44.6 | 46.8 | 49.1 | 51.2 | 53.4 | 57.9 | 59.6 | 4 | 49.07 | -1.53 | | -35.70 | 16 | 4 | 11.84 | - | | |
| | 30 | ^η Serpentis | S. | 20.0 | 22.6 | 24.0 | 30.2 | 32.2 | 34.3 | 40.5 | 42.0 | 44.5 | 15 | 32.26 | -1.12 | -35.73 | -35.64 | 18 | 14 | 55.50 | + | 0.15 | |
| | 31 | ^a Lyrae | S. | 5.0 | 8.2 | 10.0 | 18.0 | 20.8 | 23.2 | 31.0 | 33.0 | 36.2 | 33 | 20.60 | -0.08 | -35.65 | -35.64 | 18 | 32 | 44.88 | + | 0.03 | |
| | 32 | ^β Lyrae | S. | 52.0 | 55.1 | 56.9 | 4.3 | 6.8 | 9.3 | 16.6 | 18.3 | 21.4 | 46 | 6.74 | -0.26 | -35.59 | -35.63 | 18 | 45 | 30.85 | - | 0.01 | |
| | 33 | ^ε Aquilæ | S. | 8.0 | 10.6 | 12.2 | 18.7 | 20.6 | 22.7 | 29.0 | 30.5 | 33.2 | 0 | 20.61 | -0.76 | -35.65 | -35.63 | 18 | 59 | 44.22 | + | 0.10 | |
| | 34 | Saturn I, S. | S. | 59.4 | 1.9 | 3.7 | | | | 20.4 | 21.8 | 24.6 | 18 | 11.97 | -1.31 | | -35.61 | 22 | 17 | 35.05 | - | | |
| | 35 | Saturn II, N. | S. | | | 9.0 | 11.2 | 13.3 | 15.3 | 17.5 | | | 18 | 13.27 | -1.31 | | -35.61 | 22 | 17 | 36.35 | - | | |
| | 36 | ^ε Cephei (R.) | S. | | | | | | | | | | | | | | | | | | - | | |
| | 37 | ^ε Cephei | S. | | | 46.4 | 51.3 | 56.2 | 1.2 | 11.2 | 14.7 | 20.9 | 45 | 51.30 | +1.65 | | -35.60 | 22 | 45 | 17.35 | + | 0.11 | |
| | 38 | Moon I, S. | S. | 47.3 | 50.0 | 51.6 | 57.8 | 0.0 | 2.0 | 8.3 | 9.9 | 12.6 | 53 | 59.94 | -1.21 | | -35.60 | 22 | 53 | 23.13 | + | 62.78 | |
| | 39 | Anonymous | S. | 44.8 | 47.4 | 49.0 | 55.0 | 57.0 | 59.0 | 5.2 | 6.8 | 9.4 | 42 | 57.08 | -1.15 | | -35.50 | 23 | 41 | 20.34 | - | 3.48 | |
| | 40 | Weisse 848 | S. | 51.2 | 53.7 | 55.3 | 1.5 | 3.5 | 5.5 | 11.6 | 13.2 | 25.8 | 43 | 3.47 | -1.15 | | -35.59 | 23 | 42 | 26.73 | - | 3.48 | |
| | 41 | ^a Andromedæ | S. | 24.2 | 27.0 | 28.8 | 35.7 | 38.0 | 40.4 | 47.4 | 49.0 | 52.0 | 2 | 38.06 | -0.37 | -35.54 | -35.59 | 0 | 2 | 2.10 | - | 0.03 | |
| | 42 | ^γ Pegasi | S. | 18.3 | 20.9 | 22.5 | 28.7 | 30.9 | 33.0 | 39.3 | 40.9 | 43.7 | 7 | 30.91 | -0.72 | -35.64 | -35.59 | 0 | 6 | 54.60 | + | 0.05 | |
| | 43 | ^β Ceti | S. | 50.0 | 52.7 | 54.3 | 0.9 | 2.9 | 5.0 | 11.5 | 13.2 | 15.8 | 38 | 2.92 | -1.46 | -35.71 | -35.58 | 0 | 37 | 25.88 | + | 0.18 | |
| | 44 | B. A. C. 259 | S. | 16.4 | 19.7 | 21.6 | 29.4 | 31.9 | 34.5 | 42.3 | 44.2 | 47.4 | 50 | 31.93 | -0.08 | | -35.58 | 0 | 49 | 56.27 | - | 3.76 | |
| | 45 | B. A. C. 272 | S. | 5.0 | 8.0 | 9.8 | 16.9 | 19.3 | 21.6 | 28.7 | 30.4 | 33.3 | 53 | 19.22 | -1.76 | | -35.58 | 0 | 52 | 41.88 | - | 4.06 | |
| | 46 | B. A. C. 289 | S. | | | | | | | 22.2 | 24.0 | 27.0 | 57 | 12.54 | -1.82 | | -35.58 | 0 | 56 | 35.14 | - | 4.10 | |
| | 47 | Polaris | S. | 57.0 | 44.5 | 52.5 | 41.5 | 11.5 | 38.0 | 6.5 | 38.0 | | 13 | 39.76 | +50.74 | | -35.58 | 1 | 13 | 54.92 | - | 2.36 | |
| | 48 | ^η Piscium (R.) | S. | | | | | | | | | | | | | | | | | | - | | |
| | 49 | ^η Piscium | S. | | | | | | | | | | | | | | | | | | - | | |
| | 50 | B. A. C. 544 | S. | 45.0 | 48.0 | 50.0 | 57.7 | 0.2 | 2.7 | 10.5 | 12.4 | 15.6 | 42 | 0.23 | -0.06 | | -35.58 | 1 | 41 | 24.56 | - | 4.27 | |
| | 51 | ^β Arietis | S. | 14.8 | 17.5 | 19.2 | 25.7 | 27.9 | 30.1 | 36.5 | 38.0 | 40.9 | 48 | 27.84 | -0.58 | -35.59 | -35.58 | 1 | 47 | 51.68 | + | 0.03 | |

6, 16, 39. Thread A used.
10, 38. Bisections at sets B and D.
34, 35, 36. Thread B used.
35. Telescope micrometer reading increased one revolution in reduction.
50. Telescope micrometer reading decreased one revolution in reduction.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|----|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | | |
| | | r. " | " " | " " | " " | | | | | | | | | | | | | |
| 1 | 285 26 | 10 11.1 | 7.1 | 6.4 | 13.0 | 35 | 248 | 188 | .. | .. | .. | 69.4 | 74 30 6.1 | .. | + 3 28.5 | 125 39 55.8 | +13.5 | |
| 2 | 285 26 | 11.1 | 7.1 | 6.4 | 13.0 | 33 | .. | 612 | .. | 586 | .. | 69.4 | 71 30 10.8 | .. | + 3 28.5 | 125 40 0.5 | +13.5 | |
| 3 | 288 52 | 10.0 | 5.5 | 3.6 | 11.3 | 33 | .. | 612 | .. | 586 | .. | 69.4 | 71 3 40.6 | .. | + 2 49.3 | 122 12 51.1 | +15.9 | |
| 4 | 49 40 | 6.3 | 0.2 | 0.0 | 4.5 | 32 | 452 | 444 | 440 | 410 | 420 | 69.4 | 310 15 18.3 | .. | + 1 9.2 | 1 20 30.3 | + 1.7 | |
| 5 | 312 14 | 11.6 | 8.1 | 4.4 | 14.2 | 33 | 330 | 254 | .. | 076 | 054 | 69.4 | 47 41 36.3 | .. | + 1 4.4 | 98 49 1.9 | + 0.1 | |
| 6 | 0 28 | 12.3 | 7.1 | 8.6 | 11.7 | 37 | .. | .. | .. | 828 | .. | 69.4 | 359 26 15.5 | .. | — 0.6 | 50 32 36.1 | + 0.1 | |
| 7 | 343 56 | 12.7 | 7.1 | 5.3 | 12.8 | 36 | .. | 150 | .. | 122 | .. | 69.4 | 16 0 21.7 | 46.8 | + 16.8 | 67 6 59.7 | — 0.5 | |
| 8 | 331 54 | 6.2 | 1.1 | 29.5 | 4.8 | 32 | .. | .. | .. | .. | 040 | 69.4 | 28 1 13.4 | .. | + 31.2 | 79 8 5.8 | .. | |
| 9 | 337 8 | 9.6 | 4.4 | 1.7 | 8.4 | 33 | .. | 346 | .. | 258 | .. | 64.4 | 22 47 34.8 | .. | + 24.7 | 73 54 29.7 | +26.9 | |
| 10 | 66 20 | 6.9 | 0.9 | 28.5 | 4.9 | 31 | 894 | 890 | .. | .. | .. | 69.4 | 293 35 9.4 | .. | — 2 13.8 | 344 39 16.8 | — 0.2 | |
| 11 | 171 26 | 8.2 | 6.2 | 3.8 | 10.7 | 34 | 834 | 868 | .. | .. | .. | 69.4 | 188 29 58.5 | .. | + 8.8 | 42 36 13.9 | — 2.9 | |
| 12 | 8 26 | 16.4 | 10.1 | 8.1 | 14.6 | 34 | .. | .. | .. | 704 | 666 | 69.4 | 351 30 3.6 | .. | — 8.8 | 42 36 16.0 | — 0.8 | |
| 13 | 314 46 | 11.7 | 7.5 | 4.3 | 11.7 | 33 | .. | 914 | .. | 856 | .. | 69.4 | 15 9 46.5 | .. | + 16.0 | 66 16 23.7 | — 1.2 | |
| 14 | 352 34 | 8.6 | 3.5 | 1.5 | 7.7 | 36 | .. | 210 | .. | 126 | .. | 69.4 | 7 22 18.1 | .. | + 7.6 | 58 28 46.9 | — 1.0 | |
| 15 | 307 12 | 8.2 | 4.4 | 3.0 | 10.7 | 33 | .. | 958 | .. | 782 | .. | 69.4 | 52 43 43.9 | 44.1 | + 17.4 | 103 51 22.5 | — 0.8 | |
| 16 | 336 30 | 3.9 | 28.6 | 27.1 | 3.1 | 34 | .. | 160 | .. | 170 | .. | 69.4 | 23 23 9.2 | .. | + 25.5 | 74 29 55.9 | — 2.6 | |
| 17 | 52 22 | 0.0 | 26.3 | 26.8 | 28.3 | 37 | 070 | .. | 968 | .. | 980 | 69.4 | 307 34 23.0 | 35.9 | — 1 18.1 | 358 39 26.1 | — 2.3 | |
| 18 | 310 32 | 3.2 | 0.5 | 29.0 | 5.0 | 33 | .. | .. | .. | 230 | 170 | 69.4 | 49 23 29.8 | .. | + 1 10.1 | 100 31 1.1 | — 1.2 | |
| 19 | 321 6 | 6.6 | 1.6 | 1.8 | 7.2 | 38 | .. | .. | .. | 022 | 020 | 69.4 | 38 50 46.1 | .. | + 48.5 | 89 57 55.8 | — 0.7 | |
| 20 | 313 30 | 3.0 | 0.2 | 29.7 | 5.9 | 37 | 940 | .. | .. | .. | 900 | 69.4 | 46 26 41.5 | .. | + 1 3.2 | 97 34 5.9 | .. | |
| 21 | 313 30 | 3.0 | 0.2 | 29.7 | 5.9 | 38 | .. | 990 | .. | 870 | .. | 69.4 | 46 26 57.0 | .. | + 1 3.2 | 97 34 21.4 | .. | |
| 22 | 168 54 | 6.0 | 5.0 | 3.8 | 7.0 | 33 | 815 | 790 | .. | .. | .. | 69.4 | 191 1 40.3 | .. | + 11.7 | 40 4 29.2 | — 1.2 | |
| 23 | 10 58 | 5.7 | 2.9 | 3.9 | 8.5 | 36 | .. | .. | .. | 280 | 250 | 69.4 | 348 58 20.8 | .. | — 11.7 | 40 4 30.3 | — 0.1 | |
| 24 | 340 4 | 5.3 | 1.6 | 1.1 | 5.4 | 36 | .. | 840 | .. | 730 | .. | 69.4 | 19 52 25.5 | .. | + 21.7 | 70 59 8.4 | + 0.1 | |
| 25 | 199 0 | 5.0 | 4.4 | 2.0 | 0.0 | 35 | 490 | 460 | .. | .. | .. | 69.4 | 160 56 3.7 | .. | — 20.8 | 70 10 38.3 | + 0.8 | |
| 26 | 340 52 | 4.4 | 0.5 | 0.2 | 4.5 | 34 | .. | .. | .. | 890 | 835 | 69.4 | 19 3 56.0 | 37.1 | + 20.8 | 70 10 38.0 | + 0.5 | |
| 27 | 348 38 | 3.9 | 0.6 | 0.5 | 5.5 | 34 | .. | 810 | .. | 710 | .. | 69.4 | 11 17 53.8 | .. | + 12.0 | 62 24 27.0 | — 0.4 | |
| 28 | 300 4 | 4.3 | 29.3 | 1.3 | 3.7 | 37 | 630 | 565 | .. | .. | .. | 69.4 | 59 52 35.8 | 38.4 | + 1 42.9 | 111 0 39.9 | .. | |
| 29 | 300 36 | 0.8 | 24.3 | 27.7 | 1.2 | 35 | .. | .. | .. | 972 | 976 | 69.4 | 59 20 8.5 | .. | + 1 40.7 | 110 28 10.4 | .. | |
| 30 | 318 8 | 5.6 | 2.6 | 3.3 | 7.5 | 37 | .. | 425 | .. | 222 | .. | 69.4 | 41 48 35.0 | 39.6 | + 53.3 | 92 55 49.5 | + 0.9 | |
| 31 | 359 42 | 4.3 | 0.6 | 2.4 | 3.6 | 32 | 900 | 928 | .. | 802 | 770 | 69.4 | 0 13 24.9 | .. | + 0.2 | 51 19 46.3 | + 0.4 | |
| 32 | 354 16 | 5.0 | 2.5 | 2.3 | 6.5 | 36 | .. | 100 | .. | 975 | .. | 69.4 | 5 40 14.9 | .. | + 5.9 | 56 46 42.0 | — 1.3 | |
| 33 | 334 44 | 3.6 | 28.6 | 29.1 | 5.0 | 36 | 341 | 326 | .. | 218 | 214 | 69.4 | 25 12 15.9 | 39.6 | + 28.1 | 76 19 5.2 | — 0.4 | |
| 34 | 308 34 | 5.8 | 2.0 | 1.0 | 9.5 | 29 | .. | 810 | .. | 780 | .. | 70.6 | 51 23 13.0 | .. | + 1 15.2 | 102 30 49.4 | .. | |
| 35 | 308 34 | 5.8 | 2.0 | 1.0 | 9.5 | 27 | 810 | .. | .. | .. | 570 | 70.6 | 51 22 56.0 | 35.2 | + 1 15.2 | 102 30 32.4 | .. | |
| 36 | 153 18 | 8.0 | 5.0 | 4.5 | 9.0 | 30 | 520 | 420 | .. | .. | .. | 70.6 | 206 39 23.4 | .. | + 30.2 | 24 26 27.6 | — 3.1 | |
| 37 | 26 34 | 5.0 | 29.8 | 1.5 | 6.7 | 29 | .. | .. | .. | 595 | 510 | 70.6 | 333 20 37.7 | .. | — 30.2 | 24 26 28.7 | — 2.0 | |
| 38 | 312 44 | 5.9 | 29.7 | 1.5 | 6.8 | 38 | 610 | .. | 410 | .. | 075 | 70.6 | 47 12 50.8 | .. | + 1 5.0 | 98 20 17.0 | .. | |
| 39 | 315 52 | 5.8 | 1.1 | 0.9 | 8.6 | 34 | 880 | 795 | .. | .. | .. | 70.6 | 44 1 22.9 | .. | + 58.2 | 95 8 42.3 | +20.5 | |
| 40 | 315 52 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 33.8 | .. | .. | .. | .. |
| 41 | 349 26 | 4.5 | 29.0 | 29.8 | 6.2 | 29 | 600 | 645 | .. | .. | .. | 70.6 | 10 28 35.3 | .. | + 11.2 | 61 35 7.7 | + 0.4 | |
| 42 | 335 32 | 6.0 | 1.0 | 1.1 | 6.0 | 31 | 460 | 500 | .. | 292 | 300 | 70.6 | 24 23 4.2 | .. | + 27.4 | 75 29 52.8 | 0.0 | |
| 43 | 302 24 | 6.6 | 0.0 | 1.1 | 7.2 | 34 | .. | 150 | .. | 080 | .. | 70.6 | 57 31 45.9 | 31.8 | + 1 34.9 | 108 39 42.0 | — 2.2 | |
| 44 | 358 52 | 4.8 | 28.8 | 0.0 | 4.7 | 33 | 055 | 130 | .. | .. | .. | 70.6 | 1 3 23.2 | .. | + 1.1 | 52 9 50.5 | +33.3 | |
| 45 | 291 4 | 5.7 | 0.0 | 1.8 | 7.5 | 36 | 800 | 770 | .. | .. | .. | 70.6 | 68 52 25.8 | .. | + 2 35.5 | 120 1 22.5 | +15.9 | |
| 46 | 288 52 | 5.7 | 0.0 | 1.8 | 8.1 | 33 | .. | .. | .. | 550 | 590 | 70.6 | 71 3 38.4 | .. | + 2 54.7 | 122 12 54.3 | +15.5 | |
| 47 | 49 40 | 9 29.5 | 22.5 | 24.0 | 25.9 | 32 | 930 | .. | 920 | .. | 980 | 70.6 | 310 15 20.1 | .. | — 1 11.4 | 1 20 29.9 | — 1.5 | |
| 48 | 204 6 | 10 7.0 | 2.9 | 3.0 | 4.8 | 33 | 645 | 680 | .. | .. | .. | 70.6 | 155 49 38.8 | .. | — 27.2 | 75 17 9.6 | + 0.3 | |
| 49 | 335 46 | 4.3 | 27.8 | 28.2 | 4.4 | 36 | .. | .. | .. | 415 | 472 | 70.6 | 24 10 20.2 | 31.2 | + 27.2 | 75 17 8.6 | — 0.7 | |
| 50 | 358 22 | 4.7 | 29.0 | 0.0 | 4.9 | 31 | .. | 210 | .. | 095 | .. | 70.6 | 1 32 59.3 | .. | + 1.6 | 52 39 22.1 | +31.8 | |
| 51 | 341 14 | 4.7 | 29.0 | 28.1 | 6.1 | 31 | 248 | 230 | .. | .. | .. | 70.6 | 18 40 44.2 | .. | + 20.5 | 69 47 25.9 | — 0.6 | |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " " | " " | " " | " " |
| 7 | 29.98 | 48.6 | 8 | - 0.1 | .. | .. | - 0.1 |
| 15 | 30.01 | 46.8 | 20 | - 5.6 | + 8.0 | - 0.5 | + 1.9 |
| 17 | 30.10 | 37.0 | 21 | - 5.6 | - 8.0 | .. | - 13.6 |
| 26 | 30.11 | 38.6 | 28 | - 7.8 | - 16 14.7 | .. | - 16 22.5 |
| 28 | 30.10 | 39.5 | 29 | - 7.7 | + 16 14.7 | .. | + 16 7.0 |
| 30 | 30.04 | 41.2 | 34 | - 0.8 | - 8.5 | .. | - 9.3 |
| 33 | 30.02 | 41.0 | 35 | - 0.8 | + 8.5 | .. | + 7.7 |
| 35 | 30.03 | 37.6 | 38 | -40 24.1 | - 15 5.5 | .. | - 55 29.6 |
| 40 | 30.02 | 36.5 | | | | | |
| 43 | 30.00 | 34.5 | | | | | |
| 49 | 30.00 | 34.0 | | | | | |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|------------------|---------|-------------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-----------|----------|------------|--------------|----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | |
| | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| 1876. Nov. 24 | 1 | α Arietis | S. | 38.2 | 40.9 | 42.6 | 49.2 | 51.5 | 53.6 | 0.4 | 2.0 | 4.7 | 0 51.46 | - 0.51 | -35.56 | -35.57 | 2 0 15.38 | 0.00 |
| | 2 | Thiabe | S. | 48.4 | 51.0 | 52.8 | 59.2 | 1.4 | 3.6 | 10.2 | 11.8 | 14.4 | 30 1.42 | - 0.57 | . | -35.57 | 2 29 25.28 | . |
| | 3 | ρ^2 Arietis | S. | 18.4 | 21.0 | 22.6 | 29.0 | 31.2 | 33.5 | 39.8 | 41.4 | 44.0 | 49 31.21 | - 0.63 | . | -35.57 | 2 48 55.01 | - 4.39 |
| | 4 | Feronia | S. | 57.5 | 0.0 | 1.5 | 7.8 | 9.9 | 12.4 | 18.5 | 20.0 | 22.3 | 3 9.99 | - 0.60 | . | -35.56 | 4 2 33.74 | . |
| | 5 | Niohe | S. | 37.3 | 41.7 | 44.3 | 54.5 | 57.9 | 1.1 | 11.2 | 13.4 | 17.6 | 9 57.67 | + 0.57 | . | -35.56 | 4 9 22.68 | . |
| | 6 | γ Camelopardalis (R.) | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 7 | γ Camelopardalis | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 8 | Vibilia | S. | 8.8 | 11.4 | 13.0 | 19.8 | 22.0 | 24.3 | 30.8 | 32.6 | 35.0 | 57 21.97 | - 0.54 | . | -35.55 | 4 56 45.88 | . |
| | 9 | β Orionis (R.) | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 10 | β Orionis | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 11 | δ Orionis | S. | 8.8 | 11.5 | 12.9 | 19.0 | 21.2 | 23.2 | 29.2 | 30.9 | 33.5 | 26 21.13 | - 1.04 | -35.53 | -35.55 | 5 25 44.54 | - 0.05 |
| | 12 | ϵ Orionis | S. | 23 8 26.4 | 28.0 | 33.9 | 36.0 | 38.1 | 44.2 | 45.9 | 48.4 | 30 36.08 | - 1.06 | -35.51 | -35.55 | 5 29 59.47 | - 0.05 | |
| | 13 | Polaris, S. P. | E. | . | . | . | . | . | 28.0 | . | 28.0 | 15.0 | 15 32.20 | -62.34 | . | -33.26 | 1 13 56.62 | - 0.36 |
| | 14 | ζ Virginis | E. | . | . | 54.9 | 57.0 | 59.0 | 1.0 | 3.0 | . | . | 28 53.99 | - 1.20 | -33.27 | -33.26 | 13 28 24.73 | + 0.21 |
| | 15 | η Ursæ Majoris (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 16 | η Ursæ Majoris | E. | 58.2 | 0.5 | 6.8 | 10.2 | 13.4 | 16.5 | 19.6 | 25 8 28.4 | 43 13.27 | + 0.52 | . | -33.26 | 13 42 40.53 | + 0.01 | |
| | 17 | η Bootis | E. | 9.6 | 12.3 | 13.9 | 20.5 | 22.7 | 24.7 | 31.2 | 32.5 | 35.5 | 49 22.58 | - 0.67 | -33.27 | -33.20 | 13 48 48.65 | - 0.04 |
| | 18 | α Bootis (R.) | E. | . | . | . | . | . | . | 44.4 | 46.1 | 48.0 | 10 35.81 | - 0.68 | -33.17 | -33.26 | 14 10 1.87 | - 0.09 |
| | 19 | α Bootis | E. | . | . | . | . | . | . | . | . | . | . | - 0.44 | -33.32 | -33.26 | 14 39 35.76 | + 0.04 |
| | 20 | ϵ Bootis | E. | 55.7 | 58.4 | 0.3 | 7.1 | 9.5 | 11.7 | 18.6 | 20.4 | 23.4 | 40 9.46 | . | . | . | . | . |
| | 21 | α Ceti (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 22 | α Ceti | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 23 | ζ Arietis | E. | 11.9 | 14.6 | 16.3 | 22.8 | 25.0 | 27.1 | 33.8 | 35.4 | 37.9 | 8 24.98 | - 0.47 | -33.44 | -33.26 | 3 7 51.25 | + 0.14 |
| 26 | 24 | α Persei | F. | 48.6 | 52.3 | 54.6 | 4.1 | 7.2 | 10.3 | 19.7 | 22.2 | 26.2 | 16 7.24 | + 0.57 | . | -33.40 | 3 15 34.41 | + 0.15 |
| | 25 | η Tauri | F. | 32.0 | 34.8 | 36.5 | 43.2 | 45.1 | 47.6 | 54.1 | 56.0 | 58.8 | 40 45.41 | - 0.38 | -33.38 | -33.39 | 3 40 11.64 | - 0.01 |
| | 26 | ζ Persei | F. | 44.7 | 47.6 | 49.4 | 56.5 | 59.0 | 1.3 | 8.6 | 10.3 | 13.4 | 46 58.08 | - 0.16 | -33.42 | -33.39 | 3 46 25.43 | + 0.02 |
| | 27 | γ^1 Eridani | F. | 41.0 | 43.6 | 45.2 | 51.5 | 53.6 | 55.7 | 1.8 | 3.4 | 6.0 | 52 53.53 | - 1.30 | -33.37 | -33.39 | 3 52 18.84 | + 0.02 |
| | 28 | α Tauri | F. | 14.2 | 16.6 | 18.5 | 24.8 | 26.9 | 29.0 | 35.3 | 37.0 | 39.8 | 29 26.93 | - 0.58 | -33.30 | -33.37 | 4 28 52.98 | - 0.09 |
| | 29 | γ Camelopardalis (R.) | F. | . | . | . | . | . | . | . | . | . | . | + 2.00 | . | -33.37 | 4 41 52.63 | + 0.09 |
| | 30 | γ Camelopardalis | F. | . | 13.8 | 18.8 | 24.1 | 29.2 | 34.2 | 44.0 | 48.0 | 51.2 | 42 24.00 | - 0.11 | -33.39 | -33.36 | 4 49 0.45 | - 0.01 |
| | 31 | ι Aurigæ | F. | . | . | . | . | . | . | 43.7 | 45.4 | 48.5 | 49 33.92 | -10.11 | . | -33.36 | 16 58 30.07 | + 0.49 |
| | 32 | ϵ Ursæ Minoris, S. P. | F. | . | 44.0 | 25.7 | 14.0 | 44.0 | 28.4 | . | . | . | 59 13.54 | - 0.25 | -33.40 | -33.36 | 5 18 32.37 | + 0.02 |
| | 33 | β Tauri | F. | 52.0 | 55.0 | 56.8 | 3.7 | 6.0 | 8.4 | 15.1 | 16.9 | 19.9 | 19 5.98 | . | . | . | . | . |
| 27 | 34 | ι Cephei (R.) | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 35 | ι Cephei | S. | . | . | . | 48.7 | 53.7 | 58.5 | 8.2 | 12.0 | 18.3 | 45 48.62 | + 1.75 | . | -33.08 | 22 45 17.29 | + 0.10 |
| | 36 | α Piscis Australis | S. | 12.3 | 15.2 | 17.0 | 24.0 | 26.3 | 28.8 | 35.9 | 37.7 | 40.6 | 51 26.42 | - 1.92 | -33.08 | -33.08 | 22 50 51.42 | + 0.04 |
| | 37 | α Pegasi | S. | 59.2 | 1.8 | 3.5 | 9.8 | 12.0 | 14.0 | 20.3 | 22.0 | 24.5 | 59 11.90 | - 0.79 | -33.07 | -33.07 | 22 58 38.04 | + 0.03 |
| | 38 | Anonymous | S. | 42.2 | 45.2 | 46.6 | 52.7 | 54.7 | 56.7 | 3.0 | 4.4 | 7.1 | 41 54.73 | - 1.25 | . | -33.07 | 23 41 20.41 | - 3.45 |
| | 39 | Weisse 848 | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 40 | α Andromedæ | S. | 21.6 | 24.0 | 26.3 | 33.2 | 35.7 | 38.0 | 44.8 | 46.6 | 49.5 | 2 35.59 | - 0.42 | -33.05 | -33.07 | 0 2 2.10 | 0.00 |
| | 41 | γ Pegasi | S. | 15.7 | 18.4 | 20.0 | 26.3 | 28.5 | 30.6 | 37.0 | 38.6 | 41.0 | 7 28.49 | - 0.79 | -33.15 | -33.07 | 0 6 54.60 | + 0.08 |
| | 42 | B. A. C. 69 | S. | 7.2 | 10.7 | 12.7 | 20.8 | 23.4 | 26.2 | 34.0 | 36.3 | 39.6 | 15 23.43 | - 2.26 | . | -33.07 | 0 14 48.10 | - 4.15 |
| | 43 | Lalande 512 | S. | 28.4 | 30.9 | 32.5 | 38.6 | 40.6 | 42.6 | 48.8 | 50.4 | 53.0 | 19 40.64 | - 1.10 | . | -33.07 | 0 19 6.47 | - 3.58 |
| | 44 | α Cassiopeiæ (R.) | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 45 | α Cassiopeiæ | S. | . | . | . | . | . | . | . | . | . | . | - 1.59 | -33.10 | -33.07 | 0 37 25.76 | + 0.08 |
| | 46 | β Ceti | S. | 47.6 | 50.2 | 51.9 | 58.2 | 0.4 | 2.6 | 9.0 | 10.6 | 13.3 | 38 0.42 | +54.33 | . | -33.07 | 1 13 55.32 | - 0.31 |
| | 47 | Polaris | S. | 52.0 | 39.5 | 46.5 | 32.5 | 10.0 | . | . | . | . | 13 31.06 | - 0.88 | . | -33.07 | 1 14 19.51 | +66.55 |
| | 48 | Moon I. S. | S. | 40.7 | 43.4 | 44.9 | 51.1 | 53.4 | 55.5 | 2.1 | 3.7 | 6.3 | 14 53.46 | . | . | . | . | . |
| | 49 | α Piscium (R.) | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |

2, 4, 5, 8, 10, 38, 39. Thread A used.

6, 24, 30, 47, 48. Bisections at sets B and D.

27. Telescope micrometer reading increased one revolution in reduction.

32. Bisections at set C.

34, 45. Thread B used.

39. Bisections at threads VII and VIII.

| Number. | Circle Division. | MICROSCOPE MICROMS | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom ^r . | Refraction. | Apparent North-Polar Distance. | Miscell ^{an} us Corrections. | | |
|---------|------------------|--------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------------------|-------------|--------------------------------|---------------------------------------|-------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | | °. | ′ | ″ | ″ | | | | | | | | | | | | | |
| 1 | 343 56 | 10 2.8 | 28.2 | 28.0 | 3.4 | 36 | 628 | 560 | .. | 452 | 418 | 70.6 | 16 0 19.8 | .. | + | 17.4 | 67 6 58.4 | — 1.7 |
| 2 | 342 0 | 9 29.0 | 23.8 | 24.5 | 0.0 | 37 | .. | 405 | .. | 205 | .. | 70.6 | 17 53 54.6 | .. | + | 19.6 | 69 0 35.4 | — 1.5 |
| 3 | 338 52 | 10 5.2 | 0.4 | 29.8 | 6.2 | 31 | .. | 530 | .. | 500 | .. | 70.6 | 21 3 5.5 | .. | + | 23.3 | 72 9 50.0 | +25.9 |
| 4 | 330 22 | 3.7 | 28.1 | 27.6 | 1.2 | 42 | .. | 190 | .. | 080 | .. | 70.6 | 23 33 11.9 | .. | + | 26.4 | 74 39 59.6 | — 2.6 |
| 5 | 13 36 | 5.5 | 0.7 | 1.4 | 5.5 | 41 | .. | 345 | .. | 130 | .. | 70.6 | 346 19 1.6 | 31.2 | — | 14.7 | 37 25 8.1 | + 0.9 |
| 6 | 152 42 | 4.0 | 28.8 | 1.4 | 4.5 | 34 | 465 | 445 | .. | .. | .. | 70.6 | 207 13 49.2 | .. | + | 31.2 | 23 52 0.8 | — 0.9 |
| 7 | 27 10 | 0.5 | 25.5 | 26.8 | 0.5 | 35 | .. | .. | .. | 965 | 780 | 70.6 | 332 46 9.6 | .. | — | 31.2 | 23 51 59.6 | — 2.1 |
| 8 | 342 44 | 3.7 | 28.8 | 28.3 | 4.5 | 46 | .. | 725 | .. | 460 | .. | 70.6 | 17 12 21.3 | .. | + | 18.8 | 68 19 1.3 | — 2.0 |
| 9 | 227 10 | 4.2 | 28.5 | 1.3 | 1.0 | 38 | 870 | 855 | .. | .. | .. | 70.6 | 132 46 56.2 | .. | — I | 5.4 | 98 20 30.4 | + 0.1 |
| 10 | 312 42 | 4.2 | 28.5 | 29.0 | 6.4 | 41 | .. | .. | .. | 345 | 330 | 70.6 | 47 13 2.4 | 30.6 | + I | 5.4 | 98 20 29.0 | — 1.3 |
| 11 | 320 40 | 0.8 | 24.7 | 25.1 | 2.3 | 35 | .. | 780 | .. | 750 | .. | 70.6 | 39 16 5.8 | .. | + | 49.5 | 90 23 16.5 | — 2.2 |
| 12 | 319 46 | 4.4 | 28.1 | 29.1 | 4.8 | 33 | .. | 090 | .. | 012 | .. | 70.6 | 40 9 27.6 | 31.0 | + | 51.1 | 91 16 39.9 | — 3.2 |
| 13 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 14 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 15 | 168 54 | 4.0 | 0.8 | 2.4 | 2.7 | 33 | 980 | 965 | .. | .. | .. | 69.1 | 191 1 39.8 | 34.5 | + | 11.7 | 40 4 29.7 | — 1.1 |
| 16 | 10 58 | 6.0 | 1.0 | 1.5 | 6.5 | 36 | .. | .. | .. | 420 | 285 | 69.1 | 348 58 20.3 | .. | — | 11.7 | 40 4 29.8 | — 1.0 |
| 17 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 18 | 199 0 | 6.7 | 2.7 | 3.5 | 3.7 | 35 | 510 | 565 | .. | .. | .. | 69.1 | 160 56 5.7 | .. | — | 20.7 | 70 10 36.2 | — 1.6 |
| 19 | 340 52 | 4.2 | 0.6 | 28.8 | 4.1 | 34 | .. | .. | .. | 850 | 830 | 69.1 | 19 3 54.9 | .. | + | 20.7 | 70 10 36.8 | — 1.0 |
| 20 | 348 38 | 6.2 | 2.0 | 1.5 | 5.5 | 34 | .. | 735 | .. | 640 | .. | 69.1 | 11 17 53.5 | .. | + | 12.0 | 62 24 26.7 | — 1.0 |
| 21 | 215 12 | 14.6 | 9.2 | 8.9 | 12.5 | 32 | 950 | 898 | .. | .. | .. | 71.1 | 144 43 34.9 | .. | — | 42.2 | 86 23 28.5 | — 0.5 |
| 22 | 324 40 | 4.9 | 26.6 | 26.0 | 4.6 | 36 | .. | .. | .. | 810 | 764 | 71.1 | 35 16 25.1 | 32.8 | + | 42.2 | 86 23 28.5 | — 0.5 |
| 23 | 341 38 | 7.7 | 0.7 | 29.2 | 9.2 | 34 | .. | 352 | .. | 294 | .. | 71.1 | 18 17 50.3 | .. | + | 19.8 | 69 24 31.3 | — 1.8 |
| 24 | 10 28 | 7.6 | 1.8 | 3.5 | 11.2 | 35 | .. | .. | .. | 946 | 924 | 71.1 | 349 28 17.0 | 32.0 | — | 11.1 | 40 31 27.1 | — 2.6 |
| 25 | 344 46 | 1.5 | 25.1 | 23.7 | 1.9 | 31 | .. | .. | .. | 300 | 290 | 71.1 | 15 9 44.7 | .. | + | 16.2 | 66 16 22.1 | — 2.6 |
| 26 | 352 34 | 9.2 | 1.2 | 1.0 | 8.0 | 36 | .. | 110 | .. | 996 | .. | 71.1 | 7 22 17.5 | .. | + | 7.7 | 58 28 16.4 | — 2.1 |
| 27 | 307 12 | 7.7 | 2.1 | 2.7 | 9.9 | 32 | 924 | 874 | .. | .. | .. | 71.1 | 52 43 44.0 | .. | + I | 18.5 | 103 51 23.7 | — 0.5 |
| 28 | 337 18 | 6.9 | 27.9 | 28.2 | 0.1 | 32 | .. | 900 | .. | 736 | .. | 71.1 | 22 37 25.0 | .. | + | 25.0 | 73 44 11.2 | + 0.3 |
| 29 | 152 42 | 3.1 | 27.6 | 29.8 | 5.5 | 34 | 650 | 600 | .. | .. | .. | 71.1 | 207 13 50.0 | .. | + | 30.8 | 23 52 0.4 | — 0.8 |
| 30 | 27 10 | 2.8 | 27.1 | 28.2 | 2.7 | 35 | .. | .. | .. | 790 | 770 | 71.1 | 332 46 8.9 | .. | — | 30.8 | 23 51 59.3 | — 1.9 |
| 31 | 351 0 | 9 28.6 | 20.9 | 22.6 | 27.9 | 32 | .. | .. | .. | 396 | 332 | 71.1 | 5 55 12.2 | .. | + | 6.2 | 57 1 39.6 | — 0.3 |
| 32 | 58 46 | 10 4.1 | 28.5 | 28.2 | 5.6 | 32 | .. | 760 | 670 | 680 | .. | 71.1 | 301 9 22.7 | .. | — I | 38.8 | 352 11 5.1 | — 2.1 |
| 33 | 349 32 | 6.1 | 28.0 | 28.5 | 7.6 | 31 | .. | 972 | .. | 940 | .. | 71.1 | 10 23 12.4 | 31.0 | + | 11.0 | 61 29 44.6 | — 0.6 |
| 34 | 153 18 | 7.0 | 3.0 | 2.2 | 7.2 | 30 | 550 | 4.0 | .. | .. | .. | 72.2 | 206 39 23.3 | .. | + | 29.9 | 24 26 28.0 | — 2.5 |
| 35 | 26 31 | 2.6 | 27.6 | 0.6 | 4.8 | 29 | .. | .. | .. | 580 | 400 | 72.2 | 333 20 36.5 | .. | — | 29.9 | 21 26 27.8 | — 2.7 |
| 36 | 290 42 | 7.0 | 2.9 | 3.5 | 9.3 | 33 | .. | 490 | .. | 360 | .. | 72.2 | 69 7 38.8 | .. | + | 35.1 | 120 16 35.1 | + 0.5 |
| 37 | 335 36 | 5.8 | 0.0 | 1.0 | 5.6 | 36 | .. | 845 | .. | 730 | .. | 72.2 | 24 20 28.0 | 32.8 | + | 27.0 | 75 27 16.2 | + 0.5 |
| 38 | 315 52 | 4.5 | 29.0 | 29.4 | 6.0 | 34 | .. | 930 | .. | 830 | .. | 72.2 | 44 1 24.3 | .. | + | 57.6 | 95 8 43.1 | +20.3 |
| 39 | 315 52 | 4.5 | 29.0 | 29.4 | 6.0 | 28 | .. | .. | .. | 610 | 575 | 72.2 | 43 59 49.3 | .. | + | 57.5 | 95 7 8.0 | +20.3 |
| 40 | 349 26 | 6.1 | 0.0 | 1.0 | 6.4 | 29 | .. | 390 | .. | 315 | .. | 72.2 | 10 28 34.5 | .. | + | 11.0 | 61 35 6.7 | — 0.5 |
| 41 | 335 32 | 4.4 | 28.6 | 28.6 | 1.6 | 31 | .. | 550 | .. | 415 | .. | 72.2 | 24 23 4.4 | 33.3 | + | 27.0 | 75 29 52.6 | — 0.2 |
| 42 | 281 12 | 6.3 | 2.0 | 5.0 | 8.5 | 36 | .. | .. | .. | 650 | 940 | 72.2 | 78 41 15.5 | .. | + 4 | 51.5 | 129 55 28.2 | +10.8 |
| 43 | 322 18 | 6.5 | 2.1 | 1.2 | 6.6 | 32 | .. | .. | .. | 105 | 020 | 72.2 | 37 37 17.4 | .. | + | 46.0 | 88 44 24.6 | +23.8 |
| 44 | 162 58 | 4.3 | 0.6 | 2.1 | 4.8 | 35 | 590 | 570 | .. | .. | .. | 72.2 | 196 58 7.6 | .. | + | 18.2 | 34 7 55.4 | — 3.0 |
| 45 | 16 54 | 2.8 | 27.9 | 0.1 | 3.5 | 34 | .. | .. | .. | 645 | 610 | 72.2 | 343 1 54.4 | .. | — | 18.2 | 34 7 57.4 | — 1.0 |
| 46 | 302 24 | 4.0 | 27.5 | 0.0 | 4.6 | 34 | .. | 535 | .. | 450 | .. | 72.2 | 57 31 51.0 | .. | + I | 33.5 | 108 39 45.7 | + 1.1 |
| 47 | 49 40 | 1.1 | 25.0 | 25.9 | 7.6 | 32 | 380 | 460 | .. | .. | .. | 72.2 | 310 15 20.5 | .. | — I | 10.4 | 1 20 31.3 | + 0.7 |
| 48 | 331 28 | 5.3 | 29.7 | 29.8 | 5.5 | 30 | 995 | .. | 690 | .. | 470 | 72.2 | 28 29 26.8 | .. | + | 32.4 | 79 36 20.4 | .. |
| 49 | 210 18 | 8.5 | 7.5 | 7.0 | 8.0 | 40 | 035 | 095 | .. | .. | .. | 72.2 | 149 39 21.7 | .. | — | 35.0 | 81 27 34.5 | — 0.3 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|----------|
| 5 | 29.97 | 34.5 | 48 | - 27 21.6 | - 15 46.1 | .. | - 43 7.7 |
| 10 | 29.95 | 33.5 | | | | | |
| 12 | 29.96 | 33.2 | | | | | |
| 15 | 29.88 | 36.5 | | | | | |
| 22 | 29.67 | 35.8 | | | | | |
| 24 | 29.67 | 35.4 | | | | | |
| 33 | 29.68 | 34.0 | | | | | |
| 37 | 29.60 | 34.8 | | | | | |
| 41 | 29.64 | 35.4 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. | |
|---------|---------|--------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|-------|------------|--------------|----------------|----------------|---------------------------|--------|----|----------------------------|----|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | | | | |
| | | | | | | | | | | | | | | | | | s. | s. | s. | | h. |
| 1876. | | | | | | | | | | | | | m. | s. | | | | | | | |
| Nov. 27 | 1 | <i>a</i> Piscium | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 2 | <i>a</i> Arietis (R) . . . | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 3 | <i>a</i> Arietis | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 4 | Neptune | S. | 14.4 | 16.9 | 18.6 | 24.8 | 26.0 | 29.0 | 35.0 | 36.8 | 39.5 | 6 26.88 | - 0.88 | . | -33.07 | 2 5 52.93 | . | . | . | |
| | 5 | Thisbe | S. | . | . | 56.5 | 58.5 | 0.6 | 2.8 | 5.0 | . | . | 28 0.69 | - 0.63 | . | -33.07 | 2 27 26.99 | . | . | . | |
| | 6 | ρ^3 Arietis | S. | 51.7 | 54.3 | 56.0 | 0.3 | 2.3 | 4.5 | 6.7 | 8.8 | . | 50 4.53 | - 0.71 | . | -33.07 | 2 49 30.75 | - 4.40 | . | . | |
| | 7 | B. A. C. 937 . . . | S. | 56.9 | 0.4 | 2.3 | . | . | . | 23.8 | 25.9 | 29.3 | 54 13.10 | - 2.29 | . | -33.07 | 2 53 37.74 | - 1.19 | . | . | |
| | 8 | B. A. C. 935 . . . | S. | . | . | 8.6 | 11.2 | 13.9 | 16.7 | 19.2 | . | . | 54 13.93 | - 2.29 | . | -33.07 | 2 53 38.57 | - 4.19 | . | . | |
| | 9 | Valleda | S. | 50.2 | 52.6 | 54.1 | 1.2 | 3.4 | 5.7 | 12.3 | 14.0 | 17.0 | 0 3.39 | - 0.54 | . | -33.07 | 3 59 29.78 | . | . | . | |
| | 10 | Niobe | S. | 30.7 | 35.3 | 37.9 | 48.8 | 51.7 | 54.7 | 5.0 | 7.2 | 11.7 | 5 51.41 | + 0.58 | . | -33.07 | 4 5 18.95 | . | . | . | |
| | 11 | ϵ Tauri | S. | 48.0 | 50.9 | 52.4 | 59.0 | 1.0 | 3.2 | 9.7 | 11.2 | 14.0 | 22 1.04 | - 0.68 | -33.00 | -33.07 | 4 21 27.29 | - 0.08 | . | . | |
| | 12 | <i>a</i> Tauri | S. | 14.2 | 16.9 | 18.4 | 24.7 | 26.9 | 28.9 | 35.3 | 37.0 | 39.7 | 29 26.89 | - 0.75 | -33.08 | -33.07 | 4 28 53.07 | - 0.01 | . | . | |
| | 13 | <i>t</i> Aurigæ | S. | 19.2 | 22.4 | 24.2 | 31.4 | 33.8 | 36.3 | 43.6 | 45.4 | 48.3 | 49 33.81 | - 0.28 | -33.12 | -33.07 | 4 49 0.49 | + 0.01 | . | . | |
| | 14 | Vibilia | S. | . | . | . | . | . | . | 19.5 | 21.0 | 23.9 | 54 10.60 | - 0.60 | . | -33.07 | 4 53 36.99 | . | . | . | |
| 28 | 15 | Polaris | P. | . | . | . | 9.0 | 38.0 | 4.0 | . | . | . | 13 36.93 | +53.08 | . | -33.31 | 1 13 56.70 | + 1.55 | . | . | |
| | 16 | η Piscium | P. | 16.4 | 19.0 | 20.6 | 26.9 | 29.0 | 31.1 | 37.5 | 39.0 | 41.7 | 25 29.02 | - 0.75 | -33.35 | -33.31 | 1 24 54.56 | - 0.29 | . | . | |
| | 17 | <i>a</i> Piscium (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 18 | <i>a</i> Piscium | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 19 | β Arietis | P. | 12.4 | 15.1 | 16.7 | 23.4 | 25.5 | 27.7 | 34.2 | 35.9 | 38.6 | 48 25.50 | - 0.61 | -33.23 | -33.31 | 1 47 51.58 | - 0.08 | . | . | |
| | 20 | 50 Cassiopeæ (R.) . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 21 | 50 Cassiopeæ . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 22 | <i>a</i> Arietis | P. | 35.9 | 38.7 | 40.4 | 47.0 | 49.4 | 51.5 | 58.2 | 59.8 | 2.6 | 0 49.28 | - 0.54 | -33.35 | -33.31 | 2 0 15.43 | + 0.05 | . | . | |
| | 23 | Neptune | P. | 9.5 | 12.0 | 13.6 | 20.0 | 22.0 | 24.0 | 30.4 | 31.9 | 34.4 | 6 21.98 | - 0.84 | . | -33.31 | 2 5 47.83 | . | . | . | |
| | 24 | Moon I, S. . . . | P. | 46.2 | 49.0 | 50.6 | 57.0 | 59.4 | 1.4 | 8.0 | 9.6 | 12.3 | 7 59.28 | - 0.70 | . | -33.31 | 2 7 25.27 | +69.61 | . | . | |
| | 25 | Latande 4803 . . . | P. | 43.3 | 45.8 | 47.4 | 53.5 | 55.6 | 57.6 | 3.8 | 5.3 | 8.0 | 29 55.59 | - 0.94 | . | -33.31 | 2 29 21.34 | - 4.19 | . | . | |
| | 26 | γ^1 Ceti | P. | 18.8 | 21.3 | 22.9 | . | . | . | 39.2 | 40.7 | 43.3 | 37 31.03 | - 1.02 | . | -33.31 | 2 36 56.70 | - 4.19 | . | . | |
| | 27 | γ^2 Ceti | P. | . | . | 27.0 | 29.2 | 31.2 | 33.2 | 35.2 | . | . | 37 31.17 | - 1.02 | -33.37 | -33.31 | 2 36 56.84 | + 0.06 | . | . | |
| | 28 | β Ursæ Minoris, S. P. | P. | 27.0 | 17.3 | 11.5 | 48.5 | 49.7 | 32.9 | 9.8 | 3.9 | 54.6 | 51 40.69 | - 5.68 | . | -33.31 | 14 51 1.70 | - 0.16 | . | . | |
| | 29 | <i>a</i> Ceti | P. | 14.0 | 16.7 | 18 3 | 24.4 | 26.5 | 28.7 | 34.8 | 36.0 | 438.7 | 56 26.50 | - 1.00 | -33.31 | -33.31 | 2 55 52.19 | + 0.02 | . | . | |
| | 30 | 48 Cephei | P. | 23.4 | 31.9 | 42.2 | 10.3 | 19.7 | 28.7 | 56.5 | 3.5 | 14.7 | 5 19.32 | + 4.56 | . | -33.31 | 3 4 50.57 | + 0.16 | . | . | |
| | 31 | <i>a</i> Persei (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 32 | <i>a</i> Persei | P. | . | . | . | . | . | . | 19.6 | 22.0 | 26.0 | 16 7.11 | + 0.41 | . | -33.31 | 3 15 34.21 | - 0.06 | . | . | |
| | 33 | γ^2 Ursæ Minoris, S. P. | P. | 11.8 | 3.4 | 58.3 | 38.0 | 30.7 | 24.3 | 4.0 | 59.0 | 51.0 | 21 31.17 | - 5.01 | . | -33.31 | 15 20 52.85 | - 0.32 | . | . | |
| | 34 | B. A. C. 1100 . . . | P. | 31.5 | 34.2 | 35.8 | 42.0 | 44.0 | 46.2 | 52.3 | 53.9 | 56.6 | 27 41.06 | - 1.31 | . | -33.31 | 3 27 9.44 | - 4.19 | . | . | |
| | 35 | δ Persei (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 36 | δ Persei | P. | . | . | . | . | . | . | 57.0 | 59.2 | 3.0 | 34 44.90 | + 0.31 | . | - 33.30 | 3 34 11.91 | + 0.21 | . | . | |
| | 37 | ζ Persei (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 38 | ζ Persei | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 39 | γ^1 Eridani | P. | 40.9 | 43.6 | 45.0 | 51.5 | 53.6 | 55.8 | 2.0 | 3.7 | 6.4 | 52 53.61 | - 1.40 | -33.34 | -33.30 | 3 52 18.91 | + 0.08 | . | . | |
| | 40 | γ Tauri (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 41 | γ Tauri | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 42 | B. A. C. 1378 . . . | P. | 48.0 | 50.8 | 52.2 | 58.7 | 0.8 | 2.8 | 9.2 | 10.7 | 13.3 | 22 0 72 | - 0.75 | . | -33.30 | 4 21 26.67 | - 4.63 | . | . | |
| | 43 | B. A. C. 1464 . . . | P. | 4.4 | 7.6 | 9.5 | 17.2 | 19.7 | 22.3 | 30.2 | 31.9 | 35.1 | 38 19.77 | - 2.05 | . | -33.30 | 4 37 44.39 | - 3.91 | . | . | |
| | 44 | B. A. C. 1488 . . . | P. | 24.3 | 27.2 | 29.0 | 36.3 | 38.6 | 40.8 | 48.0 | 49.7 | 52.8 | 43 38.52 | - 1.84 | . | -33.30 | 4 43 3.38 | - 3.95 | . | . | |
| | 45 | ϵ Ursæ Minoris, S. P. | P. | 43.6 | 24.5 | 14.2 | . | . | . | . | . | . | 59 13.14 | -10.35 | . | -33 30 | 16 58 29.49 | + 0.02 | . | . | |
| | 46 | β Orionis | P. | . | . | 9.3 | 11.4 | 13.5 | 15.6 | 17.7 | . | . | 9 13.51 | - 1.27 | -33.32 | -33.29 | 5 8 38.95 | + 0.03 | . | . | |
| | 47 | β Tauri | P. | 52.0 | 54.9 | 56.8 | 3.7 | 6.0 | 8.4 | 15.4 | 17.0 | 19.8 | 19 6.00 | - 0.38 | -33.24 | -33.29 | 5 18 32.33 | - 0.07 | . | . | |
| | 48 | δ Orionis | P. | 6.9 | 9.4 | 11.0 | 17.0 | 19.0 | 21.1 | 27 3 | 28.8 | 31.3 | 26 19.09 | - 1.10 | -33.36 | -33.29 | 5 25 44.76 | + 0.04 | . | . | |
| | 49 | ϵ Orionis (R) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 50 | ϵ Orionis | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |

1, 3. Both bisections near thread VII.
 5, 9, 10, 25. Thread A used.
 20, 21, 24, 28, 30, 33, 44, 45. Bisections at sets B and D.
 24. Thread B used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith-Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | |
| | | 1. | " | " | " | | | | | | | " | ° ' " | ° | ' " | ° ' " | " |
| 1 | 329 36 | 10 4.0 | 28.9 | 29.1 | 3.5 | 37 | .. | .. | .. | 380 | 405 | 72.2 | 30 20 36.6 | 32.6 | + | 35.0 | 81 27 32.8 |
| 2 | 195 56 | 7.4 | 3.8 | 3.0 | 5.2 | 33 | 360 | 485 | .. | .. | .. | 72.2 | 163 59 37.0 | .. | - | 17.1 | 67 7 1.3 |
| 3 | 343 56 | 2.7 | 28.6 | 29.1 | 4.2 | 36 | .. | .. | .. | 320 | 360 | 72.2 | 16 0 20.4 | .. | + | 17.1 | 67 6 58.7 |
| 4 | 331 52 | 3.1 | 26.9 | 27.6 | 2.1 | 31 | 985 | .. | .. | .. | 905 | 72.2 | 28 3 20.7 | .. | + | 31.8 | 79 10 13.7 |
| 5 | 341 44 | 2.5 | 26.9 | 27.2 | 2.6 | 39 | .. | 690 | .. | 600 | .. | 72.2 | 18 10 35.0 | .. | + | 19.6 | 69 17 15.8 |
| 6 | 338 34 | 2.5 | 26.9 | 26.9 | 2.8 | 32 | 015 | 980 | .. | .. | .. | 72.2 | 21 21 10.5 | .. | + | 23.3 | 72 27 55.0 |
| 7 | 280 20 | 1.5 | 26.4 | 29.6 | 3.9 | 36 | 375 | 360 | .. | .. | .. | 72.2 | 79 36 17.4 | .. | + | 5 15.2 | 130 47 53.8 |
| 8 | 280 20 | 1.5 | 26.4 | 29.6 | 3.9 | 36 | .. | .. | .. | 110 | 180 | 72.2 | 79 36 15.7 | 33.8 | + | 5 15.2 | 130 47 52.1 |
| 9 | 344 58 | 4.6 | 0.1 | 1.0 | 5.7 | 37 | 570 | 550 | .. | .. | .. | 72.2 | 14 56 5.2 | .. | + | 15.9 | 66 2 42.3 |
| 10 | 13 24 | 4.4 | 29.8 | 0.4 | 3.2 | 37 | 770 | 675 | .. | .. | .. | 72.2 | 346 29 51.9 | .. | - | 14.3 | 37 35 58.8 |
| 11 | 339 56 | 5.3 | 0.9 | 29.8 | 5.8 | 29 | .. | .. | .. | 940 | 950 | 72.2 | 19 58 44.0 | .. | + | 21.6 | 71 5 26.8 |
| 12 | 337 18 | 6.4 | 2.9 | 3.0 | 6.3 | 32 | .. | .. | .. | 495 | 415 | 72.2 | 22 37 24.1 | 36.0 | + | 24.8 | 73 44 10.1 |
| 13 | 354 0 | 1.1 | 25.4 | 26.2 | 0.0 | 32 | 200 | 180 | .. | .. | .. | 72.2 | 5 55 12.0 | .. | + | 6.2 | 57 1 39.4 |
| 14 | 342 48 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 36.0 | .. | .. | .. |
| 15 | 49 40 | 4.0 | 27.9 | 28.1 | 0.1 | 32 | .. | 450 | 510 | 485 | .. | 71.4 | 310 15 18.3 | 36.5 | - | 1 10.5 | 1 20 29.0 |
| 16 | 335 46 | 8.1 | 3.4 | 2.3 | 7.5 | 36 | .. | 345 | .. | 275 | .. | 71.4 | 24 10 22.1 | .. | + | 26.8 | 75 17 10.1 |
| 17 | 210 18 | 6.4 | 4.5 | 3.5 | 4.5 | 40 | 265 | 235 | .. | .. | .. | 71.4 | 149 39 20.8 | .. | - | 35.0 | 81 27 35.4 |
| 18 | 329 36 | 5.5 | 0.5 | 0.1 | 3.9 | 37 | .. | .. | .. | 420 | 385 | 71.4 | 30 20 36.9 | .. | + | 35.0 | 81 27 33.1 |
| 19 | 341 14 | 3.1 | 28.7 | 26.7 | 4.5 | 30 | .. | 370 | .. | 230 | .. | 71.4 | 18 40 45.5 | .. | + | 20.3 | 69 47 27.0 |
| 20 | 147 0 | 4.6 | 3.1 | 2.5 | 6.4 | 32 | 980 | 910 | .. | .. | .. | 71.4 | 212 55 28.8 | .. | + | 38.8 | 18 10 13.6 |
| 21 | 32 50 | 3.5 | 28.0 | 27.8 | 3.5 | 29 | .. | .. | .. | 250 | 280 | 71.4 | 327 4 30.0 | 35.4 | - | 38.8 | 18 10 12.4 |
| 22 | 343 56 | 7.7 | 3.0 | 1.7 | 6.7 | 36 | .. | 370 | .. | 210 | .. | 71.4 | 16 0 21 3 | .. | + | 17.2 | 67 6 59.7 |
| 23 | 331 52 | 4.5 | 29.6 | 28.5 | 4.1 | 34 | .. | 675 | .. | 560 | .. | 71.4 | 28 3 52.5 | .. | + | 32.0 | 79 10 45.7 |
| 24 | 337 30 | 5.3 | 0.1 | 28.4 | 4.3 | 34 | 445 | .. | 240 | .. | 010 | 71.4 | 22 28 19.3 | .. | + | 24.8 | 73 35 5.3 |
| 25 | 327 20 | 6.0 | 0.8 | 29.9 | 5.8 | 40 | .. | 845 | .. | 765 | .. | 71.4 | 32 34 55.2 | .. | + | 38.3 | 83 41 54.7 |
| 26 | 323 46 | 8.8 | 4.7 | 3.1 | 11.1 | 33 | 870 | .. | .. | .. | 725 | 71.4 | 36 9 45.2 | .. | + | 43.9 | 87 16 50.3 |
| 27 | 323 46 | 8.8 | 4.7 | 3.1 | 11.1 | 33 | .. | 930 | .. | 855 | .. | 71.4 | 36 9 46.6 | .. | + | 43.0 | 87 16 51.7 |
| 28 | 66 20 | 3.8 | 27.6 | 27.6 | 1.8 | 32 | 075 | .. | .. | .. | 060 | 71.4 | 293 35 11.6 | .. | - | 2 16.8 | 344 39 16.0 |
| 29 | 324 40 | 5.7 | 0.3 | 29.4 | 6.9 | 36 | .. | 670 | .. | 590 | .. | 71.4 | 35 16 24.7 | 34.4 | + | 42.5 | 86 23 28.4 |
| 30 | 38 18 | 7.0 | 0.2 | 1.0 | 5.1 | 32 | 720 | .. | .. | .. | 650 | 71.4 | 321 37 24.9 | .. | - | 47.6 | 12 42 58.5 |
| 31 | 169 24 | 6.8 | 4.5 | 4.1 | 6.6 | 33 | 865 | 805 | .. | .. | .. | 71.4 | 190 31 42.8 | .. | + | 11.2 | 40 34 27.2 |
| 32 | 10 28 | 7.5 | 2.9 | 3.5 | 8.0 | 35 | .. | .. | .. | 915 | 900 | 71.4 | 349 28 17.5 | .. | - | 11.2 | 40 34 27.5 |
| 33 | 68 41 | 5.7 | 0.4 | 29.2 | 1.9 | 36 | 460 | .. | .. | .. | 370 | 71.4 | 2 1 12 19.8 | .. | - | 2 34.0 | 342 16 7.0 |
| 34 | 311 10 | 6.1 | 2.0 | 2.0 | 9.5 | 30 | .. | 655 | .. | 515 | .. | 71.4 | 48 44 53.9 | .. | + | 1 8.5 | 99 52 23.6 |
| 35 | 171 26 | 6.6 | 4.9 | 3.7 | 6.5 | 34 | 880 | 825 | .. | .. | .. | 71.4 | 188 29 58.3 | .. | + | 9.0 | 42 36 13.9 |
| 36 | 8 26 | 9.1 | 4.7 | 4.9 | 8.0 | 34 | .. | .. | .. | 805 | 790 | 71.4 | 351 30 1.7 | .. | - | 9.0 | 42 36 13.9 |
| 37 | 187 18 | 11.1 | 9.5 | 8.2 | 10.0 | 33 | 520 | 430 | .. | .. | .. | 71.4 | 172 37 41.8 | .. | + | 7.8 | 58 28 47.2 |
| 38 | 352 34 | 6.8 | 2.2 | 2.0 | 6.0 | 36 | .. | .. | .. | 090 | 910 | 71.4 | 7 22 17.4 | .. | + | 7.8 | 58 28 46.4 |
| 39 | 307 12 | 6.7 | 3.2 | 2.0 | 7.9 | 33 | .. | 920 | .. | 820 | .. | 71.4 | 52 43 44.2 | 32.9 | + | 1 19.1 | 103 51 24.5 |
| 40 | 203 30 | 9.5 | 5.5 | 4.8 | 6.6 | 37 | 730 | .. | .. | .. | .. | 71.4 | 156 26 43.8 | .. | - | 26.3 | 74 40 3.7 |
| 41 | 336 22 | 6.5 | 1.7 | 0.7 | 4.9 | 32 | .. | .. | .. | .. | 010 | 71.4 | 23 33 15.6 | .. | + | 26.3 | 74 40 3.1 |
| 42 | 335 30 | 5.0 | 1.0 | 29.2 | 5.8 | 31 | .. | 460 | .. | 315 | .. | 71.4 | 24 25 4.2 | .. | + | 27.4 | 75 31 52.8 |
| 43 | 283 42 | 4.6 | 0.0 | 1.0 | 7.2 | 29 | .. | 530 | .. | 360 | .. | 71.4 | 76 12 34.5 | .. | + | 4 17.4 | 127 22 57.4 |
| 44 | 290 50 | 3.8 | 29.3 | 0.3 | 4.5 | 32 | .. | .. | .. | 710 | 645 | 71.4 | 69 5 23.3 | .. | + | 2 37.0 | 120 14 21.5 |
| 45 | 58 46 | 5.0 | 1.5 | 1.4 | 3.5 | 32 | .. | .. | .. | 795 | 790 | 71.4 | 301 9 24.9 | 31.1 | - | 1 39.8 | 352 14 6.3 |
| 46 | 312 42 | 5.5 | 1.3 | 1.2 | 7.0 | 31 | .. | 380 | .. | 220 | .. | 71.4 | 47 13 3.7 | .. | + | 1 5.3 | 98 20 30.2 |
| 47 | 349 32 | 5.4 | 29.5 | 0.1 | 4.5 | 32 | .. | 030 | .. | 855 | .. | 71.4 | 10 23 12.4 | .. | + | 11.1 | 61 29 44.7 |
| 48 | 320 40 | 3.8 | 28.5 | 29.0 | 5.5 | 35 | .. | 675 | .. | 560 | .. | 71.4 | 39 16 7.8 | .. | + | 49.5 | 90 23 18.5 |
| 49 | 220 6 | 8.1 | 4.4 | 4.8 | 4.8 | 36 | .. | 750 | .. | .. | .. | 71.4 | 139 50 28.2 | .. | - | 51.0 | 91 16 44.0 |
| 50 | 319 46 | 7.5 | 2.5 | 2.0 | 7.4 | 33 | .. | .. | .. | 005 | .. | 71.4 | 40 9 31.6 | .. | + | 51.0 | 91 16 43.8 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | ' " | ' " | ' " | ' " |
| 1 | 29.67 | 35.0 | 4 | 0.1 | .. | .. | 0.1 |
| 8 | 29.70 | 35.4 | 23 | 0.1 | .. | .. | 0.1 |
| 12 | 29.75 | 36.4 | 24 | -22 14.0 | - 16 1.3 | .. | - 38 15.2 |
| 14 | 29.79 | 36.8 | | | | | |
| 15 | 29.92 | 37.8 | | | | | |
| 21 | 29.93 | 37.5 | | | | | |
| 29 | 29.93 | 36.8 | | | | | |
| 39 | 29.95 | 35.1 | | | | | |
| 45 | 29.94 | 33.7 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|---------|---------|------------------------------|-----------|--------------------------------|----------|---------|----------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | |
| 1876. | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| Nov. 28 | 1 | ω Draconis, S. P. | P. | 48.341.3 | 37.320.0 | 14.7 | 9.252.0 | 47.4 | 40.5 | | | | 38 14.56 | - 4.32 | . | -33.29 | 17 37 36.95 | - 0.02 |
| | 2 | ψ^1 Draconis, S. P. | P. | . | 55.448.6 | 41.7 | 35.428.2 | . | . | . | . | . | 44 41.82 | - 5.00 | . | -33.29 | 17 44 3.53 | - 0.12 |
| | 3 | ψ^2 Draconis, S. P. | P. | . | 57.050.4 | 43.5 | 37.330.2 | . | . | . | . | . | 44 43.64 | - 5.00 | . | -33.29 | 5 44 5.35 | + 5.16 |
| | 4 | δ Ursæ Minoris S. P. | P. | . | 45.6 | 9.931.6 | 2.127.5 | . | . | . | . | . | 12 35.76 | -22.45 | . | -33.29 | 18 11 40.02 | + 0.32 |
| | 5 | B. A. C. 2077 | P. | 52.055.2 | 57.1 | 4.8 | 7.3 | 9.9 | 17.7 | 19.4 | 22.8 | | 20 7.36 | - 2.07 | . | -33.29 | 6 19 32.00 | - 3.50 |
| | 6 | B. A. C. 2109 | P. | 58.6 | 1.6 | 3.5 | 10.7 | 13.0 | 15.6 | 23.0 | 24.7 | 27.7 | 24 13.16 | - 1.92 | . | -33.29 | 6 23 37.95 | - 3.56 |
| | 7 | B. A. C. 2179 | P. | 12.6 | 15.8 | 17.6 | 25.5 | 28.2 | 30.6 | 38.4 | 40.3 | 43.8 | 33 28.00 | - 2.11 | . | -33.29 | 6 32 52.69 | - 3.42 |
| | 8 | B. A. C. 2195 | P. | 6.8 | 9.9 | 11.8 | 19.6 | 22.3 | 24.9 | 32.7 | 34.5 | 37.8 | 36 22.26 | - 2.11 | . | -33.29 | 6 35 46.86 | - 3.41 |
| | 9 | B. A. C. 2207 ¹ | P. | 27.030.3 | 32.2 | . | . | . | 53.0 | 55.0 | 58.3 | | 38 42.63 | - 2.12 | . | -33.29 | 6 38 7.22 | - 3.39 |
| | 10 | B. A. C. 2207 ² | P. | . | 38.040.7 | 43.4 | 46.048.7 | . | . | . | . | . | 38 43.37 | - 2.12 | . | -33.29 | 6 38 7.96 | - 3.39 |
| | 11 | δ^1 Cephei | P. | . | . | . | . | . | 11.8 | . | 1.8 | | 42 47.60 | +25.17 | . | -33.29 | 6 42 39.48 | - 0.46 |
| | 12 | B. A. C. 2282 | P. | 42.245.4 | 47.4 | 54.9 | 57.3 | 59.7 | 7.3 | 9.0 | 12.3 | | 52 57.28 | - 2.01 | . | -33.29 | 6 52 21.98 | - 3.38 |
| | 13 | Weisse (2) 1675 | P. | 9.8 | 12.5 | 14.0 | . | . | 31.5 | 33.1 | 35.8 | | 57 22.78 | - 0.59 | . | -33.29 | 6 56 48.90 | - 4.71 |
| | 14 | B. A. C. 2305 | P. | . | 19.3 | 21.6 | 23.8 | 25.9 | 28.1 | . | . | | 57 23.75 | - 0.59 | . | -33.29 | 6 56 49.87 | - 4.71 |
| | 15 | δ Draconis, S. P. | P. | 37.430.9 | 26.6 | 10.7 | 5.4 | 0.2 | 44.3 | 10.6 | 33.6 | | 13 5.46 | - 4.11 | . | -33.29 | 19 12 28.06 | - 0.12 |
| | 16 | B. A. C. 2468 | P. | 50.753.2 | 54.9 | 1.0 | 3.1 | 5.1 | 11.4 | 12.9 | 15.5 | | 22 3.09 | - 0.88 | . | -33.29 | 7 21 28.92 | - 4.26 |
| | 17 | B. A. C. 2473 | P. | 19.522.1 | 23.7 | 30.0 | 32.0 | 34.0 | 40.4 | 42.0 | 44.6 | | 23 32.73 | - 0.80 | . | -33.29 | 7 22 57.94 | - 4.34 |
| | 18 | B. A. C. 2486 | P. | 57.6 | 0.2 | 1.8 | 8.1 | 10.3 | 12.4 | 18.7 | 20.3 | 23.2 | 27 10.29 | - 0.71 | . | -33.29 | 7 26 36.29 | - 4.44 |
| | 19 | B. A. C. 2551 | P. | 22.621.4 | 27.0 | 33.8 | 36.0 | 38.3 | 45.0 | 46.8 | 49.6 | | 37 36.06 | - 0.49 | . | -33.29 | 7 37 2.28 | - 4.70 |
| | 20 | ϕ Geminorum | P. | 19.021.9 | 23.7 | 30.5 | 32.9 | 35.2 | 42.0 | 43.6 | 46.6 | | 46 32.82 | - 0.43 | -33.26 | -33.28 | 7 45 59.11 | - 0.10 |
| | 21 | B. A. C. 2639 | P. | . | 30.9 | 33.0 | . | . | 39.4 | 43.7 | 45.3 | 47.9 | 50 35.17 | - 0.71 | . | -33.28 | 7 50 1.18 | - 4.34 |
| | 22 | B. A. C. 2664 | P. | . | . | 0.0 | 2.3 | 4.5 | 6.6 | 8.7 | . | . | 55 4.43 | - 0.70 | . | -33.28 | 7 54 30.45 | - 4.34 |
| | 23 | γ^1 Argus | P. | 40.743.6 | 45.0 | 51.8 | 54.0 | 56.2 | 3.0 | 4.6 | 7.5 | | 2 54.04 | - 1.66 | -33.27 | -33.28 | 8 2 19.10 | - 0.07 |
| | 24 | B. A. C. 2789 | P. | 34.537.3 | 39.0 | 45.6 | 47.8 | 50.0 | 56.9 | 58.6 | 1.4 | | 13 47.90 | - 0.50 | . | -33.28 | 8 13 14.12 | - 4.50 |
| | 25 | B. A. C. 2853 | P. | 56.659.2 | 0.8 | 7.4 | 9.6 | 11.7 | 18.2 | 19.8 | 22.5 | | 25 9.53 | - 0.65 | . | -33.28 | 8 24 35.60 | - 4.24 |
| | 26 | B. A. C. 2889 ¹ | P. | 41.043.7 | 45.3 | . | . | . | 1.8 | 3.3 | 5.9 | | 29 53.50 | - 0.92 | . | -33.28 | 8 29 19.30 | - 3.89 |
| | 27 | B. A. C. 2889 ² | P. | . | 49.6 | 51.7 | 53.8 | 55.9 | 57.9 | . | . | | 29 53.79 | - 0.92 | . | -33.28 | 8 29 19.59 | - 3.89 |
| | 28 | B. A. C. 2953 | P. | 3.2 | 5.9 | 7.6 | 14.2 | 16.4 | 18.5 | 24.8 | 26.6 | 29.3 | 38 16.28 | - 0.65 | . | -33.28 | 8 37 42.35 | - 4.17 |
| | 29 | ϵ^2 Hydræ | P. | 38.340.8 | 42.3 | 48.5 | 50.5 | 52.6 | 58.9 | 0.4 | 2.9 | | 40 50.58 | - 0.93 | -33.31 | -33.28 | 8 40 16.37 | - 0.01 |
| | 30 | ϵ Ursæ Majoris (R.) | P. | . | . | . | . | . | . | . | . | | . | . | . | . | . | . |
| | 31 | ι Ursæ Majoris | P. | . | . | . | . | . | 33.3 | 35.7 | 39.5 | | 51 21.02 | + 0.37 | . | -33.28 | 8 50 48.11 | + 0.16 |
| | 32 | σ^2 Ursæ Majoris (R.) | P. | . | . | . | . | . | . | . | . | | . | . | . | . | . | . |
| | 33 | σ^2 Ursæ Majoris | P. | . | . | . | . | . | . | . | . | | . | . | . | . | . | . |
| | 34 | B. A. C. 3133 | P. | . | 17.7 | 19.9 | 22.0 | 24.0 | 26.2 | . | . | | 6 21.97 | - 0.99 | . | -33.28 | 9 5 47.70 | - 3.62 |
| | 35 | B. A. C. 3171 | P. | 28.531.0 | 32.7 | 39.2 | 41.5 | 43.5 | 50.0 | 51.6 | 54.4 | | 12 41.38 | - 0.66 | . | -33.28 | 9 12 7.44 | - 3.94 |
| | 36 | α Hydræ | P. | 55.057.6 | 59.2 | 5.3 | 7.4 | 0.5 | 15.7 | 17.2 | 19.8 | | 22 7.41 | - 1.27 | -33.26 | -33.28 | 9 21 32.86 | - 0.05 |
| | 37 | B. A. C. 3252 | P. | 15.919.0 | 21.0 | 28.5 | 31.2 | 33.7 | 41.3 | 43.4 | 46.6 | | 26 31.18 | - 0.11 | . | -33.28 | 9 25 57.79 | - 4.46 |
| | 38 | B. A. C. 3261 | P. | 59.8 | 3.0 | 5.0 | 12.5 | 15.0 | 17.7 | 25.3 | 27.3 | 30.4 | 27 15.11 | - 0.12 | . | -33.28 | 9 26 41.71 | - 4.45 |
| | 39 | ϵ Leonis (R.) | P. | . | . | . | . | . | . | . | . | | . | . | . | . | . | . |
| | 40 | ϵ Leonis | P. | . | . | . | . | . | . | . | . | | . | . | . | . | . | . |
| | 41 | γ^2 Draconis, S. P. | P. | 38.229.4 | 24.2 | 3.5 | 56.4 | 49.0 | 27.9 | 23.0 | 14.5 | | 51 56.23 | - 5.22 | . | -33.28 | 21 51 17.73 | + 0.12 |
| | 42 | α Leonis (R.) | P. | . | . | . | . | . | . | . | . | | . | . | . | . | . | . |
| | 43 | α Leonis | P. | . | . | . | . | . | 31.8 | 33.4 | 36.0 | | 2 23.46 | - 0.80 | -33.19 | -33.28 | 10 1 49.38 | - 0.13 |
| | 44 | β Ursæ Majoris | P. | 8.114.1 | 17.8 | 32.6 | 38.0 | 42.8 | 57.7 | 1.4 | 7.5 | | 9 37.78 | + 1.75 | . | -33.28 | 10 9 6.25 | - 0.04 |
| 29 | 45 | β^2 Camelopard, S. P. | E. | . | 32.2 | 11.1 | 51.7 | 31.7 | 11.5 | . | . | | 48 51.53 | -13.38 | . | -33.36 | 0 48 4.79 | + 1.25 |
| | 46 | β^2 Camelopard, S. P. | E. | . | 39.2 | 19.0 | 59.4 | 39.6 | 19.0 | . | . | | 48 59.13 | -13.38 | . | -33.36 | 12 48 12.39 | - 0.48 |
| | 47 | ϵ Piscium | E. | 56.058.7 | 0.2 | 6.4 | 8.5 | 10.5 | 16.6 | 18.1 | 20.9 | | 57 8.43 | - 0.84 | -33.30 | -33.36 | 0 56 34.23 | - 0.04 |
| | 48 | Polaris | E. | . | 34.5 | 2.5 | 33.0 | 5.5 | 30.0 | . | . | | 13 33.56 | +53.96 | . | -33.36 | 1 13 54.16 | - 0.52 |
| | 49 | η Piscium | E. | 16.318.9 | 20.5 | 26.8 | 29.0 | 31.1 | 37.4 | 38.9 | 41.6 | | 25 28.94 | - 0.66 | -33.37 | -33.36 | 1 24 54.92 | + 0.08 |
| | 50 | β Arietis | E. | 15.316.9 | 21.2 | 23.4 | 25.6 | 27.7 | 30.0 | 34.4 | 35.9 | | 48 25.60 | - 0.52 | -33.42 | -33.36 | 1 47 51.72 | + 0.08 |

1, 2, 3, 11, 15, 22, 34, 35, 38, 41, 44, 45, 46. Bisections at sets B and D.

14, 38, 40, 41, 43. Thread B used.

21. Bisections at threads V and VI.

32. Bisections at set C.

37. Thread A used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Corrections. | Apparent Zenith Distance, South. | External Thermom. r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|------|-----------------------|-----|-----|-----|-----|---------------------------|----------------------------------|----------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | |
| 1 | 72 10 | 10 | 3.5 | 27.5 | 26.5 | 0.0 | 33 | 730 | .. | .. | 615 | 71.4 | 287 45 35.5 | .. | - 3 7.1 | 338 48 49.6 | + 1.3 |
| 2 | 68 48 | | 6.2 | 0.5 | 29.8 | 1.9 | 37 | 995 | .. | .. | 920 | 71.4 | 291 8 43.8 | .. | - 2 35.5 | 342 12 29.5 | - 0.2 |
| 3 | 68 48 | | 6.2 | 0.5 | 29.8 | 1.9 | 39 | .. | 905 | .. | 855 | 71.4 | 291 9 13.2 | 30.7 | - 2 35.4 | 342 12 59.0 | - 3.3 |
| 4 | 54 24 | | 4.5 | 29.5 | 28.4 | 2.7 | 33 | 440 | .. | 445 | .. | 71.4 | 305 31 33.6 | 30.4 | - 1 21.7 | 356 36 30.1 | + 0.6 |
| 5 | 284 10 | | 3.6 | 28.9 | 29.4 | 5.4 | 36 | .. | 010 | .. | 880 | 71.4 | 75 46 28.0 | .. | + 3 55.0 | 126 56 44.2 | + 14.5 |
| 6 | 288 36 | | 6.5 | 1.1 | 2.5 | 7.9 | 37 | .. | 470 | .. | 315 | 71.4 | 71 20 37.6 | .. | + 2 57.7 | 122 29 56.5 | + 13.9 |
| 7 | 283 4 | | 9.5 | 5.0 | 6.0 | 9.5 | 33 | .. | 835 | .. | 775 | 71.4 | 76 51 45.6 | .. | + 4 14.6 | 128 2 21.4 | + 14.1 |
| 8 | 283 4 | | 9.5 | 5.0 | 6.0 | 9.5 | 34 | .. | 130 | .. | 950 | 71.4 | 76 51 49.2 | .. | + 4 14.6 | 128 2 25.0 | + 14.0 |
| 9 | 282 50 | | 5.6 | 0.7 | 2.0 | 6.6 | 34 | .. | 185 | .. | 100 | 71.4 | 77 5 47.0 | .. | + 4 19.2 | 128 16 27.4 | + 13.9 |
| 10 | 282 50 | | 5.6 | 0.7 | 2.0 | 6.6 | 34 | .. | 280 | .. | 125 | 71.4 | 77 5 47.9 | .. | + 4 19.2 | 128 16 28.3 | + 13.9 |
| 11 | 48 16 | | 5.1 | 28.1 | 29.7 | 3.0 | 38 | .. | .. | .. | 420 | 71.4 | 311 40 51.7 | .. | - 1 8.0 | 2 46 1.9 | + 0.1 |
| 12 | 285 51 | | 6.6 | 1.3 | 3.0 | 8.5 | 29 | .. | 880 | .. | 725 | 71.4 | 74 0 41.7 | .. | + 3 28.7 | 125 10 31.6 | + 12.9 |
| 13 | 341 48 | | 4.0 | 29.8 | 29.0 | 5.2 | 30 | 120 | .. | .. | 900 | 71.4 | 18 6 42.5 | .. | + 10.8 | 69 13 24.5 | + 2.2 |
| 14 | 341 48 | | 4.0 | 29.8 | 29.0 | 5.2 | 26 | .. | 105 | .. | 015 | 71.4 | 18 8 14.3 | .. | + 19.9 | 69 14 55.4 | + 2.2 |
| 15 | 73 32 | | 5.6 | 29.5 | 28.5 | 3.0 | 31 | 355 | .. | .. | 515 | 71.4 | 286 23 49.4 | .. | - 3 23.4 | 337 26 47.2 | + 0.5 |
| 16 | 330 11 | | 5.1 | 0.4 | 0.7 | 4.2 | 37 | 215 | 180 | .. | .. | 71.4 | 29 42 32.1 | .. | + 34.6 | 80 49 27.9 | + 2.1 |
| 17 | 333 18 | | 5.5 | 0.7 | 29.4 | 5.5 | 32 | .. | 900 | .. | 805 | 71.4 | 26 37 26.6 | .. | + 30.4 | 77 41 18.2 | + 1.2 |
| 18 | 337 8 | | 5.5 | 0.4 | 0.0 | 5.2 | 34 | .. | 040 | .. | 900 | 71.4 | 22 47 43.7 | .. | + 25.5 | 73 51 30.4 | - 0.1 |
| 19 | 345 44 | | 4.8 | 28.6 | 28.8 | 5.5 | 34 | .. | 485 | .. | 355 | 71.4 | 14 11 49.8 | 30.5 | + 15.3 | 65 18 26.3 | - 3.5 |
| 20 | 348 8 | | 6.5 | 0.8 | 1.2 | 7.0 | 36 | 775 | 730 | .. | 605 | 71.4 | 11 48 26.5 | .. | + 12.7 | 62 55 0.4 | + 1.4 |
| 21 | 337 10 | | 6.2 | 0.9 | 0.5 | 4.6 | 35 | .. | .. | .. | 280 | 71.4 | 22 46 4.2 | .. | + 25.4 | 73 52 50.8 | - 2.7 |
| 22 | 337 50 | | 1.1 | 25.0 | 25.4 | 0.4 | 33 | .. | .. | .. | 580 | 71.4 | 22 5 33.0 | .. | + 24.6 | 73 12 18.8 | - 3.4 |
| 23 | 297 8 | | 8.0 | 3.7 | 5.1 | 8.4 | 36 | .. | 640 | .. | 465 | 71.4 | 62 48 26.5 | .. | + 1 57.5 | 113 56 45.2 | - 0.1 |
| 24 | 345 28 | | 5.9 | 0.2 | 0.6 | 7.0 | 38 | .. | 306 | .. | 140 | 71.4 | 14 28 49.5 | .. | + 15.7 | 65 35 26.4 | - 7.6 |
| 25 | 339 34 | | 4.5 | 29.1 | 28.5 | 4.4 | 37 | .. | 720 | .. | 595 | 71.4 | 20 22 39.1 | .. | + 22.5 | 71 29 22.8 | - 7.2 |
| 26 | 328 6 | | 6.0 | 1.4 | 1.6 | 7.1 | 35 | 050 | .. | .. | 875 | 71.4 | 31 50 0.2 | .. | + 37.6 | 82 56 59.0 | - 4.2 |
| 27 | 328 6 | | 6.0 | 1.4 | 1.6 | 7.1 | 34 | .. | 390 | .. | 205 | 71.4 | 31 49 49.9 | .. | + 37.6 | 82 56 48.7 | - 4.2 |
| 28 | 339 40 | | 1.4 | 25.2 | 25.4 | 0.5 | 38 | .. | 820 | .. | 735 | 71.4 | 20 16 52.7 | .. | + 22.4 | 71 23 36.3 | - 8.5 |
| 29 | 327 56 | | 5.1 | 0.4 | 29.7 | 5.0 | 37 | .. | 005 | .. | 880 | 71.4 | 32 0 44.3 | .. | + 37.9 | 83 7 43.4 | + 0.1 |
| 30 | 170 18 | | 8.4 | 6.5 | 6.8 | 8.0 | 33 | 010 | 900 | .. | .. | 71.4 | 189 37 31.2 | .. | + 10.3 | 41 28 39.7 | + 2.6 |
| 31 | 9 34 | | 5.1 | 0.6 | 0.3 | 5.5 | 36 | .. | .. | .. | 965 | 71.4 | 350 22 31.0 | .. | - 10.3 | 41 28 41.9 | - 0.4 |
| 32 | 151 12 | | 5.8 | 2.9 | 2.5 | 7.6 | 33 | 315 | .. | 260 | .. | 71.4 | 208 43 34.9 | .. | + 33.2 | 22 22 13.1 | - 3.4 |
| 33 | 28 40 | | 5.1 | 28.5 | 29.4 | 4.0 | 36 | .. | .. | .. | 765 | 71.4 | 331 16 26.7 | .. | + 33.2 | 22 22 14.7 | - 1.8 |
| 34 | 325 26 | | 7.6 | 1.9 | 1.5 | 8.5 | 37 | .. | .. | .. | 240 | 71.4 | 34 30 36.3 | .. | + 41.7 | 85 37 39.2 | - 6.7 |
| 35 | 339 16 | | 3.6 | 26.9 | 26.8 | 2.5 | 33 | 945 | .. | .. | 960 | 71.4 | 20 39 40.1 | .. | + 22.9 | 71 46 24.2 | - 11.8 |
| 36 | 312 56 | | 6.4 | 1.8 | 1.8 | 8.0 | 34 | .. | 705 | .. | 565 | 71.4 | 46 59 55.5 | 30.4 | + 1 5.0 | 98 7 21.7 | - 1.0 |
| 37 | 358 2 | | 7.2 | 2.8 | 1.8 | 7.5 | 36 | 420 | 395 | .. | .. | 71.4 | 1 51 48.9 | .. | + 2.0 | 52 58 12.1 | - 19.2 |
| 38 | 358 2 | | 7.2 | 2.8 | 1.8 | 7.5 | 37 | 220 | .. | .. | 195 | 71.4 | 1 57 7.7 | .. | + 2.0 | 53 3 30.9 | - 19.2 |
| 39 | 194 28 | | 9.5 | 7.8 | 6.3 | 7.3 | 30 | 955 | 855 | .. | .. | 71.4 | 165 27 0.5 | .. | - 15.7 | 65 39 36.4 | - 0.2 |
| 40 | 345 24 | | 5.0 | 0.3 | 0.1 | 6.0 | 28 | .. | .. | .. | 895 | 71.4 | 14 32 58.3 | .. | + 15.7 | 65 39 35.2 | - 1.4 |
| 41 | 67 54 | | 7.0 | 29.5 | 0.0 | 4.0 | 31 | 480 | .. | .. | 350 | 71.4 | 292 3 36.5 | .. | - 2 28.7 | 343 7 29.0 | + 0.9 |
| 42 | 206 14 | | 8.4 | 6.0 | 3.5 | 5.8 | 30 | 940 | 915 | .. | .. | 71.4 | 153 40 59.2 | .. | - 30.0 | 77 25 52.0 | - 0.2 |
| 43 | 333 38 | | 3.6 | 27.7 | 27.4 | 2.9 | 29 | .. | .. | 100 | 060 | 71.4 | 26 18 59.8 | .. | + 30.0 | 77 25 51.0 | - 1.2 |
| 44 | 26 46 | | 6.9 | 1.3 | 1.2 | 6.4 | 39 | 300 | .. | .. | 245 | 71.4 | 333 11 6.2 | 30.3 | - 30.7 | 24 16 56.7 | - 1.5 |
| 45 | 56 56 | | 8.5 | 0.7 | 2.8 | 6.8 | 35 | .. | 400 | .. | 310 | 70.1 | 303 0 4.7 | .. | - 1 32.9 | 354 4 53.0 | + 37.7 |
| 46 | 56 56 | | 8.5 | 0.7 | 2.8 | 6.8 | 34 | .. | 180 | .. | 955 | 70.1 | 302 59 45.8 | .. | - 1 32.9 | 354 4 34.1 | + 0.4 |
| 47 | 328 16 | | 12.0 | 4.8 | 4.7 | 12.0 | 31 | .. | 795 | .. | 685 | 70.1 | 31 39 13.8 | 31.0 | + 37.3 | 82 46 12.3 | - 1.6 |
| 48 | 49 40 | | 7.3 | 27.8 | 26.0 | 29.0 | 32 | 640 | .. | 625 | .. | 70.1 | 310 15 19.3 | .. | - 1 11.4 | 1 20 29.1 | - 0.9 |
| 49 | 335 46 | | 7.0 | 1.5 | 1.5 | 8.5 | 36 | .. | 360 | .. | 160 | 70.1 | 24 10 19.4 | .. | + 27.2 | 75 17 7.8 | - 1.5 |
| 50 | 341 14 | | 5.5 | 0.0 | 29.8 | 7.7 | 30 | .. | 130 | .. | 100 | 70.1 | 18 40 43.9 | .. | + 20.5 | 69 47 25.6 | - 0.8 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|------|
| 3 | 29.95 | 33.3 | | | | | |
| 4 | 29.95 | 32.8 | | | | | |
| 19 | 29.96 | 33.0 | | | | | |
| 36 | 29.97 | 32.8 | | | | | |
| 44 | 30.00 | 32.8 | | | | | |
| 47 | 29.94 | 33.5 | | | | | |

For summary of the elements of reduction see page 3.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. | | |
|---------|---------|----------------------------------|-----------|--------------------------------|------|------|------|------|-------|------|-------|------|--------------|-------|----------------|---------------------------|------------|----------------------------|--------|----|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | | m. | s. |
| 1876. | | | | | | | | | | | | | m. | s. | | | | | | |
| Nov. 29 | 1 | B. A. C. 625 . . . | E. | 4.2 | 6.9 | 8.5 | 14.5 | 16.6 | 18.9 | 24.8 | 26.4 | 28.9 | 56 | 16.63 | — 0.96 | . | —33.36 | 1 55 42.31 | — 4.03 | |
| | 2 | a Arietis | E. | . | 44.7 | 47.0 | 49.2 | 51.4 | 53.5 | 58.0 | 59.8 | 2.6 | 0 | 49.20 | — 0.46 | —33.36 | 2 0 15.38 | + 0.01 | | |
| | 3 | Moon I. | E. | 9.4 | 12.3 | 13.8 | 20.7 | 23 | 125.4 | 32.0 | 33.8 | 36.6 | 6 | 23.01 | — 0.48 | . | —33.36 | 3 5 49.17 | +73.22 | |
| Dec. 2 | 4 | Vibilia | P. | 36.4 | 39.0 | 40.8 | 47.2 | 49.4 | 51.7 | 58.2 | 0.1 | 2.8 | 48 | 49.51 | — 0.38 | . | —33.51 | 4 48 15.62 | . | |
| | 5 | Ursæ Minoris, S. P. | P. | . | . | 43.0 | 27.6 | 12.5 | 57.8 | 43.3 | . | . | 59 | 12.77 | — 9.93 | . | —33.51 | 16 58 29.33 | + 0.05 | |
| | 6 | β Orionis | P. | 1.1 | 2.6 | 5.3 | 11.5 | 13.6 | 15.6 | 21.8 | 24.4 | 25.9 | 9 | 13.53 | — 1.06 | —33.50 | 5 8 38.97 | 0.00 | | |
| | 7 | B. A. C. 1650 . . . | P. | 25.0 | 28.1 | 30.0 | 37.3 | 39 | 842.4 | 49.8 | 51.7 | 54.9 | 13 | 39.89 | — 1.75 | . | —33.50 | 5 13 4.64 | — 3.86 | |
| | 8 | β Tauri | P. | 52.2 | 55.0 | 56.8 | 3.8 | 6.2 | 8.4 | 15.4 | 17.1 | 20.0 | 19 | 6.10 | — 0.20 | —33.45 | 5 18 32.40 | — 0.07 | | |
| | 9 | Groom. 966 | P. | 4.5 | 14.3 | 20.3 | 43.8 | 51.7 | 59.6 | 23.2 | 28.9 | 38.8 | 23 | 51.68 | + 3.72 | . | —33.50 | 5 23 21.90 | — 0.46 | |
| | 10 | δ Orionis | P. | 6.9 | 9.4 | 11.0 | 17.4 | 19.1 | 21.2 | 27.1 | 28.8 | 31.4 | 26 | 19.14 | — 0.88 | —33.56 | 5 25 44.76 | + 0.03 | | |
| | 11 | B. A. C. 1794 ¹ . . . | P. | 56.6 | 59.2 | 0.8 | . | . | . | 17.0 | 18.6 | 21.2 | 35 | 8.90 | — 0.92 | . | —33.50 | 5 32 34.48 | — 4.33 | |
| | 12 | B. A. C. 1794 ² . . . | P. | . | . | 4.9 | 7.0 | 9.0 | 11.0 | 13.2 | . | . | 35 | 9.03 | — 0.92 | . | —33.50 | 5 34 31.61 | — 4.33 | |
| | 13 | δ Ursæ Minoris, S. P. | P. | . | . | 43.6 | 9.4 | 33.4 | 58.8 | 25.0 | . | . | 12 | 33.86 | —21.72 | . | —33.49 | 18 11 38.65 | — 0.02 | |
| | 14 | B. A. C. 2109 . . . | P. | 58.7 | 1.7 | 3.7 | 10.9 | 13.3 | 15.6 | 23.0 | 24.8 | 27.7 | 24 | 13.27 | — 1.67 | . | —33.49 | 6 23 38.11 | — 3.64 | |
| | 15 | Moon II, N. | P. | 52.3 | 55.1 | 57.0 | 4.2 | 6.6 | 9.0 | 16.0 | 17.9 | 20.7 | 33 | 6.53 | — 0.22 | . | —33.49 | 6 32 32.82 | —78.67 | |
| | 16 | ε Canis Majoris . . | P. | 9.8 | 12.6 | 14.5 | 21.6 | 24.0 | 26.2 | 33.0 | 34.9 | 37.9 | 54 | 23.83 | — 1.56 | —33.48 | 6 53 48.78 | — 0.06 | | |
| | 17 | Weisse (2) 1675 . . | P. | 9.8 | 12.6 | 14.3 | . | . | . | 31.7 | 33.3 | 36.2 | 57 | 22.98 | — 0.47 | . | —33.49 | 6 56 49.09 | — 4.82 | |
| | 18 | B. A. C. 2305 . . . | P. | . | . | 19.5 | 21.8 | 24.0 | 26.2 | 28.4 | . | . | 57 | 23.99 | — 0.40 | . | —33.49 | 6 56 50.10 | — 4.82 | |
| | 19 | δ Canis Majoris . . | P. | 16.0 | 48.8 | 50.5 | 57.4 | 59.6 | 1.8 | 8.7 | 10.4 | 13.3 | 3 | 59.61 | — 1.49 | —33.53 | 7 3 24.63 | — 0.01 | | |
| | 20 | δ Geminorum | P. | 8.5 | 11.0 | 12.8 | 19.4 | 21.7 | 23.8 | 30.4 | 32.1 | 34.8 | 13 | 21.61 | — 0.37 | —33.45 | 7 12 47.76 | — 0.09 | | |
| 3 | 21 | ζ Arietis (R.) . . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 22 | ζ Arietis | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 23 | a Persei (R.) . . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 24 | a Persei | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 25 | B. A. C. 1100 . . . | E. | 31.7 | 34.3 | 35.8 | 42.2 | 44.3 | 46.3 | 52.4 | 54.0 | 56.6 | 27 | 44.18 | — 1.11 | . | —33.58 | 3 27 9.49 | — 4.21 | |
| | 26 | B. A. C. 1125 . . . | E. | 2.0 | 5.5 | 7.6 | 15.7 | 18.5 | 21.0 | 29.0 | 31.1 | 34.6 | 33 | 18.33 | — 1.95 | . | —33.58 | 3 32 42.80 | — 4.10 | |
| | 27 | η Tauri | E. | 32.3 | 35.0 | 36.7 | 43.3 | 45.6 | 47.8 | 54.5 | 56.2 | 59.0 | 40 | 45.60 | — 0.36 | —33.53 | . | . | . | |
| | 28 | ζ Persei | E. | 44.8 | 47.8 | 49.7 | 56.8 | 59.3 | 1.7 | 8.7 | 10.5 | 13.6 | 46 | 59.21 | — 0.14 | —33.61 | . | . | . | |
| | 29 | Feronia | E. | 33.9 | 36.1 | 38.0 | 44.1 | 46.1 | 48.1 | 54.6 | 56.0 | 58.9 | 53 | 46.20 | — 0.58 | . | —33.56 | 3 53 12.06 | . | |
| | 30 | Niobe | E. | . | . | . | . | . | . | . | . | 53.5 | 57 | 54.10 | + 0.67 | . | —33.56 | 3 57 21.21 | . | |
| | 31 | γ Tauri | E. | 10.3 | 13.0 | 14.6 | 21.0 | 23.0 | 25.0 | 31.5 | 33.0 | 35.8 | 13 | 23.02 | — 0.56 | —33.47 | —33.55 | 4 12 48.91 | — 0.07 | |
| | 32 | B. A. C. 1378 . . . | E. | 48.2 | 50.7 | 52.2 | 58.6 | 0.8 | 2.8 | 9.3 | 11.0 | 13.4 | 22 | 0.78 | — 0.58 | . | —33.54 | 4 21 26.66 | — 4.69 | |
| | 33 | A Draconis, S. P. . | E. | 23.0 | 15.5 | 11.0 | 54.0 | 48.3 | 42.6 | 25.8 | 21.3 | 14.0 | 28 | 48.39 | — 4.08 | . | —33.54 | 16 28 10.77 | 0.00 | |
| | 34 | B. A. C. 1467 . . . | E. | 46.7 | 49.7 | 51.6 | 58.6 | 1.0 | 3.5 | 10.5 | 12.4 | 15.4 | 39 | 1.04 | — 1.64 | . | —33.53 | 4 38 25.87 | — 4.00 | |
| | 35 | B. A. C. 1488 . . . | E. | 24.4 | 27.3 | 29.3 | 36.3 | 38.7 | 41.0 | 48.0 | 49.9 | 52.9 | 43 | 38.64 | — 1.62 | . | —33.53 | 4 43 3.49 | — 3.99 | |
| | 36 | Vibilia | E. | 32.0 | 34.7 | 36.4 | 43.0 | 45.2 | 47.3 | 54.0 | 55.6 | 58.4 | 47 | 45.18 | — 0.40 | . | —33.52 | 4 47 11.26 | . | |
| | 37 | Lalande 9184 . . . | E. | 18.0 | 20.9 | 22.6 | 29.6 | 32.0 | 34.1 | 41.0 | 42.8 | 45.7 | 57 | 31.86 | — 0.26 | . | —33.52 | 4 56 58.08 | — 5.17 | |
| | 38 | Weisse 633 | E. | 16.0 | 18.6 | 20.1 | . | . | . | 36.6 | 38.2 | 40.6 | 27 | 28.35 | — 1.04 | . | —33.50 | 5 26 53.81 | — 4.26 | |
| | 39 | Weisse 632 | E. | . | . | 24.4 | 26.6 | 28.7 | 30.7 | 32.9 | . | . | 27 | 28.67 | — 1.04 | . | —33.50 | 5 26 54.13 | — 4.26 | |
| | 40 | B. A. C. 1951 . . . | E. | 40.7 | 43.5 | 45.2 | 51.8 | 54.0 | 56.3 | 2.9 | 4.7 | 7.6 | 59 | 54.08 | — 0.36 | . | —33.48 | 5 59 20.24 | — 5.06 | |
| | 41 | 22 Camelopardalis (R.) | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 42 | 22 Camelopardalis . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 43 | δ Ursæ Minoris, S. P. | E. | 51.0 | 44.0 | 7.0 | . | 58.5 | . | 15.5 | 50.5 | . | 12 | 33.44 | —21.55 | . | —33.47 | 18 11 38.42 | 0.00 | |
| | 44 | γ Geminorum (R.) . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 45 | γ Geminorum | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 46 | 51 Cephei | E. | . | . | 26.0 | 9.0 | 51.0 | 33.0 | 16.0 | . | . | 42 | 51.20 | +24.42 | . | —33.45 | 6 42 42.17 | + 0.23 | |
| | 47 | B. A. C. 2252 . . . | E. | 45.8 | 49.0 | 50.7 | 58.4 | 0.7 | 3.2 | 10.6 | 12.5 | 15.7 | 47 | 0.73 | — 1.73 | . | —33.44 | 6 46 25.56 | — 3.54 | |
| | 48 | B. A. C. 2282 . . . | E. | 45.4 | 47.3 | 52.3 | 54.9 | 57.4 | 59.9 | 2.3 | 7.3 | 9.3 | 52 | 57.34 | — 1.76 | . | —33.44 | 6 52 22.12 | — 3.50 | |
| | 49 | Weisse (2) 1675 . . | E. | 9.7 | 12.6 | 14.3 | 20.8 | 23.0 | 25.2 | 31.8 | 33.5 | 36.0 | 57 | 22.99 | — 0.43 | . | —33.43 | 6 56 49.13 | — 4.85 | |
| | 50 | B. A. C. 2305 . . . | E. | 10.8 | 13.5 | 15.2 | 21.8 | 24.0 | 26.2 | 32.8 | 34.4 | 37.0 | 57 | 23.97 | — 0.43 | . | —33.43 | 6 56 50.11 | — 4.85 | |

4, 29, 30, 36. Thread A used.

5, 43. Bisections at set C.

9, 15, 18, 33, 41. Bisections at sets B and D.

30. Transit over thread VII.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | |
| 1 | 323 14 | 7.7 | 2.0 | 3.7 | 10.5 | 37 | .. | 470 | .. | 300 | .. | 70.1 | 36 42 37.8 | .. | + | 45.1 | 87 49 41.1 |
| 2 | 343 56 | 5.3 | 1.0 | 0.6 | 6.2 | 36 | .. | .. | .. | 360 | 330 | 70.1 | 16 0 20.3 | .. | + | 17.3 | 67 6 58.8 |
| 3 | 343 0 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 31.0 | .. | .. | .. |
| 4 | 342 50 | 0.8 | 24.2 | 24.6 | 1.0 | 41 | .. | 205 | .. | 080 | .. | 71.6 | 17 4 55.2 | 27.6 | + | 18.7 | 68 11 35.1 |
| 5 | 58 46 | 2.5 | 27.5 | 28.2 | 2.2 | 32 | 815 | .. | 795 | .. | 730 | 71.6 | 301 9 22.9 | .. | - | 1 40.4 | 352 14 3.7 |
| 6 | 312 42 | 6.5 | 1.2 | 2.1 | 8.4 | 31 | .. | 310 | .. | 180 | .. | 71.6 | 47 13 3.8 | .. | + | 1 5.7 | 98 20 30.7 |
| 7 | 286 4 | 7.7 | 2.8 | 4.5 | 10.7 | 30 | .. | 930 | .. | 825 | .. | 71.6 | 73 50 59.9 | .. | + | 3 27.4 | 125 0 48.5 |
| 8 | 349 32 | 4.8 | 28.2 | 0.0 | 5.2 | 31 | .. | 955 | .. | 850 | .. | 71.6 | 10 23 11.6 | .. | + | 11.2 | 61 29 44.0 |
| 9 | 36 0 | 4.0 | 27.2 | 28.8 | 4.0 | 38 | 235 | .. | .. | .. | 175 | 71.6 | 323 56 47.2 | .. | - | 44.3 | 15 2 24.1 |
| 10 | 320 40 | 3.0 | 27.0 | 27.8 | 5.2 | 35 | .. | 795 | .. | 565 | .. | 71.6 | 39 16 7.3 | .. | + | 49.7 | 99 23 18.2 |
| 11 | 319 2 | 5.6 | 29.9 | 1.4 | 6.7 | 31 | 580 | .. | .. | .. | 420 | 71.6 | 40 53 6.6 | .. | + | 52.6 | 92 0 20.4 |
| 12 | 319 2 | 5.6 | 29.9 | 1.4 | 6.7 | 31 | .. | 735 | .. | 660 | .. | 71.6 | 40 53 7.1 | 28.5 | + | 52.6 | 92 0 20.9 |
| 13 | 54 24 | 2.8 | 26.2 | 27.5 | 1.2 | 33 | 395 | .. | 345 | .. | 355 | 71.6 | 305 31 31.1 | 28.7 | - | 1 25.0 | 356 36 27.3 |
| 14 | 288 36 | 6.1 | 0.9 | 2.2 | 9.0 | 37 | .. | 505 | .. | 330 | .. | 71.6 | 71 20 35.2 | .. | + | 2 58.4 | 122 29 57.8 |
| 15 | 349 4 | 4.2 | 29.9 | 29.0 | 6.5 | 35 | 510 | .. | 525 | .. | 545 | 71.6 | 10 52 7.3 | .. | + | 11.7 | 61 58 40.2 |
| 16 | 292 16 | 5.6 | 1.2 | 3.3 | 8.7 | 32 | .. | 130 | .. | 945 | .. | 71.6 | 67 39 16.0 | .. | + | 2 27.1 | 118 48 4.3 |
| 17 | 341 48 | 5.3 | 0.5 | 0.5 | 7.5 | 29 | 965 | .. | .. | .. | 800 | 71.6 | 18 6 42.2 | .. | + | 19.9 | 69 13 23.3 |
| 18 | 341 48 | 5.3 | 0.5 | 0.5 | 7.5 | 35 | 985 | .. | .. | .. | 925 | 71.6 | 18 8 14.9 | .. | + | 19.9 | 69 14 56.0 |
| 19 | 294 52 | 4.4 | 28.6 | 1.2 | 6.5 | 31 | .. | 515 | .. | 650 | .. | 71.6 | 65 3 9.3 | .. | + | 2 10.3 | 116 11 40.8 |
| 20 | 343 16 | 6.6 | 1.2 | 1.0 | 7.0 | 38 | .. | 580 | .. | 040 | .. | 71.6 | 16 40 48.5 | 28.3 | + | 18.3 | 67 47 23.0 |
| 21 | 198 14 | 7.0 | 4.0 | 4.2 | 6.1 | 35 | 490 | 460 | .. | .. | .. | 72.1 | 161 42 8.8 | .. | - | 20.4 | 69 24 32.8 |
| 22 | 341 38 | 2.7 | 26.5 | 27.3 | 5.3 | 34 | .. | .. | .. | 530 | 460 | 72.1 | 18 17 51.1 | .. | + | 20.4 | 69 24 32.7 |
| 23 | 169 24 | 5.5 | 3.8 | 5.3 | 9.8 | 33 | 860 | 760 | .. | .. | .. | 72.1 | 190 31 43.7 | .. | + | 10.1 | 40 34 27.4 |
| 24 | 10 28 | 7.6 | 1.3 | 4.3 | 8.8 | 35 | .. | .. | .. | 865 | 815 | 72.1 | 349 28 17.2 | .. | - | 10.1 | 40 34 28.3 |
| 25 | 311 10 | 5.0 | 0.8 | 27.9 | 8.5 | 30 | .. | .. | .. | 510 | 400 | 72.1 | 48 44 51.5 | 27.0 | + | 1 10.1 | 99 52 22.8 |
| 26 | 280 24 | 5.6 | 0.3 | 3.4 | 7.5 | 23 | .. | .. | .. | 175 | .. | 72.1 | 79 29 0.9 | .. | + | 5 21.5 | 130 40 43.6 |
| 27 | 344 46 | 4.0 | 29.7 | 29.6 | 5.2 | 34 | .. | 145 | .. | 000 | .. | 72.1 | 15 9 45.4 | .. | + | 16.7 | 66 16 23.3 |
| 28 | 352 34 | 4.9 | 28.3 | 0.7 | 4.3 | 36 | .. | 260 | .. | 210 | .. | 72.1 | 7 22 18.5 | .. | + | 8.0 | 58 28 47.7 |
| 29 | 335 38 | 4.7 | 27.2 | 0.9 | 6.8 | 34 | .. | 630 | .. | 440 | .. | 72.1 | 24 15 19.2 | .. | + | 27.7 | 75 22 8.1 |
| 30 | 12 54 | 4.5 | 1.5 | 1.8 | 6.7 | 34 | .. | .. | .. | 250 | 150 | 72.1 | 346 59 16.9 | .. | - | 14.2 | 38 5 23.9 |
| 31 | 336 22 | 3.8 | 28.0 | 29.7 | 4.0 | 32 | .. | 270 | .. | 130 | .. | 72.1 | 23 33 15.9 | .. | + | 26.9 | 74 40 4.0 |
| 32 | 335 30 | 3.5 | 28.2 | 28.5 | 4.8 | 31 | .. | 445 | .. | 330 | .. | 72.1 | 24 25 3.3 | .. | + | 28.0 | 75 31 52.5 |
| 33 | 71 58 | 5.5 | 27.7 | 29.1 | 2.8 | 37 | 615 | .. | .. | .. | 540 | 72.1 | 287 58 38.0 | .. | - | 3 8.1 | 339 1 51.1 |
| 34 | 290 6 | 7.3 | 1.3 | 4.8 | 10.5 | 36 | .. | 680 | .. | 500 | .. | 72.1 | 69 50 27.4 | .. | + | 2 46.6 | 120 59 35.2 |
| 35 | 290 50 | 0.0 | 23.3 | 27.0 | 1.6 | 32 | .. | 960 | .. | 840 | .. | 72.1 | 69 5 22.9 | .. | + | 2 40.2 | 120 14 24.3 |
| 36 | 342 50 | 9 27.5 | 20.3 | 22.3 | 27.7 | 38 | .. | 295 | .. | 210 | .. | 72.1 | 17 4 8.2 | .. | + | 18.0 | 68 10 48.3 |
| 37 | 348 34 | 10 4.6 | 28.3 | 0.6 | 6.3 | 34 | .. | 780 | .. | 650 | .. | 72.1 | 11 21 55.6 | .. | + | 12.4 | 62 28 29.2 |
| 38 | 314 28 | 8.0 | 1.3 | 3.5 | 11.8 | 32 | 770 | .. | .. | .. | 570 | 72.1 | 45 27 27.7 | .. | + | 1 2.7 | 96 34 51.6 |
| 39 | 314 28 | 8.0 | 1.3 | 3.5 | 11.8 | 35 | .. | 210 | .. | 120 | .. | 72.1 | 45 28 6.0 | .. | + | 1 2.7 | 96 35 29.9 |
| 40 | 344 42 | 2.2 | 25.2 | 23.3 | 4.3 | 36 | .. | 610 | .. | 530 | .. | 72.1 | 15 14 21.5 | .. | + | 16.5 | 66 20 59.5 |
| 41 | 149 28 | 0.4 | 25.0 | 28.8 | 1.9 | 32 | 830 | .. | 860 | .. | .. | 72.1 | 210 27 23.0 | .. | + | 36.4 | 20 38 21.8 |
| 42 | 30 24 | 7.5 | 1.3 | 2.3 | 6.9 | 37 | .. | .. | .. | 090 | 140 | 72.1 | 329 32 36.5 | .. | - | 36.4 | 20 38 21.3 |
| 43 | 54 24 | 4.8 | 28.4 | 0.5 | 4.6 | 33 | 370 | .. | .. | .. | 275 | 72.1 | 305 31 33.5 | .. | - | 1 26.4 | 356 36 28.3 |
| 44 | 202 18 | 7.8 | 3.1 | 4.8 | 6.3 | 31 | 520 | 235 | .. | .. | .. | 72.1 | 157 37 6.3 | .. | - | 25.5 | 73 29 40.4 |
| 45 | 337 34 | 2.9 | 26.5 | 27.8 | 2.4 | 38 | .. | .. | .. | 640 | 610 | 72.1 | 22 22 53.7 | .. | + | 25.5 | 73 29 40.4 |
| 46 | 48 16 | 5.6 | 29.2 | 1.0 | 5.4 | 38 | 300 | .. | 275 | .. | 320 | 72.1 | 311 40 50.7 | .. | - | 1 9.4 | 2 46 2.5 |
| 47 | 286 52 | 5.5 | 0.3 | 2.7 | 8.3 | 32 | .. | 720 | .. | 680 | .. | 72.1 | 73 3 26.0 | .. | + | 3 20.8 | 124 13 8.0 |
| 48 | 285 54 | 4.5 | 28.1 | 2.8 | 8.2 | 29 | .. | .. | .. | 620 | 580 | 72.1 | 74 0 38.5 | .. | + | 3 33.2 | 125 10 32.9 |
| 49 | 341 48 | 2.8 | 26.8 | 28.3 | 4.8 | 30 | 020 | .. | .. | .. | 850 | 72.1 | 18 6 40.7 | .. | + | 20.3 | 69 13 22.2 |
| 50 | 341 48 | 2.8 | 26.8 | 28.3 | 4.8 | 36 | .. | 040 | .. | 020 | .. | 72.1 | 18 8 13.9 | .. | + | 20.3 | 69 14 55.4 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|----------|
| | in. | ° | | " " | " " | " " | " " |
| 3 | 29.90 | 34.5 | 15 | -11 14.6 | + 16 34.5 | . | + 5 19.9 |
| 4 | 29.91 | 28.8 | | | | | |
| 12 | 29.92 | 29.3 | | | | | |
| 13 | 29.93 | 29.5 | | | | | |
| 20 | 29.96 | 29.4 | | | | | |
| 25 | 30.19 | 30.0 | | | | | |

For summary of the elements of reduction see page 3.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. | |
|-----------------|---------|------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|----------|------------|--------------|----------------|----------------|---------------------------|--------|----------------------------|----|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | m. | | s. |
| | | | | | | | | | | | | | | | | | | | | |
| 1876. Dec. 3 | 1 | B. A. C. 2468 | E. | 50.8 | 53.4 | 55.0 | 1.0 | 3.2 | 5.4 | 11.4 | 13.0 | 15.6 | 22 3.20 | - 0.70 | . | -33.42 | 7 21 | 29.08 | - 4.39 | |
| | 2 | α^1 Geminorum | E. | 5.0 | 8.0 | 9.8 | 17.0 | 19.4 | 21.9 | 29.2 | 30.8 | 34.0 | 27 19.46 | - 0.12 | . | -33.41 | 7 26 | 45.93 | - 5.23 | |
| | 3 | α^2 Geminorum | E. | 5.5 | 8.5 | 10.1 | 17.5 | 19.9 | 22.3 | 29.6 | 31.2 | 34.4 | 27 19.89 | - 0.12 | -33.44 | -33.41 | 7 26 | 46.36 | + 0.27 | |
| | 4 | α Canis Minoris | E. | 14.0 | 17.2 | 18.7 | 24.9 | 27.0 | 29.0 | 35.2 | 36.6 | 39.3 | 33 26.94 | - 0.78 | -33.41 | -33.41 | 7 32 | 52.75 | - 0.16 | |
| | 5 | β Geminorum | E. | 8.2 | 11.0 | 12.9 | 19.9 | 22.2 | 21.5 | 31.4 | 33.0 | 36.2 | 38 22.14 | - 0.24 | -33.38 | -33.41 | 7 37 | 48.49 | - 0.06 | |
| | 6 | Moon H, S. | E. | 46.5 | 49.4 | 51.0 | 55.0 | 0.3 | 2.6 | 9.6 | 11.3 | 14.2 | 42 0.32 | - 0.32 | . | -33.40 | 7 41 | 26.60 | -76.65 | |
| | 7 | Venus H, S. | S. | 10.2 | 12.7 | 14.3 | 20.7 | 22.9 | 24.9 | 31.0 | 32.7 | 35.4 | 24 22.76 | - 1.13 | . | -32.81 | 14 23 | 43.82 | - 0.48 | |
| | 8 | Venus N. | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 9 | Bootis | S. | 55.1 | 58.0 | 59.7 | 6.6 | 8.6 | 11.3 | 18.2 | 19.9 | 22.9 | 40 8.96 | - 0.24 | -32.81 | . | . | . | . | |
| | 10 | β Bootis | S. | 34.0 | 37.2 | 39.3 | 47.5 | 50.2 | 53.0 | 1.0 | 3.2 | 6.6 | 57 50.22 | + 0.18 | . | -32.81 | 14 57 | 17.59 | + 0.01 | |
| | 11 | Polaris | S. | . | . | 35.0 | 6.0 | 33.5 | 1.0 | 28.0 | . | . | 13 33.18 | + 49.99 | . | -32.79 | 1 13 | 50.38 | - 0.67 | |
| | 12 | η Piscium | S. | . | 23.9 | 26.2 | 28.4 | 30.4 | 32.5 | 36.7 | 38.3 | 10.9 | 25 25.28 | - 0.57 | -32.84 | -32.79 | 1 24 | 54.92 | - 0.12 | |
| | 13 | B. A. C. 501 | S. | 34.0 | 37.5 | 39.6 | 48.0 | 50.7 | 53.5 | 1.8 | 4.0 | 7.4 | 33 50.72 | + 0.22 | . | -32.79 | 1 33 | 18.15 | - 4.22 | |
| | 14 | B. A. C. 544 | S. | 41.9 | 44.9 | 46.8 | 54.4 | 57.0 | 59.7 | 7.4 | 9.4 | 12.5 | 41 57 11 | + 9.04 | . | -32.79 | 1 41 | 24.36 | - 4.22 | |
| | 15 | Weisse 791 ¹ | S. | 52.4 | 55.0 | 56.6 | . | . | . | 13.0 | 14.6 | 17.2 | 46 4.80 | - 0.67 | . | -32.79 | 1 45 | 31.34 | - 3.99 | |
| | 16 | Weisse 791 ² | S. | . | . | 0.7 | 2.8 | 4.9 | 7.0 | 9.0 | . | . | 46 4 89 | - 0.67 | . | -32.79 | 1 45 | 31.43 | - 3.99 | |
| | 17 | β Arietis | S. | 11.9 | 14.4 | 16.0 | 22.7 | 24.9 | 27.0 | 33.6 | 35.2 | 38.0 | 48 24.86 | - 0.44 | -32.78 | -32.79 | 1 47 | 51.63 | + 0.01 | |
| | 18 | α Arietis | S. | 35.2 | 38.0 | 39.6 | 46.3 | 48.5 | 50.7 | 57.3 | 59.0 | 1.8 | 0 48.49 | - 0.38 | -32.74 | -32.78 | 2 0 | 15.33 | - 0.03 | |
| | 19 | Neptune | S. | 35.0 | 37.7 | 39.3 | 45.6 | 47.6 | 49.7 | 55.9 | 57.5 | 0.0 | 5 47.59 | - 0.66 | . | -32.78 | 2 5 | 14.15 | . | |
| | 20 | ι Cassiope (R.) | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 21 | ϵ Cassiope | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 22 | 5 Ursæ Minoris, S. P. | S. | . | . | 41.7 | 32.8 | 24.3 | 15.5 | 7.2 | . | . | 28 24.25 | - 5.73 | . | -32.78 | 14 27 | 45.74 | 0.00 | |
| | 23 | B. A. C. 878 ¹ | S. | 4.4 | 7.0 | 9.5 | 14.7 | 17.3 | 19.9 | . | . | . | 44 19.90 | - 1.83 | . | -32.78 | 2 43 | 45.29 | - 4.13 | |
| | 24 | B. A. C. 878 ² | S. | . | . | . | 22.7 | 25.3 | 30.7 | 32.6 | 35.7 | 44 20.22 | - 1.83 | . | -32.78 | 2 43 | 45.51 | - 4.13 | | |
| | 25 | μ^3 Arietis | S. | 51.1 | 53.0 | 55.5 | 1.7 | 4.0 | 6.3 | 12.6 | 14.3 | 16.9 | 50 4.03 | - 0.50 | . | -32.78 | 2 49 | 39.75 | - 4.42 | |
| | 26 | B. A. C. 937 ¹ | S. | 56.5 | 0.1 | 2.0 | . | . | . | . | 25.5 | 28.8 | 54 12.73 | - 1.93 | . | -32.77 | 2 53 | 38.03 | - 4.15 | |
| | 27 | B. A. C. 937 ² | S. | . | . | 8.0 | 10.7 | 13.6 | 16.2 | 18.8 | . | . | 54 13.47 | - 1.93 | . | -32.77 | 2 53 | 38.77 | - 4.15 | |
| | 28 | δ Persei (R.) | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 29 | δ Persei | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 30 | Velleda | S. | 29.4 | 32.0 | 33.6 | 40.5 | . | 44.9 | 51.4 | 53.2 | 56.2 | 51 42.65 | - 0.36 | . | -32.76 | 3 51 | 9.53 | . | |
| | 31 | Niobe | S. | 59.6 | 3.8 | 6.0 | 13.5 | 20.0 | 26.8 | 33.3 | 35.8 | 39.7 | 55 19.83 | + 0.64 | . | -32.76 | 3 54 | 47.71 | . | |
| | 32 | B. A. C. 1375 | S. | 47.5 | 50.0 | 51.7 | 57.9 | 0.1 | 2.2 | 8.5 | 10.0 | 12.7 | 22 0.07 | - 0.57 | . | -32.76 | 4 21 | 26.74 | - 4.71 | |
| | 33 | Vibilia | S. | 22.8 | 25.1 | 27.2 | 34.0 | 36.3 | 38.5 | 45.0 | 46.9 | 49.4 | 45 36.19 | - 0.40 | . | -32.76 | 4 45 | 3.03 | . | |
| | 34 | II Orionis (R.) | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 35 | II Orionis | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 36 | β Orionis | S. | 0.4 | 3.0 | 4.5 | 10.7 | 12.8 | 14.9 | 21.0 | 22.6 | 25.3 | 9 12.80 | - 1.06 | -32.73 | -32.75 | 5 8 | 33.99 | - 0.02 | |
| | 37 | β Tauri (R.) | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 38 | β Tauri | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 39 | δ Orionis | S. | 6.2 | 8.7 | 10.3 | 16.3 | 18.4 | 20.4 | 26.6 | 28.0 | 30.6 | 26 18.39 | - 0.89 | -32.76 | -32.75 | 5 25 | 44.75 | - 0.02 | |
| | 40 | ϵ Orionis | S. | 21.0 | 23.7 | 25.2 | 31.3 | 33.4 | 35.5 | 41.6 | 43.0 | 45.6 | 30 33.37 | - 0.90 | -32.77 | -32.75 | 5 29 | 59.72 | + 0.01 | |
| | 41 | B. A. C. 1951 | S. | 39.9 | 42.8 | 44.4 | 51.0 | 53.4 | 55.6 | 2.3 | 3.9 | 6.7 | 59 53.33 | - 0.34 | . | -32.74 | 5 59 | 20.25 | - 5.10 | |
| | 42 | Weisse (2) 1675 | S. | 9.3 | 12.0 | 13.6 | . | . | . | 31.0 | 32.7 | 35.4 | 57 22.33 | - 0.41 | . | -32.73 | 6 56 | 49.19 | - 4.90 | |
| | 43 | B. A. C. 2305 | S. | . | . | 18.7 | 21.0 | 23.3 | 25.4 | 27.7 | . | . | 57 23.23 | - 0.41 | . | -32.73 | 6 56 | 50.09 | - 4.90 | |
| | 44 | B. A. C. 2468 | S. | 50.2 | 52.8 | 54.1 | 58.4 | 0.5 | 2.6 | 4.6 | 6.8 | . | 22 2.59 | - 0.67 | . | -32.73 | 7 21 | 29.19 | - 4.44 | |
| | 45 | B. A. C. 2473 | S. | 19.0 | 21.6 | 23.0 | 29.4 | 31.5 | 33.6 | 39.9 | 41.4 | 44.0 | 23 31.49 | - 0.60 | . | -32.73 | 7 22 | 58.16 | - 4.53 | |
| | 46 | B. A. C. 2486 | S. | 57.0 | 59.6 | 1.2 | 7.4 | 9.7 | 11.8 | 18.2 | 19.8 | 22.4 | 27 0.68 | - 0.52 | . | -32.73 | 7 26 | 36.43 | - 4.64 | |
| | 47 | B. A. C. 2551 | S. | 22.0 | 24.8 | 26.5 | 33.3 | 35.5 | 37.7 | 44.5 | 46.2 | 49.0 | 37 35.50 | - 0.31 | . | -32.73 | 7 37 | 2.46 | - 4.91 | |
| | 48 | γ Ursæ Minoris, S. P. | S. | . | . | . | 45.0 | 54.5 | 5.0 | . | . | . | 47 44.83 | -66.21 | . | -32.72 | 19 46 | 5.90 | - 0.73 | |
| | 49 | B. A. C. 2639 | S. | 21.9 | 24.6 | 26.1 | 32.5 | 34.8 | 36.8 | 43.3 | 44.8 | 47.5 | 50 34.70 | - 0.51 | . | -32.72 | 7 50 | 1.47 | - 4.55 | |
| | 50 | B. A. C. 2664 | S. | 51.0 | 53.7 | 55.3 | 1.7 | 3.9 | 6.1 | 12.5 | 14.0 | 16.7 | 55 3.88 | - 0.50 | . | -32.72 | 7 54 | 30.66 | - 4.55 | |

6. Bisections at threads II-VI.

21, 39, 31, 32, 33, 35, 38, 42. Thread A used.

22. Bisections at sets B and D.

38. Both bisections near thread VII.

41. Telescope micrometer reading decreased two revolutions in reduction.

| Number. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Dis- tance, South. | External Thermom't. | Refraction. | Apparent North-Polar Distance. | Miscellan'us Corrections. | | | |
|---------|---------------------|--------|-------|-------|-----------------------|-------|-------|-------|-------|-----------------------------|--|------------------------|-------------|--------------------------------------|------------------------------|--------|-------------|--------|
| | Circle Division. | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | | | | | | | 4. | 5. | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | ° ' " | ° ' " | |
| 1 | 330 14 | 10 2.5 | 26.5 | 27.8 | 1.5 | 37 | .. | 190 | .. | 090 | .. | 72.1 | 29 42 29.7 | .. | + | 35.3 | 80 49 26.2 | + 1.4 |
| 2 | 353 12 | 5.2 | 28.5 | 0.4 | 6.0 | 35 | 520 | .. | .. | .. | 320 | 72.1 | 6 44 6.7 | 23.5 | + | 7.3 | 57 50 35.2 | - 4.1 |
| 3 | 353 12 | 5.2 | 28.5 | 0.4 | 6.0 | 35 | .. | 330 | .. | 170 | .. | 72.1 | 6 44 3.8 | .. | + | 7.3 | 57 50 32.3 | - 1.5 |
| 4 | 326 36 | 3.7 | 27.5 | 23.5 | 5.1 | 36 | .. | 980 | .. | 850 | .. | 72.1 | 33 20 27.8 | .. | + | 40.8 | 84 27 29.8 | - 2.1 |
| 5 | 349 22 | 2.5 | 25.6 | 23.5 | 2.7 | 35 | .. | 520 | .. | 380 | .. | 72.1 | 10 34 4.2 | .. | + | 11.5 | 61 40 36.9 | - 1.2 |
| 6 | 346 4 | 4.3 | 28.8 | 27.8 | 5.5 | 38 | 405 | 500 | 685 | 820 | 920 | 72.1 | 13 52 55.2 | .. | + | 15.3 | 64 59 31.7 | .. |
| 7 | 303 52 | 9 29 5 | 25.7 | 27.5 | 1.0 | 31 | .. | 402 | .. | 382 | .. | 73.6 | 51 3 2.0 | 27.6 | + 1 | 15.9 | 102 10 39.1 | .. |
| 8 | 308 52 | 9 29.5 | 25.7 | 27.5 | 1.0 | 30 | 512 | .. | .. | .. | 438 | 73.6 | 51 2 47.8 | .. | + 1 | 15.9 | 102 10 21.9 | .. |
| 9 | 348 38 | 10 2.0 | 27.3 | 28.4 | 2.7 | 35 | .. | 875 | .. | 820 | .. | 73.6 | 11 17 56.8 | .. | + | 12.3 | 62 24 30.3 | - 0.5 |
| 10 | 1 54 | 3.3 | 0.6 | 1.6 | 2.3 | 32 | .. | 100 | .. | 020 | .. | 73.6 | 358 1 16.1 | 29.6 | - | 2.1 | 49 7 35.2 | + 0.1 |
| 11 | 49 40 | 4.3 | 28.0 | 29.4 | 1.4 | 32 | 308 | .. | 342 | .. | 330 | 73.6 | 310 15 19.0 | 29.9 | - 1 | 12.1 | 1 20 23.1 | - 0.1 |
| 12 | 335 46 | 7.3 | 0.7 | 2.8 | 8.0 | 36 | .. | .. | .. | 085 | 090 | 73.6 | 24 10 21.0 | .. | + | 27.4 | 75 17 9.6 | + 0.2 |
| 13 | 3 42 | 3.5 | 29.5 | 1.5 | 4.2 | 30 | .. | 890 | .. | 825 | .. | 73.6 | 356 12 57.9 | .. | - | 4.1 | 47 19 15.0 | + 34.3 |
| 14 | 358 22 | 4.5 | 29.4 | 1.5 | 4.9 | 31 | 000 | .. | .. | 918 | .. | 73.6 | 1 33 0.1 | .. | + | 1.7 | 52 39 23.0 | + 33.0 |
| 15 | 331 14 | 5 3 | 0.3 | 2.4 | 7.0 | 30 | 225 | 260 | .. | .. | .. | 73.6 | 28 40 47.0 | .. | + | 33.4 | 79 47 43.6 | + 26.6 |
| 16 | 331 14 | 5.3 | 0.3 | 2.4 | 7.0 | 29 | .. | .. | .. | 855 | 805 | 73.6 | 28 40 44.4 | .. | + | 33.4 | 79 47 39.0 | + 26.6 |
| 17 | 341 14 | 6.4 | 1.8 | 0.6 | 7.7 | 29 | 960 | .. | .. | 868 | .. | 73.6 | 18 40 44.9 | .. | + | 20.7 | 69 47 26.8 | + 0.5 |
| 18 | 343 56 | 6.3 | 2.0 | 1.7 | 7.8 | 36 | 192 | 198 | .. | 080 | 990 | 73.6 | 16 0 20.6 | .. | + | 17.5 | 67 6 59.3 | - 0.4 |
| 19 | 331 50 | 4.2 | 28.6 | 29.7 | 4.5 | 37 | .. | 230 | .. | 130 | .. | 73.6 | 28 6 34.0 | .. | + | 32.6 | 79 13 27.8 | .. |
| 20 | 152 0 | 3.3 | 28.7 | 2.0 | 5.3 | 39 | 065 | 085 | .. | .. | .. | 73.6 | 207 57 1.4 | .. | + | 32.4 | 23 8 47.4 | - 3.6 |
| 21 | 27 52 | 3.0 | 26.6 | 29.3 | 2.1 | 41 | .. | .. | .. | 120 | 195 | 73.6 | 332 3 2.2 | .. | - | 32.4 | 23 8 51.2 | + 0.2 |
| 22 | 64 46 | 6.4 | 0.0 | 2.0 | 5.8 | 35 | 280 | .. | .. | .. | 180 | 73.6 | 295 10 5.6 | 29.5 | - 2 | 9.5 | 316 14 17.3 | + 1.9 |
| 23 | 283 12 | 6.0 | 0.9 | 4.0 | 7.5 | 36 | 120 | 170 | .. | .. | .. | 73.6 | 70 44 19.7 | .. | + | 4 14.6 | 127 54 55.5 | + 15.3 |
| 24 | 283 12 | 6.0 | 0.9 | 4.0 | 7.5 | 36 | .. | .. | .. | 440 | 390 | 73.6 | 76 44 25.6 | .. | + | 4 14.6 | 127 55 1.4 | + 15.3 |
| 25 | 338 34 | 6.1 | 0.9 | 1.6 | 7.6 | 31 | .. | 530 | .. | 465 | .. | 73.6 | 21 21 9.8 | .. | + | 23.9 | 72 27 54.9 | + 25.9 |
| 26 | 280 20 | 7.5 | 2.6 | 5.6 | 10.0 | 35 | 470 | 330 | .. | .. | .. | 73.6 | 79 36 10.1 | .. | + | 5 23.3 | 130 47 54.6 | + 14.9 |
| 27 | 280 20 | 7.5 | 2.6 | 5.6 | 10.0 | 35 | .. | .. | .. | 170 | 230 | 73.6 | 79 36 8.8 | .. | + | 5 23.3 | 130 47 53.3 | + 14.9 |
| 28 | 171 26 | 10.0 | 8.0 | 8.4 | 10.0 | 34 | 710 | 575 | .. | .. | .. | 73.6 | 188 30 1.0 | .. | + | 9.2 | 42 36 11.0 | - 3.4 |
| 29 | 8 26 | 11.5 | 6.5 | 7.5 | 10.6 | 34 | .. | .. | .. | 512 | 420 | 73.6 | 351 30 1.2 | .. | - | 9.2 | 42 36 13.2 | - 1.2 |
| 30 | 344 40 | 9 28.6 | 24.0 | 24.5 | 29.6 | 39 | 460 | 330 | .. | .. | .. | 73.6 | 15 14 28.6 | .. | + | 16.7 | 66 21 6.5 | - 1.6 |
| 31 | 12 44 | 10 6 8 | 2.5 | 3.9 | 8.8 | 41 | .. | 740 | .. | 880 | .. | 73.6 | 347 11 15.6 | .. | - | 13.9 | 38 17 22.9 | + 0.9 |
| 32 | 335 30 | 7.9 | 3.9 | 3.5 | 9.4 | 41 | .. | 015 | .. | 960 | .. | 73.6 | 24 25 3.3 | .. | + | 27.8 | 75 31 52.3 | + 19.0 |
| 33 | 342 52 | 6.0 | 1.4 | 2.1 | 8.0 | 39 | .. | 370 | .. | 270 | .. | 73.6 | 17 2 36.0 | 27.8 | + | 18.8 | 63 9 16.0 | - 2.0 |
| 34 | 203 36 | 7 0 | 4.0 | 4.5 | 5.5 | 38 | 120 | 072 | .. | .. | .. | 73.6 | 156 20 50.5 | .. | - | 26.9 | 74 45 57.6 | + 0.5 |
| 35 | 336 16 | 6.5 | 3.0 | 3.5 | 7.2 | 41 | .. | .. | .. | 441 | 441 | 73.6 | 23 39 10.2 | .. | + | 26.9 | 74 45 58.3 | + 1.2 |
| 36 | 312 42 | 5.6 | 29.5 | 1.4 | 7.2 | 31 | .. | 300 | .. | 140 | .. | 73.6 | 47 13 4.3 | .. | + | 1 6.3 | 98 20 31.8 | - 0.5 |
| 37 | 190 20 | 8.2 | 6.5 | 5.9 | 7.5 | 37 | 910 | 820 | .. | .. | .. | 73.6 | 169 36 48.6 | .. | - | 11.3 | 61 29 43.9 | - 1.0 |
| 38 | 349 32 | 4.0 | 26.4 | 29.3 | 3.9 | 41 | .. | .. | .. | 772 | 732 | 73.6 | 10 23 11.6 | .. | + | 11.3 | 61 29 44.1 | - 0.8 |
| 39 | 320 40 | 10.6 | 5.1 | 5.5 | 11.7 | 35 | .. | 110 | .. | 062 | .. | 73.6 | 39 16 8.4 | .. | + | 50.3 | 90 23 19.9 | - 0.3 |
| 40 | 319 46 | 7.5 | 1.6 | 3.2 | 8.8 | 32 | .. | 915 | .. | 805 | .. | 73.6 | 40 9 31.4 | 26.2 | + | 51.9 | 91 16 44.5 | - 0.2 |
| 41 | 344 42 | 7.0 | 2.5 | 2.8 | 8.7 | 38 | .. | 185 | .. | 070 | .. | 73.6 | 15 14 21.5 | 25.5 | + | 16.8 | 66 20 59.5 | + 8.5 |
| 42 | 341 48 | 8.3 | 3.0 | 3.0 | 9.0 | 39 | .. | .. | .. | 465 | 480 | 73.6 | 18 6 40.9 | .. | + | 20.2 | 69 13 22.3 | + 1.8 |
| 43 | 341 48 | 8.3 | 3.0 | 3.0 | 9.0 | 35 | 765 | 680 | .. | .. | .. | 73.6 | 18 8 15.0 | 24.4 | + | 20.2 | 69 14 56.4 | + 1.8 |
| 44 | 330 14 | 7.0 | 1.9 | 2.5 | 7.6 | 36 | 930 | 960 | .. | .. | .. | 73.6 | 29 42 32.6 | .. | + | 35.2 | 80 49 29.0 | + 1.1 |
| 45 | 333 18 | 9.0 | 3.5 | 5.7 | 10.2 | 32 | .. | .. | .. | 220 | 290 | 73.0 | 26 37 24.9 | .. | + | 31.0 | 77 44 17.1 | + 0.3 |
| 46 | 337 8 | 4.6 | 29.5 | 28.9 | 4.0 | 33 | .. | 872 | .. | 790 | .. | 73.6 | 22 47 42.8 | .. | + | 26.0 | 73 54 30.0 | - 0.9 |
| 47 | 345 44 | 3.5 | 28.0 | 29.6 | 5.1 | 34 | .. | 270 | .. | 120 | .. | 73.6 | 14 11 48.2 | .. | + | 15.6 | 65 18 25.0 | - 4.0 |
| 48 | 52 6 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 49 | 337 10 | 9.6 | 5.0 | 4.1 | 9.5 | 35 | .. | 900 | .. | 835 | .. | 73.6 | 22 46 4.0 | .. | + | 25.9 | 73 52 51.1 | - 3.5 |
| 50 | 337 50 | 5.7 | 0.7 | 0.5 | 5.0 | 33 | .. | 180 | .. | 085 | .. | 73.6 | 22 5 33.3 | .. | + | 25.1 | 73 12 19.6 | - 4.2 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| 2 | 30.18 | 27.0 | 6 | - 14 19.1 | - 16 31.6 | .. | - 30 50.7 |
| 7 | 30.17 | 28.0 | 7 | - 5.6 | - 7.3 | .. | - 12.9 |
| 10 | 30.18 | 30.6 | 8 | - 5.6 | + 7.3 | - 0.4 | + 1.3 |
| 11 | 30.16 | 31.1 | 19 | - 0.1 | .. | .. | - 0.1 |
| 22 | 30.16 | 31.0 | | | | | |
| 33 | 30.15 | 29.4 | | | | | |
| 40 | 30.14 | 29.0 | | | | | |
| 41 | 30.13 | 28.6 | | | | | |
| 43 | 30.13 | 27.2 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|-----------------|---------|---------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|----------|-------------|--------------|----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | |
| | | | | | | | | | | | | | | | | | | |
| 1876. Dec. 5 | 1 | B. A. C. 2789 . . | S. | 33.8 | 36.8 | 38.3 | 45.2 | 47.5 | 49.7 | 56.1 | 57.9 | 0.6 | m. 13 47.32 | s. - 0.31 | . | -32.72 | h. 8 13 14.29 | s. - 4.73 |
| | 2 | B. A. C. 2814 . . | S. | 49.5 | 51.8 | 53.5 | 59.5 | 1.7 | 3.7 | 9.8 | 11.4 | 14.0 | 19 1.66 | - 0.93 | . | -32.72 | 8 18 28.01 | - 3.89 |
| | 3 | B. A. C. 2825 . . | S. | 53.0 | 55.8 | 57.3 | 3.3 | 5.4 | 7.5 | 13.4 | 15.0 | 17.6 | 20 5.37 | - 0.93 | . | -32.72 | 8 19 31.72 | - 3.88 |
| | 4 | B. A. C. 2853 . . | S. | 56.3 | 58.9 | 0.4 | 6.9 | 9.2 | 11.2 | 17.7 | 19.3 | 22.0 | 25 9.10 | - 0.49 | . | -32.72 | 8 24 35.92 | - 4.47 |
| | 5 | B. A. C. 2953 . . | S. | 2.7 | 5.4 | 7.2 | 13.5 | 15.8 | 18.0 | 24.4 | 26.0 | 28.7 | 38 15.74 | - 0.45 | . | -32.72 | 8 37 42.57 | - 4.40 |
| | 6 | B. A. C. 2970 . . | S. | 33.0 | 35.7 | 37.2 | 43.5 | 45.6 | 47.7 | 53.9 | 55.7 | 58.3 | 40 45.62 | - 0.59 | . | -32.72 | 8 40 12.31 | - 4.20 |
| | 7 | B. A. C. 2957 . . | S. | 33.0 | 35.6 | 37.0 | 43.2 | 45.4 | 47.2 | 53.4 | 55.0 | 57.5 | 43 45.26 | - 0.92 | . | -32.72 | 8 43 11.62 | - 3.79 |
| | 8 | B. A. C. 3117 . . | S. | 37.8 | 40.6 | 42.2 | 48.9 | 51.0 | 53.3 | 59.9 | 1.7 | 4.3 | 2 51.03 | - 0.36 | . | -32.71 | 9 2 18.01 | - 4.38 |
| | 9 | B. A. C. 3123 . . | S. | 37.4 | 40.3 | 41.9 | 48.6 | 50.7 | 53.0 | 59.5 | 1.3 | 4.0 | 3 50.74 | - 0.36 | . | -32.71 | 9 3 17.57 | - 4.37 |
| | 10 | B. A. C. 3133 . . | S. | 9.2 | 11.8 | 13.4 | 17.4 | 19.4 | 21.6 | 23.7 | 25.8 | . | 6 21.57 | - 0.76 | . | -32.71 | 9 5 48.10 | - 3.85 |
| | 11 | B. A. C. 3144 . . | S. | . | 9.7 | 12.3 | 14.8 | 17.3 | 19.7 | 24.7 | 26.5 | 29.7 | 8 14.75 | - 0.01 | . | -32.71 | 9 7 42.03 | - 4.81 |
| | 12 | B. A. C. 3227 . . | S. | 13.7 | 16.3 | 17.9 | 24.0 | 26.2 | 28.3 | 31.4 | 36.0 | 38.7 | 22 26.17 | - 0.66 | . | -32.71 | 9 21 52.80 | - 3.89 |
| | 13 | B. A. C. 3285 . . | S. | 7.8 | 10.6 | 12.3 | 19.0 | 21.3 | 23.5 | 30.2 | 31.9 | 34.8 | 31 21.27 | - 0.29 | . | -32.71 | 9 30 48.27 | - 4.20 |
| | 14 | Leonis | S. | 12.3 | 15.0 | 16.7 | 23.0 | 25.8 | 28.0 | 34.8 | 36.3 | 39.3 | 39 25.76 | - 0.31 | -32.69 | -32.71 | 9 38 52.74 | - 0.08 |
| | 15 | Moon II, S. . . | S. | 45.7 | 48.4 | 50.0 | 56.7 | 58.7 | 0.9 | 7.4 | 9.0 | 11.9 | 44 58.74 | - 0.53 | . | -32.70 | 9 44 25.51 | -70.17 |
| | 16 | B. A. C. 3415 . . | S. | 4.3 | 6.9 | 8.4 | 14.6 | 16.6 | 18.7 | 25.0 | 26.6 | 29.0 | 54 16.68 | - 0.68 | . | -32.70 | 9 53 43.30 | - 3.67 |
| | 17 | a Leonis | S. | 10.6 | 13.0 | 14.6 | 20.9 | 23.0 | 25.0 | 31.3 | 32.9 | 35.5 | 2 22.98 | - 0.59 | -32.69 | -32.70 | 10 1 49.69 | - 0.05 |
| | 18 | Weisse (2) 234 . | S. | 17.0 | 19.6 | 21.3 | 25.5 | 27.6 | 29.8 | . | . | . | 13 29.91 | - 0.40 | . | -32.70 | 10 12 50.81 | - 3.81 |
| | 19 | γ ¹ Leonis | S. | 31.8 | 34.7 | 36.4 | 40.6 | 44.8 | 49.3 | 53.7 | 55.3 | 58.2 | 13 44.98 | - 0.40 | -32.74 | -32.70 | 10 13 11.88 | + 0.02 |
| | 20 | ρ Leonis (R.) . . | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 21 | ρ Leonis | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 22 | l Leonis (R.) . . | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 23 | l Leonis | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 24 | a Ursæ Majoris (R.) | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 25 | a Ursæ Majoris . . | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 26 | δ Leonis | S. | 54.0 | 56.8 | 58.6 | 5.0 | 7.0 | 9.3 | 15.8 | 17.5 | 20.2 | 8 7.13 | - 0.41 | -32.61 | -32.69 | 11 7 34.03 | - 0.14 |
| | 27 | δ Crateris | S. | 32.7 | 35.4 | 37.0 | 43.2 | 45.4 | 47.5 | 53.8 | 55.3 | 58.0 | 13 45.37 | - 1.16 | -32.85 | -32.69 | 11 13 11.52 | + 0.14 |
| | 28 | γ Ursæ Majoris (R) | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 29 | γ Ursæ Majoris . . | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 30 | a Bootis (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 31 | a Bootis | P. | . | . | . | . | . | . | 14.0 | 45.7 | 48.3 | 10 35.34 | - 0.54 | -32.57 | -32.60 | 14 10 2.20 | - 0.03 |
| | 32 | θ Bootis (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 33 | θ Bootis | P. | . | . | . | . | . | . | 14.9 | 47.3 | 51.4 | 21 31.42 | + 0.65 | . | -32.60 | 14 20 50.47 | + 0.02 |
| | 34 | α ² Bootis | P. | 55.0 | 57.9 | 59.6 | 6.5 | 8.8 | 11.0 | 18.0 | 19.8 | 22.7 | 40 8.81 | - 0.33 | -32.55 | -32.60 | 14 39 55.88 | - 0.07 |
| | 35 | α ¹ Libræ | P. | 24.6 | 27.3 | 28.9 | 35.2 | 37.4 | 39.5 | 45.8 | 47.3 | 50.9 | 44 37.33 | - 1.36 | -32.68 | -32.60 | 14 44 3.37 | + 0.07 |
| | 36 | β Biotis | P. | 33.7 | 37.2 | 39.2 | 47.2 | 50.0 | 52.8 | 0.9 | 2.7 | 6.0 | 57 49.97 | + 0.09 | . | -32.60 | 14 57 17.46 | - 0.14 |
| | 37 | a Cor Borealis (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 38 | a Coronæ Borealis . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 39 | B. A. C. 5216 . . | P. | 50.0 | 52.6 | 54.2 | 0.6 | 2.7 | 4.8 | 11.3 | 12.7 | 15.5 | 41 2.71 | - 0.62 | . | -32.60 | 15 40 29.49 | - 1.55 |
| | 40 | B. A. C. 5230 . . | P. | 32.2 | 34.8 | 36.4 | 42.5 | 44.6 | 46.7 | 52.6 | 54.0 | 56.8 | 43 44.51 | - 1.05 | . | -32.60 | 15 43 10.86 | - 1.85 |
| | 41 | B. A. C. 5284 . . | P. | 5.6 | 8.2 | 9.8 | 16.2 | 18.4 | 20.4 | 26.8 | 28.4 | 31.0 | 51 18.31 | - 0.61 | . | -32.60 | 15 50 45.10 | - 1.50 |
| 6 | 42 | Sun I, N. | P. | . | . | 10.6 | 12.8 | 15.0 | 17.3 | 21.6 | 23.3 | 26.0 | 54 12.78 | - 1.52 | . | -32.59 | 16 53 38.67 | . |
| | 43 | Sun II, S. | P. | 20.9 | 23.7 | 25.2 | 31.9 | 34.0 | 36.3 | 43.0 | 44.6 | 47.1 | 56 34.11 | - 1.52 | . | -32.59 | 16 56 0.00 | . |
| | 44 | β Draconis (R) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 45 | β Draconis | P. | . | . | . | 9.1 | 12.3 | 15.7 | 22.5 | 24.9 | 29.0 | 23 9.02 | + 0.73 | . | -32.59 | 17 27 37.16 | + 0.08 |
| | 46 | γ Draconis (R.) . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 47 | γ Draconis | P. | . | . | . | . | 21.4 | 28.0 | 30.5 | 34.4 | 54 14.85 | + 0.60 | . | -32.59 | 17 53 42.05 | - 0.11 | |
| | 48 | δ Ursæ Minoris . . | P. | . | . | 40.3 | 15.3 | 19.7 | 23.4 | 58.0 | . | . | 11 49.52 | + 21.03 | . | -32.59 | 18 11 37.96 | + 0.11 |
| | 49 | a Lyre | P. | 1.6 | 4.9 | 6.8 | 14.6 | 17.2 | 19.8 | 27.7 | 29.7 | 33.0 | 33 17.26 | + 0.12 | -32.59 | -32.59 | 18 32 44.79 | + 0.02 |
| | 50 | β Lyre | P. | 48.9 | 51.9 | 53.7 | 1.0 | 3.5 | 6.0 | 13.3 | 15.0 | 18.2 | 46 3.50 | - 0.07 | -32.61 | -32.59 | 18 45 30.84 | + 0.05 |

2, 6, 7, 18. Thread A used.
 3, 9, 23, 25, 29, 46. Thread B used.
 10. Bisections at threads II and V.
 11. Telescope micrometer reading increased one revolution in reduction.
 15, 48. Bisections at sets B and D.
 19. Both bisections near thread VII.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom ^r . | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------------------|-------------|--------------------------------|----------------------------|-------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | | r. " | " " | " " | " " | | | | | | | | | | | | | |
| 1 | 345 28 | 10 7.4 | 2.2 | 2.0 | 7.9 | 38 | .. | 060 | .. | 935 | .. | 73.6 | 14 28 49.8 | .. | + | 16.0 | 65 35 27.0 | - 8.3 |
| 2 | 317 38 | 8.2 | 2.5 | 4.2 | 10.0 | 27 | 930 | 948 | .. | .. | .. | 73.6 | 42 13 42.4 | .. | + | 56.1 | 93 20 59.7 | - 1.5 |
| 3 | 317 38 | 8.2 | 2.5 | 4.2 | 10.0 | 43 | .. | .. | .. | 842 | 780 | 73.6 | 42 22 53.3 | .. | + | 56.4 | 93 30 10.9 | - 1.5 |
| 4 | 339 34 | 7.4 | 1.6 | 1.3 | 8.3 | 37 | 430 | 380 | .. | .. | .. | 73.6 | 20 22 39.6 | .. | + | 23.0 | 71 29 23.8 | - 8.0 |
| 5 | 339 40 | 3.4 | 27.3 | 27.5 | 2.6 | 38 | 530 | 550 | .. | .. | .. | 73.6 | 20 16 52.6 | 23.0 | + | 22.9 | 71 23 36.7 | - 9.5 |
| 6 | 333 36 | 7.8 | 2.0 | 2.0 | 8.5 | 42 | 702 | 535 | .. | .. | .. | 73.6 | 26 19 26.2 | .. | + | 30.6 | 77 26 18.0 | - 8.0 |
| 7 | 318 4 | 6.9 | 0.8 | 2.0 | 8.0 | 44 | .. | .. | .. | 045 | 960 | 73.6 | 41 51 48.6 | .. | + | 55.4 | 92 59 5.2 | - 3.8 |
| 8 | 343 36 | 8.0 | 3.0 | 3.5 | 8.2 | 37 | 900 | 915 | .. | .. | .. | 73.6 | 16 20 48.4 | .. | + | 18.2 | 67 27 27.8 | -13.2 |
| 9 | 343 36 | 8.0 | 3.0 | 3.5 | 8.2 | 38 | 945 | 985 | .. | .. | .. | 73.6 | 16 23 36.9 | .. | + | 18.2 | 67 30 16.3 | -13.3 |
| 10 | 325 26 | 6.2 | 0.5 | 0.0 | 7.0 | 37 | .. | 225 | .. | 115 | .. | 73.6 | 34 30 35.3 | .. | + | 42.5 | 85 37 39.0 | - 8.0 |
| 11 | 356 10 | 2.3 | 25.5 | 27.0 | 0.0 | 31 | .. | .. | .. | 985 | 992 | 73.6 | 3 45 12.7 | .. | + | 4.1 | 54 51 38.0 | -17.5 |
| 12 | 330 38 | 5.5 | 0.0 | 1.2 | 5.5 | 32 | 955 | 910 | .. | .. | .. | 73.6 | 29 17 29.4 | .. | + | 34.7 | 80 24 25.3 | -11.1 |
| 13 | 346 16 | 4.1 | 28.5 | 29.5 | 5.2 | 35 | 370 | 330 | .. | .. | .. | 73.6 | 13 40 5.4 | 23.0 | + | 15.0 | 64 46 41.6 | -17.0 |
| 14 | 345 24 | 4.1 | 28.0 | 29.5 | 4.0 | 37 | 935 | 925 | .. | .. | .. | 73.6 | 14 32 59.8 | .. | + | 16.0 | 65 39 37.0 | - 0.6 |
| 15 | 336 8 | 6.0 | 29.3 | 29.7 | 6.1 | 37 | 552 | .. | 755 | .. | 890 | 73.6 | 23 48 43.5 | .. | + | 27.3 | 74 55 32.0 | .. |
| 16 | 329 42 | 6.0 | 1.0 | 0.5 | 6.0 | 38 | .. | .. | .. | 530 | 525 | 73.6 | 30 14 57.2 | .. | + | 36.1 | 81 21 54.5 | -13.5 |
| 17 | 333 38 | 4.5 | 29.2 | 0.5 | 6.3 | 38 | .. | 910 | .. | 830 | .. | 73.6 | 26 19 1.0 | 22.2 | + | 30.7 | 77 25 52.9 | - 0.6 |
| 18 | 341 30 | 2.8 | 27.3 | 26.8 | 3.1 | 38 | .. | 500 | .. | 390 | .. | 73.6 | 18 24 18.2 | .. | + | 20.6 | 69 31 0.0 | -19.1 |
| 19 | 341 30 | 2.8 | 27.3 | 26.8 | 3.1 | 33 | .. | .. | .. | 080 | 130 | 73.6 | 18 25 31.2 | .. | + | 20.7 | 69 32 13.1 | - 0.1 |
| 20 | 208 52 | 6.0 | 3.9 | 4.6 | 6.2 | 32 | 040 | 940 | .. | .. | .. | 73.6 | 151 3 17.0 | .. | - | 34.3 | 80 3 38.5 | + 1.1 |
| 21 | 331 0 | 6.0 | 3.0 | 29.1 | 6.1 | 37 | .. | .. | .. | 468 | 458 | 73.6 | 28 56 41.1 | .. | + | 34.3 | 80 3 36.6 | - 0.8 |
| 22 | 207 36 | 7.5 | 4.1 | 6.0 | 7.0 | 29 | 345 | 355 | .. | .. | .. | 73.6 | 152 18 37.5 | .. | - | 32.6 | 78 48 16.3 | + 2.3 |
| 23 | 332 16 | 4.7 | 29.0 | 29.6 | 3.4 | 30 | .. | .. | .. | 055 | 065 | 73.6 | 27 41 18.3 | .. | + | 32.6 | 78 48 12.1 | - 1.9 |
| 24 | 156 24 | 1.1 | 27.6 | 29.5 | 1.1 | 29 | 450 | 420 | .. | .. | .. | 73.6 | 203 30 31.6 | .. | + | 27.0 | 27 35 22.6 | - 0.2 |
| 25 | 23 28 | 6.1 | 1.6 | 3.5 | 6.9 | 30 | .. | .. | .. | 370 | 230 | 73.6 | 336 29 25.7 | .. | - | 27.0 | 27 35 19.9 | - 2.9 |
| 26 | 342 14 | 8.5 | 3.7 | 3.5 | 9.2 | 32 | .. | 785 | .. | 682 | .. | 73.6 | 17 41 30.5 | .. | + | 19.8 | 68 48 11.5 | - 0.8 |
| 27 | 306 56 | 6.0 | 2.0 | 2.5 | 7.5 | 30 | 500 | 420 | .. | .. | .. | 73.6 | 52 58 52.8 | 20.7 | + | 22.3 | 104 6 36.3 | - 1.7 |
| 28 | 164 26 | 9.0 | 6.0 | 7.0 | 10.5 | 28 | 960 | 960 | .. | .. | .. | 73.6 | 195 23 32.8 | .. | + | 17.2 | 35 37 31.2 | - 0.4 |
| 29 | 15 26 | 4.0 | 28.0 | 2.0 | 5.3 | 30 | .. | .. | .. | 535 | 530 | 73.6 | 344 31 26.8 | 20.2 | - | 17.2 | 35 37 30.8 | - 0.8 |
| 30 | 199 0 | 7.5 | 5.2 | 4.8 | 4.0 | 34 | 920 | 840 | .. | .. | .. | 72.1 | 160 55 59.8 | 25.6 | - | 21.3 | 70 10 42.7 | + 1.8 |
| 31 | 340 52 | 3.1 | 28 0 | 28.9 | 3.5 | 34 | .. | .. | .. | 985 | 925 | 72.1 | 19 3 58.5 | .. | + | 21.3 | 70 10 41.0 | + 0.1 |
| 32 | 166 24 | 6.4 | 3.9 | 3.9 | 6.1 | 31 | 410 | 320 | .. | .. | .. | 72.1 | 193 31 5.2 | .. | + | 14.8 | 37 35 1.2 | - 0.8 |
| 33 | 13 28 | 3.5 | 29.8 | 1.0 | 3.9 | 38 | .. | .. | .. | 625 | 580 | 72.1 | 346 23 56.1 | .. | - | 14.8 | 37 35 2.5 | + 0.5 |
| 34 | 345 38 | 7.1 | 2.7 | 3.0 | 7.5 | 34 | .. | 730 | .. | 640 | .. | 72.1 | 11 17 57.7 | 27.5 | + | 12.3 | 62 24 31.2 | + 0.1 |
| 35 | 305 32 | 5.4 | 1.2 | 2.2 | 7.2 | 34 | .. | 930 | .. | 825 | .. | 72.1 | 54 23 59.4 | .. | + | 25.5 | 105 31 46.1 | + 0.9 |
| 36 | 1 54 | 2.4 | 28.8 | 29.7 | 2.3 | 32 | .. | 285 | .. | 190 | .. | 72.1 | 358 1 16.1 | .. | - | 2.1 | 49 7 35.2 | - 0.2 |
| 37 | 191 42 | 4.0 | 3.5 | 3.0 | 1.9 | 35 | 885 | 850 | .. | .. | .. | 72.1 | 168 14 12.5 | .. | - | 12.7 | 62 52 21.1 | + 1.0 |
| 38 | 348 10 | 6.8 | 1.6 | 2.4 | 6.5 | 33 | .. | .. | .. | 920 | 870 | 72.1 | 11 45 45.9 | .. | + | 12.7 | 62 52 19.8 | - 0.6 |
| 39 | 336 50 | 2.2 | 26.9 | 28.5 | 1.6 | 30 | .. | 655 | .. | 555 | .. | 72.1 | 23 4 49.9 | 32.3 | + | 25.9 | 74 11 37.0 | -18.3 |
| 40 | 318 0 | 3.5 | 29.8 | 0.9 | 7.0 | 34 | .. | 825 | .. | 720 | .. | 72.1 | 41 55 56.6 | .. | + | 54.5 | 93 3 12.3 | -15.8 |
| 41 | 337 6 | 4.2 | 0.3 | 0.5 | 6.0 | 32 | .. | 940 | .. | 830 | .. | 72.1 | 22 49 27.8 | 32.6 | + | 25.5 | 73 56 14.5 | -17.6 |
| 42 | 298 44 | 1.6 | 28.2 | 0.5 | 3.2 | 36 | 580 | 525 | .. | .. | .. | 72.1 | 61 12 21.0 | .. | + | 49.3 | 112 20 31.5 | .. |
| 43 | 298 12 | 1.7 | 28.2 | 29.9 | 3.4 | 38 | .. | .. | .. | 315 | 285 | 72.1 | 61 44 49.1 | 35.0 | + | 51.8 | 112 53 2.1 | .. |
| 44 | 166 26 | 6.8 | 5.8 | 4.9 | 8.6 | 33 | 470 | 375 | .. | .. | .. | 72.1 | 193 29 38.1 | .. | + | 14.4 | 37 36 23.7 | - 2.0 |
| 45 | 13 26 | 4.4 | 0.2 | 0.8 | 5.5 | 36 | .. | .. | .. | 405 | 340 | 72.1 | 346 30 22.6 | 36.2 | - | 14.4 | 37 36 29.4 | - 1.3 |
| 46 | 167 22 | 5.0 | 2.8 | 1.9 | 5.6 | 31 | 280 | 240 | .. | .. | .. | 72.1 | 192 36 20.6 | .. | + | 13.4 | 38 29 47.2 | - 2.2 |
| 47 | 12 32 | 6.8 | 2.8 | 2.9 | 8.8 | 33 | .. | .. | .. | 480 | 440 | 72.1 | 347 23 40.6 | 37.3 | - | 13.4 | 38 29 48.4 | - 1.0 |
| 48 | 47 38 | 7.9 | 3.5 | 3.0 | 7.3 | 35 | .. | 890 | .. | 860 | .. | 72.1 | 312 18 16.7 | 37.2 | - | 5.7 | 3 23 32.2 | - 0.6 |
| 49 | 359 42 | 5.0 | 1.9 | 2.3 | 6.3 | 32 | 875 | 855 | .. | 770 | 755 | 72.1 | 0 13 28.1 | 37.3 | + | 0.2 | 51 19 49.5 | + 0.5 |
| 50 | 354 16 | 9.7 | 7.0 | 6.5 | 10.6 | 35 | 930 | 900 | .. | 790 | 760 | 72.1 | 5 40 19.1 | .. | + | 5.9 | 56 46 46.2 | + 0.1 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " " | " " | " " | " " |
| 5 | 30.11 | 25.9 | | | | | |
| 13 | 30.10 | 25.6 | 15 | -23 49.9 | - 16 15.0 | .. | - 40 4.9 |
| 17 | 30.10 | 25.2 | 42 | - 7.9 | + 16 15.3 | .. | + 16 7.4 |
| 27 | 30.10 | 24.8 | 43 | - 7.9 | - 16 15.3 | .. | - 16 23.2 |
| 29 | 30.10 | 24.0 | | | | | |
| 30 | 30.12 | 27.5 | | | | | |
| 34 | 30.12 | 29.0 | | | | | |
| 39 | 30.12 | 33.2 | | | | | |
| 41 | 30.11 | 33.8 | | | | | |
| 43 | 30.08 | 35.5 | | | | | |
| 45 | 30.04 | 35.8 | | | | | |
| 47 | 30.02 | 36.7 | | | | | |
| 48 | 30.01 | 38.0 | | | | | |
| 49 | 30.00 | 38.0 | | | | | |

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE | Number | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. |
|--------------|--------|--------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|-----------------|----------------|---------------------------|--------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock apparent. | Clock adopted. | h. m. s. | s. | |
| 1876, Dec. 6 | | | | | | | | | | | | | m. s. | s. | s. | s. | | | s. |
| | 1 | B. A. C. 6487 | P. | 21.3 | 24.3 | 25.9 | 32.0 | 34.4 | 36.4 | 42.8 | 44.3 | 46.9 | 54 34.30 | - 0.59 | . | -32.59 | 18 54 1.12 | - 1.46 | |
| | 2 | Aquila | P. | 4.7 | 7.3 | 9.0 | 15.1 | 17.3 | 19.4 | 25.8 | 27.4 | 30.0 | 0 17.33 | - 0.62 | -32.56 | -32.59 | 18 59 44.12 | + 0.05 | |
| | 3 | B. A. C. 78 | E. | 48.3 | 51.9 | 54.0 | 2.5 | 5.4 | 8.0 | 16.6 | 18.8 | 22.2 | 18 5.30 | + 0.32 | . | -32.54 | 0 17 33.08 | - 3.24 | |
| | 4 | Groombridge 63 | E. | 6.5 | 10.0 | 12.0 | 20.5 | 23.4 | 26.3 | 31.7 | 36.9 | 40.5 | 19 23.42 | + 0.32 | . | -32.54 | 0 18 51.20 | - 3.25 | |
| | 5 | B. A. C. 100 | E. | 52.7 | 56.1 | 58.4 | 6.9 | 9.7 | 12.6 | 21.0 | 23.2 | 26.6 | 22 9.69 | + 0.32 | . | -32.54 | 0 21 37.47 | - 3.29 | |
| | 6 | α Draconis, S. P. | E. | 27.5 | 49.9 | 15.5 | 57.1 | 51.0 | 45.0 | 26.1 | 22.0 | 14.4 | 28 50.98 | - 4.58 | . | -32.54 | 12 28 13.86 | + 0.23 | |
| | 7 | β Ceti | E. | 46.6 | 49.4 | 51.0 | 57.5 | 59.6 | 1.7 | 8.3 | 9.8 | 12.6 | 37 59.61 | - 1.36 | -32.58 | -32.53 | 0 37 25.69 | + 0.10 | |
| | 8 | ε Piscium | E. | 55.0 | 57.7 | 59.2 | 5.4 | 7.5 | 9.5 | 15.8 | 17.4 | 19.9 | 57 7.49 | - 6.77 | -32.48 | -32.53 | 0 56 34.19 | - 0.03 | |
| | 9 | Polaris | E. | 44.5 | 32.5 | 39.0 | . | . | . | . | 22.0 | 11.0 | 13 27.64 | +54.85 | . | -32.52 | 1 13 49.97 | - 0.31 | |
| | 10 | Polaris | P. | . | . | 31.0 | 59.5 | 26.9 | 53.2 | 22.8 | . | . | 13 27.18 | +54.85 | . | -32.48 | 1 13 49.55 | - 0.73 | |
| | 11 | θ Ceti | E. | 14.6 | 17.2 | 18.8 | 24.9 | 27.0 | 29.0 | 35.3 | 36.8 | 39.5 | 18 27.01 | - 1.14 | -32.47 | -32.51 | 1 17 53.36 | - 0.02 | |
| | 12 | η Piscium | P. | 15.3 | 18.0 | 19.6 | 25.0 | 28.0 | 30.1 | 35.4 | 38.0 | 40.6 | 25 27.99 | - 0.56 | -32.53 | -32.47 | 1 24 54.93 | + 0.13 | |
| | 13 | ο Piscium | E. | 15.5 | 18.2 | 19.8 | 25.9 | 27.9 | 30.0 | 36.2 | 37.8 | 40.4 | 39 27.97 | - 0.74 | -32.42 | -32.50 | 1 38 54.73 | - 0.11 | |
| | 14 | β Arietis | P. | 11.5 | 14.2 | 15.8 | 22.4 | 24.6 | 26.8 | 33.3 | 34.8 | 37.6 | 45 24.56 | - 0.45 | -32.48 | -32.48 | 1 47 51.63 | + 0.02 | |
| | 15 | α Arietis | P. | 34.9 | 37.6 | 39.3 | 45.9 | 48.1 | 50.3 | 57.0 | 58.6 | 1 5 | 0 48.13 | - 0.38 | -32.39 | -32.47 | 2 0 15.28 | - 0.07 | |
| | 16 | ε Cassiopeæ (R) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 17 | ε Cassiopeæ | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 18 | 5 Ursæ Minoris, S. P. | P. | 15.7 | 4.9 | 58.5 | 32.5 | 23.5 | 15.3 | 49.9 | 43.3 | 32.5 | 28 24.01 | - 6.26 | . | -32.45 | 14 27 45.30 | - 0.49 | |
| | 19 | Lalande 4503 | P. | . | . | 50.4 | 52.4 | 54.5 | 56.5 | 58.7 | . | . | 29 54.51 | - 0.78 | . | -32.45 | 2 29 21.28 | - 4.19 | |
| | 20 | γ Ceti | P. | 17.8 | 20.4 | 22.0 | 28.0 | 30.1 | 32.3 | 38.4 | 39.9 | 42.4 | 37 30.14 | - 0.87 | -32.49 | -32.45 | 2 36 56.82 | + 0.04 | |
| | 21 | Anonymous | P. | 6.3 | 9.0 | 10.9 | 17.4 | 19.4 | 21.7 | 28.3 | 30.0 | 32.7 | 51 19.52 | - 0.42 | . | -32.44 | 2 50 46.66 | - 4.49 | |
| | 22 | α Ceti | P. | 13.3 | 15.8 | 17.3 | 23.5 | 25.5 | 27.6 | 33.6 | 35.1 | 37.7 | 56 25.49 | - 0.81 | -32.44 | -32.44 | 2 55 52.20 | + 0.02 | |
| | 23 | γ Arietis (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 24 | ε Arietis | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 25 | γ Tauri | P. | 9.2 | 11.9 | 13.5 | 19.9 | 22.0 | 24.1 | 30.5 | 32.0 | 34.7 | 13 21.98 | - 0.60 | -32.36 | -32.40 | 4 12 48.98 | - 0.03 | |
| | 26 | 62 ¹ Tauri | P. | 53.7 | 56.5 | 58.4 | . | . | . | 16.0 | 17.7 | 20.4 | 17 7.12 | - 0.35 | . | -32.40 | 4 16 34.34 | - 4.97 | |
| | 27 | 62 ² Tauri | P. | . | . | 4.5 | 6.8 | 9.0 | 11.3 | 13.6 | . | . | 17 9.04 | - 0.38 | . | -32.40 | 4 16 36.26 | - 4.97 | |
| | 28 | ε Tauri | P. | 47.5 | 50.2 | 51.7 | 58.2 | 0.4 | 2.5 | 9.9 | 10.6 | 13.3 | 22 0.38 | - 0.51 | -32.41 | -32.40 | 4 21 27.47 | - 0.00 | |
| | 29 | α Tauri | P. | 13.3 | 15.9 | 17.7 | 23.9 | 26.0 | 28.2 | 34.6 | 36.2 | 39.0 | 29 26.09 | - 0.58 | -32.34 | -32.40 | 4 28 53.11 | - 0.08 | |
| | 30 | Vibilia | P. | 19.0 | 21.8 | 23.3 | 30.0 | 32.2 | 34.3 | 40.8 | 42.5 | 45.4 | 44 32.14 | - 0.44 | . | -32.39 | 4 43 59.31 | . | |
| | 31 | ι Aurigæ | P. | 18.5 | 21.5 | 23.3 | 30.6 | 33.0 | 35.4 | 42.7 | 44.5 | 47.6 | 49 33.01 | - 0.13 | -32.29 | -32.39 | 4 29 0.49 | - 0.14 | |
| | 32 | Lalande 9484 | P. | 17.6 | 19.8 | 21.6 | 28.5 | 30.7 | 33.2 | 40.0 | 41.8 | 44.7 | 57 30.81 | - 0.30 | . | -32.38 | 4 56 58.13 | - 5.21 | |
| | 33 | ε Ursæ Minoris, S. P. | P. | . | . | 12.9 | 27.8 | 12.5 | 56.8 | 42.3 | . | . | 59 12.38 | -10.37 | . | -32.38 | 16 58 29.63 | + 0.49 | |
| | 34 | Antigone | P. | 9.6 | 11.9 | 13.9 | 19.9 | 21.9 | 24.0 | 30.2 | 31.8 | 34.4 | 13 21.06 | - 0.80 | . | -32.38 | 5 12 48.75 | . | |
| | 35 | Groombridge 966 | P. | 3.6 | 13.3 | 19.4 | 43.9 | 50.6 | 58.5 | 22.2 | 23.3 | 37.7 | 23 50.73 | + 3.78 | . | -32.37 | 5 23 22.14 | - 0.04 | |
| | 36 | B. A. C. 1767 | P. | 33.7 | 41.5 | 43.0 | 49.6 | 51.8 | 54.0 | 0.6 | 2.3 | 5.0 | 30 51.83 | - 0.48 | . | -32.37 | 5 30 18.98 | - 5.02 | |
| | 37 | ω Draconis, S. P. | P. | 47.3 | 49.2 | 50.0 | 59.0 | 13.4 | 7.8 | 50.8 | 46.4 | 39.3 | 35 13.36 | - 4.26 | . | -32.37 | 17 37 35.73 | - 0.10 | |
| | 38 | B. A. C. 1841 | P. | 47.0 | 50.0 | 51.8 | 59.0 | 1.5 | 3.8 | 11.2 | 12.9 | 16.0 | 42 1.47 | - 1.80 | . | -32.36 | 5 41 27.31 | - 3.86 | |
| | 39 | φ ¹ Draconis, S. P. | P. | . | . | 54.5 | 47.7 | 40.8 | 34.2 | 27.6 | . | . | 44 40.92 | - 4.95 | . | -32.36 | 17 44 3.61 | + 0.15 | |
| | 40 | φ ² Draconis, S. P. | P. | . | . | 50.0 | 49.5 | 42.5 | 36.3 | 29.3 | . | . | 44 42.68 | - 4.95 | . | -32.36 | 17 44 5.37 | - 5.35 | |
| | 41 | B. A. C. 1882 | P. | 8.0 | 9.7 | 14.4 | 16.6 | 19.2 | 21.4 | 23.7 | 28.4 | 30.2 | 49 19.10 | - 0.28 | . | -32.36 | 5 48 46.46 | - 5.34 | |
| | 42 | Σ 853 ¹ | P. | 39.8 | 42.3 | 43.9 | . | . | . | 0.6 | 2.0 | 4.9 | 2 52.25 | - 0.72 | . | -32.35 | 6 2 19.18 | - 4.71 | |
| | 43 | Σ 853 ² | P. | . | . | 48.5 | 50.6 | 52.7 | 54.8 | 56.9 | . | . | 2 52.71 | - 0.72 | . | -32.35 | 6 2 19.04 | - 4.71 | |
| | 44 | δ Ursæ Minoris, S. P. | P. | . | . | 41.3 | 5.8 | 32.5 | 56.5 | 23.1 | . | . | 12 31.66 | -22.37 | . | -32.35 | 18 11 36.94 | - 0.81 | |
| | 45 | μ Geminorum | P. | 52.0 | 54.8 | 56.6 | 3.2 | 5.5 | 7.7 | 14.2 | 15.9 | 18.7 | 16 5.40 | - 0.46 | -32.34 | -32.35 | 6 15 32.59 | - 0.05 | |
| | 46 | γ Geminorum | P. | 57.9 | 0.6 | 2.3 | 8.5 | 10.7 | 12.8 | 19.2 | 20.7 | 23.6 | 31 10.70 | - 0.62 | -32.34 | -32.34 | 6 30 37.74 | - 0.03 | |
| | 47 | B. A. C. 2194 | P. | 42.5 | 45.2 | 47.0 | 53.7 | 56.0 | 58.3 | 5.2 | 6.8 | 9.7 | 36 56.06 | - 0.39 | . | -32.34 | 6 36 23.33 | - 5.15 | |
| | 48 | α Canis Majoris | P. | 5.8 | 8.4 | 10.0 | 16.4 | 18.5 | 20.6 | 27.0 | 23.7 | 31.3 | 49 18.52 | - 1.37 | -32.35 | -32.34 | 6 39 44.81 | - 0.07 | |
| | 49 | 51 Cephei | P. | . | . | . | 9.8 | 51.6 | . | 15.0 | . | . | 42 51.20 | +25.22 | . | -32.34 | 6 42 44.08 | + 1.07 | |
| | 50 | α Serpentis | E. | 34.8 | 36.3 | 40.3 | 42.4 | 44.5 | 46.5 | 48.6 | 52.6 | 54.2 | 38 44.47 | - 0.90 | -32.16 | -32.24 | 15 38 11.33 | - 0.06 | |

3. Thread B used.

5, 14, 17, 30, 34. Thread A used.

6, 9, 16, 17, 18, 19, 35, 37, 39, 40. Bisections at sets B and D.

33. Bisections at set C.

47. 0".83 added to the mean of the three microscopes in reduction.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom't. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|------|-------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | | |
| 1 | 335 56 | 10 | 9.2 | 6.5 | 6.3 | 11.7 | 31 | .. | 135 | .. | 055 | .. | 72.1 | 23 59 6.0 | .. | + | 26.6 | 75 5 53.8 | + 1.0 |
| 2 | 334 44 | | 6.6 | 3.9 | 4.0 | 9.5 | 36 | .. | 160 | .. | 050 | .. | 72.1 | 25 12 20.3 | 37.9 | + | 28.0 | 76 19 9.5 | + 2.1 |
| 3 | 4 42 | | 4.5 | 29.5 | 0.5 | 3.0 | 42 | .. | 740 | .. | 600 | .. | 71.8 | 355 18 29.1 | .. | - | 4.9 | 46 24 45.4 | +35.6 |
| 4 | 4 42 | | 4.5 | 29.5 | 0.5 | 3.0 | 38 | .. | .. | .. | 440 | 430 | 71.8 | 355 14 52.9 | .. | - | 5.0 | 46 21 9.1 | +35.6 |
| 5 | 4 42 | | 4.5 | 29.5 | 0.5 | 3.0 | 31 | .. | .. | .. | 840 | 810 | 71.8 | 355 10 38.4 | .. | - | 5.0 | 46 16 54.6 | +35.6 |
| 6 | 70 32 | | 3.5 | 28.0 | 27.8 | 3.0 | 35 | 740 | .. | .. | .. | 630 | 71.8 | 289 24 7.9 | 32.5 | - 2 | 49.4 | 340 27 39.7 | + 0.5 |
| 7 | 302 24 | | 1.5 | 25.8 | 28.0 | 3.2 | 34 | .. | 570 | .. | 435 | .. | 71.8 | 57 31 49.0 | .. | + 1 | 34.3 | 108 39 44.5 | - 1.0 |
| 8 | 328 16 | | 7.5 | 3.7 | 2.8 | 9.2 | 31 | .. | 930 | .. | 830 | .. | 71.8 | 31 39 15.1 | .. | + | 37.1 | 82 46 13.4 | - 0.8 |
| 9 | 49 40 | | 2.5 | 28.0 | 27.8 | 1.8 | 31 | 990 | .. | .. | .. | .. | 71.8 | 310 15 14.0 | .. | - 1 | 10.9 | 1 20 24.3 | - 3.6 |
| 10 | 49 40 | | 2.5 | 28.0 | 27.8 | 1.8 | 32 | 365 | .. | 420 | .. | 395 | 71.8 | 310 15 16.9 | .. | - 1 | 10.9 | 1 20 27.2 | - 0.7 |
| 11 | 312 14 | | 6.4 | 1.9 | 2.5 | 10.9 | 33 | .. | 405 | .. | 260 | .. | 71.8 | 47 41 36.9 | .. | + 1 | 6.0 | 98 49 4.1 | + 0.9 |
| 12 | 335 46 | | 5.2 | 29.3 | 0.2 | 5.5 | 36 | .. | 520 | .. | 350 | .. | 71.8 | 24 10 21.7 | 32.5 | + | 27.0 | 75 17 9.9 | + 0.5 |
| 13 | 329 36 | | 2.8 | 28.7 | 29.6 | 3.0 | 37 | .. | 600 | .. | 515 | .. | 71.8 | 30 20 37.3 | .. | + | 35.2 | 81 27 33.7 | - 1.4 |
| 14 | 341 14 | | 5.5 | 0.5 | 0.0 | 7.0 | 40 | .. | 165 | .. | 045 | .. | 71.8 | 18 40 45.5 | .. | + | 20.3 | 69 47 27.0 | + 0.7 |
| 15 | 343 56 | | 6.6 | 2.0 | 2.4 | 7.3 | 36 | .. | 200 | .. | 080 | .. | 71.8 | 16 0 19.2 | .. | + | 17.3 | 67 6 57.7 | - 1.9 |
| 16 | 152 0 | | 3.1 | 0.2 | 0.0 | 4.8 | 39 | 110 | 090 | .. | .. | .. | 71.8 | 207 57 1.4 | .. | + | 32.0 | 23 8 47.8 | - 2.9 |
| 17 | 27 52 | | 6.8 | 1.6 | 1.7 | 6.1 | 40 | .. | .. | .. | 940 | 935 | 71.8 | 332 2 59.0 | .. | - | 32.0 | 23 8 48.2 | - 2.5 |
| 18 | 64 46 | | 6.5 | 1.3 | 2.1 | 5.5 | 35 | 110 | .. | .. | .. | 065 | 71.8 | 295 10 1.9 | .. | - 2 | 7.7 | 346 14 15.4 | + 0.3 |
| 19 | 327 20 | | 6.4 | 1.0 | 1.3 | 6.5 | 30 | .. | .. | .. | 660 | 640 | 71.8 | 32 34 54.6 | .. | + | 35.5 | 83 41 54.3 | +24.6 |
| 20 | 323 46 | | 10.6 | 6.5 | 5.3 | 13.4 | 33 | .. | 785 | .. | 685 | .. | 71.8 | 36 9 46.7 | 31.0 | + | 44.1 | 87 16 52.0 | - 0.4 |
| 21 | 342 6 | | 10.8 | 4.1 | 3.7 | 11.0 | 33 | .. | 935 | .. | 835 | .. | 71.8 | 17 49 47.5 | .. | + | 19.4 | 68 56 28.1 | +26.5 |
| 22 | 324 40 | | 4.8 | 29.8 | 29.0 | 7.0 | 36 | .. | 680 | .. | 560 | .. | 71.8 | 35 16 24.5 | .. | + | 42.7 | 86 23 28.4 | - 1.3 |
| 23 | 198 14 | | 8.7 | 6.1 | 4.9 | 7.8 | 35 | 370 | 300 | .. | .. | .. | 71.8 | 161 42 8.0 | .. | - | 20.0 | 60 24 33.2 | + 0.2 |
| 24 | 341 38 | | 5.5 | 1.5 | 29.8 | 8.0 | 34 | .. | .. | .. | 300 | 250 | 71.8 | 18 17 50.7 | .. | + | 20.0 | 69 24 31.9 | - 1.1 |
| 25 | 336 22 | | 10.7 | 5.5 | 5.0 | 9.4 | 31 | .. | 865 | .. | 750 | .. | 71.8 | 23 33 15.9 | .. | + | 26.4 | 74 40 3.5 | - 0.5 |
| 26 | 345 2 | | 7.1 | 2.9 | 3.5 | 9.4 | 27 | .. | 935 | .. | 760 | .. | 71.8 | 14 52 13.4 | .. | + | 16.1 | 65 58 50.7 | +20.0 |
| 27 | 345 2 | | 7.1 | 2.9 | 3.5 | 9.4 | 28 | .. | 600 | .. | 450 | .. | 71.8 | 14 52 23.8 | .. | + | 16.1 | 65 59 1.1 | +20.0 |
| 28 | 339 56 | | 7.7 | 3.8 | 2.2 | 8.7 | 29 | .. | 885 | .. | 750 | .. | 71.8 | 19 58 43.4 | 29.6 | + | 22.0 | 71 5 26.6 | - 0.1 |
| 29 | 337 18 | | 11.0 | 6.6 | 6.0 | 11.5 | 32 | .. | 315 | .. | 215 | .. | 71.8 | 22 37 24.0 | .. | + | 25.2 | 73 44 10.4 | - 0.8 |
| 30 | 342 54 | | 8.0 | 3.0 | 2.7 | 8.4 | 44 | .. | 295 | .. | 140 | .. | 71.8 | 17 1 50.4 | .. | + | 18.5 | 68 8 30.1 | + 2.0 |
| 31 | 354 0 | | 5.5 | 0.9 | 1.8 | 6.4 | 31 | 870 | 830 | .. | 735 | 670 | 71.8 | 5 55 11.7 | .. | + | 6.3 | 57 1 39.2 | + 0.1 |
| 32 | 348 34 | | 9.0 | 4.0 | 4.0 | 9.2 | 34 | 445 | 440 | .. | .. | .. | 71.8 | 11 21 54.5 | .. | + | 12.2 | 62 28 27.9 | +15.7 |
| 33 | 58 46 | | 6.1 | 2.2 | 2.0 | 6.0 | 32 | 450 | .. | .. | .. | 350 | 71.8 | 301 9 21.3 | .. | - 1 | 39.9 | 352 14 2.6 | - 1.1 |
| 34 | 329 6 | | 9.0 | 3.9 | 3.2 | 9.5 | 40 | .. | 595 | .. | 350 | .. | 71.8 | 30 48 53.8 | .. | + | 36.1 | 81 55 51.1 | - 1.8 |
| 35 | 36 0 | | 4.8 | 29.3 | 29.7 | 3.4 | 38 | 140 | .. | .. | .. | 045 | 71.8 | 323 56 46.5 | .. | - | 44.1 | 15 2 23.6 | - 1.0 |
| 36 | 342 6 | | 9.2 | 3.8 | 3.5 | 10.0 | 31 | .. | 680 | .. | 550 | .. | 71.8 | 17 49 12.0 | .. | + | 19.5 | 68 55 52.7 | +12.0 |
| 37 | 72 10 | | 6.2 | 1.2 | 29.6 | 3.0 | 33 | 465 | .. | .. | .. | 380 | 71.8 | 287 45 35.2 | 27.4 | - 3 | 7.4 | 338 48 49.0 | + 3.4 |
| 38 | 288 44 | | 8.5 | 5.2 | 6.7 | 10.4 | 33 | .. | 830 | .. | 620 | .. | 71.8 | 71 11 45.0 | .. | + | 56.6 | 122 21 2.8 | +13.3 |
| 39 | 68 48 | | 6.8 | 2.1 | 1.7 | 4.0 | 37 | 675 | .. | .. | .. | 615 | 71.8 | 291 8 41.0 | .. | - 2 | 35.8 | 342 12 26.4 | - 0.6 |
| 40 | 68 48 | | 6.8 | 2.1 | 1.7 | 4.0 | 39 | .. | 540 | .. | 510 | .. | 71.8 | 291 9 9.7 | .. | - 2 | 35.7 | 342 12 55.2 | + 6.0 |
| 41 | 319 58 | | 9.1 | 4.0 | 3.4 | 9.5 | 35 | .. | 145 | .. | 065 | .. | 71.8 | 9 58 5.4 | .. | + | 10.7 | 61 4 37.3 | + 9.3 |
| 42 | 332 44 | | 7.7 | 2.9 | 3.4 | 8.3 | 34 | .. | 890 | .. | 700 | .. | 71.8 | 27 11 59.6 | .. | + | 31.2 | 78 18 52.0 | + 9.2 |
| 43 | 332 44 | | 7.7 | 2.9 | 3.4 | 8.3 | 36 | .. | 620 | .. | 515 | .. | 71.8 | 27 12 26.7 | .. | + | 31.2 | 78 19 19.1 | + 9.2 |
| 44 | 54 24 | | 5.5 | 1.0 | 0.5 | 4.3 | 33 | 140 | .. | .. | .. | 165 | 71.8 | 305 31 31.7 | .. | - 1 | 24.9 | 356 36 28.0 | + 1.0 |
| 45 | 343 38 | | 10.7 | 6.0 | 4.5 | 10.4 | 37 | .. | 525 | .. | 440 | .. | 71.8 | 16 18 43.1 | .. | + | 17.8 | 67 25 22.1 | - 0.1 |
| 46 | 337 34 | | 7.4 | 2.0 | 3.0 | 7.0 | 38 | .. | 520 | .. | 415 | .. | 71.8 | 22 22 55.1 | .. | + | 25.0 | 73 29 41.3 | - 0.8 |
| 47 | 346 18 | | 9.8 | 5.0 | 4.7 | .. | 35 | .. | 615 | .. | 480 | .. | 71.8 | 13 38 12.9 | .. | + | 11.7 | 64 44 48.8 | + 3.6 |
| 48 | 304 30 | | 7.1 | 2.4 | 3.5 | 9.0 | 30 | .. | 655 | .. | 500 | .. | 71.8 | 55 24 54.8 | .. | + | 28.0 | 106 32 44.0 | - 0.4 |
| 49 | 48 16 | | 7.9 | 1.5 | 2.5 | 6.4 | 38 | .. | .. | 110 | .. | 070 | 71.8 | 311 40 49.0 | 26.3 | - 1 | 8.2 | 2 46 2.0 | - 0.8 |
| 50 | 327 52 | | 6.7 | 0.2 | 3.3 | 7.5 | 35 | .. | .. | .. | 930 | 890 | 70.9 | 32 4 15.4 | 33.0 | + | 37.5 | 83 11 14.1 | - 0.7 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|------|
| | in. | ° | | " | " | " | " |
| 2 | 30.00 | 40.0 | | | | | |
| 6 | 29.87 | 35.0 | | | | | |
| 12 | 29.85 | 34.7 | | | | | |
| 20 | 29.83 | 33.6 | | | | | |
| 28 | 29.83 | 31.7 | | | | | |
| 37 | 29.80 | 30.3 | | | | | |
| 49 | 29.78 | 28.8 | | | | | |
| 50 | 29.74 | 34.3 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. |
|--------|---------|------------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|-------|------------|--------------|----------------|----------------|---------------------------|--------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. m. s. | s. | |
| 1876. | | | | | | | | | | | | | m. s. | s. | s. | s. | | | s. |
| Dec. 6 | 1 | a Scorpii | E. | 11.0 | 13.7 | 15.5 | 22.2 | 24.6 | 26.9 | 33.6 | 35.3 | 38.2 | 22 24.56 | - 1.74 | -32.30 | -32.23 | 16 21 50.56 | + 0.06 | |
| | 2 | Sun I. N. | E. | 22.0 | 23.0 | 26.5 | 33.0 | 35.3 | 37.5 | 44.0 | 46.0 | 48.8 | 58 35.34 | - 1.63 | . | -32.22 | 16 58 1.49 | . | |
| | 3 | Sun II. S. | E. | 43.7 | 49.4 | 48.0 | 54.5 | 56.9 | 59.0 | 5.6 | 7.2 | 10.1 | 0 56.82 | - 1.63 | . | -32.22 | 17 0 22.97 | . | |
| | 4 | B. A. C. 192 . . . | E. | 7.4 | 10.7 | 12.7 | 20.6 | 23.3 | 25.8 | 33.9 | 35.8 | 39.0 | 37 23.24 | - 2.20 | . | -32.09 | 0 36 48.95 | - 4.02 | |
| | 5 | B. A. C. 202 . . . | E. | 34.7 | 33.2 | 40.0 | 47.9 | 50.6 | 53.2 | 1.0 | 3.0 | 6.4 | 38 50.56 | - 2.20 | . | -32.09 | 0 38 16.27 | - 4.02 | |
| | 6 | B. A. C. 259 . . . | E. | 12.9 | 16.0 | 18.0 | 25.7 | 23.4 | 31.0 | 33.8 | 40.7 | 44.0 | 50 23.39 | - 0.09 | . | -32.09 | 0 49 56.21 | - 3.63 | |
| | 7 | ε Piscium (R.) . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 8 | ε Piscium | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 9 | γ Polaris (R.) . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 10 | γ Polaris | E. | . | 32.4 | 0.6 | 27.4 | 53.9 | 22.9 | 16.5 | 21.4 | 9.7 | 13 27.53 | +53 67 | . | -32.09 | 1 13 49.11 | - 0.40 | |
| | 11 | θ ¹ Ceti | E. | 14.4 | 17.0 | 18.5 | 24.8 | 26.9 | 23.9 | 35.0 | 36.7 | 39.2 | 18 26.82 | - 1.31 | -32.12 | -32.09 | 1 17 53.42 | + 0.05 | |
| | 12 | η Piscium | E. | 15.0 | 17.7 | 19.4 | 25.7 | 27.8 | 29.0 | 36.0 | 37.8 | 40.4 | 25 27.71 | - 0.76 | -32.12 | -32.09 | 1 24 54.89 | + 0.10 | |
| | 13 | α Piscium | E. | 15.4 | 18.0 | 19.6 | 25.8 | 27.8 | 29.0 | 36.0 | 37.6 | 40.2 | 39 27.80 | - 0.91 | -32.08 | -32.10 | 1 38 54.79 | - 0.05 | |
| | 14 | β Arietis | E. | 11.4 | 14.0 | 15.7 | 22.0 | 24.4 | 26.6 | 33.0 | 34.6 | 37.5 | 48 24.36 | - 0.62 | -32.11 | -32.10 | 1 47 51.64 | + 0.03 | |
| | 15 | α Arietis | E. | 34.7 | 37.4 | 39.0 | 45.7 | 47.9 | 50.1 | 56.8 | 58.5 | 5 1.4 | 0 47.94 | - 0.55 | -32.03 | -32.10 | 2 0 15.29 | - 0.06 | |
| | 16 | Neptune | E. | 25.7 | 23.3 | 30.0 | 36.0 | 33.2 | 40.5 | 46.5 | 48.0 | 50.8 | 5 38.20 | - 0.86 | . | -32.10 | 2 5 5.24 | . | |
| | 17 | α Ceti | E. | 13.0 | 15.5 | 17.0 | 23.2 | 25.2 | 27.4 | 33.5 | 35.0 | 37.6 | 56 25.27 | - 1.02 | -32.05 | -32.11 | 2 55 52.14 | - 0.04 | |
| | 18 | γ Arietis | E. | 10 7 | 13.5 | 15.2 | 21.6 | 23.8 | 26.0 | 32.7 | 34.2 | 37.0 | 8 23 86 | - 0.61 | -32.13 | -32.11 | 3 7 51.14 | - 0.02 | |
| | 19 | α Persei (R.) . . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 20 | α Persei | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 21 | γ ² Ursæ Minoris, S. P. | E. | 10.0 | 1.7 | 56.6 | 36.6 | 30.0 | 23.6 | 3.0 | 58.2 | 49.6 | 21 29.92 | - 5.09 | . | -32.11 | 15 20 52.72 | - 0.64 | |
| | 22 | B. A. C. 1125 . . . | E. | 1.0 | 4.3 | 6.3 | 14.5 | 17.2 | 19.9 | 28.0 | 29.9 | 33.4 | 33 17.17 | - 2.25 | . | -32.11 | 3 32 42.81 | - 4.09 | |
| | 23 | B. A. C. 1136 ¹ . . | E. | 41.2 | 44.6 | 46.6 | . | . | . | 8.1 | 10.2 | 13.7 | 35 57.40 | - 2.26 | . | -32.11 | 3 35 23.03 | - 4.09 | |
| | 24 | B. A. C. 1136 ² . . | E. | . | . | 52.4 | 55.0 | 57.8 | 0.5 | 3.4 | . | . | 35 57.83 | - 2.26 | . | -32.11 | 3 35 23.46 | - 4.09 | |
| | 25 | η Tauri | E. | 31.0 | 33.7 | 35.4 | 42.0 | 44.4 | 46.6 | 53.3 | 55.9 | 57.8 | 40 44.34 | - 0.52 | -32.08 | -32.11 | 3 40 11.71 | - 0.03 | |
| | 26 | ζ Persei | E. | 46.3 | 48.2 | 53.0 | 55.4 | 57.9 | 0.3 | 2.7 | 7.5 | 9.4 | 46 57.86 | - 0.29 | -32.08 | -32.11 | 3 46 25.46 | - 0.04 | |
| | 27 | Velleda | E. | 33.3 | 35.7 | 37.4 | 44.5 | 46.6 | 48.8 | 56.0 | 57.5 | 0.1 | 49 46.66 | - 0.52 | . | -32.11 | 3 49 14.03 | . | |
| | 28 | Niobe | E. | 30.0 | 34.4 | 37.0 | . | . | . | 4.0 | 6.7 | . | 52 50.36 | + 0.54 | . | -32.11 | 3 52 18.79 | . | |
| | 29 | α Tauri | E. | 13.2 | 15.9 | 17.5 | 24.0 | 26.0 | 28.0 | 34.6 | 36.2 | 38.8 | 29 26.03 | - 0.71 | -32.14 | -32.12 | 4 28 53.20 | 0.00 | |
| | 30 | Vibilia | E. | 15.6 | 18.3 | 20.0 | 26.5 | 28.8 | 31.0 | 37.6 | 39.2 | 42.0 | 43 28.78 | - 0.57 | . | -32.12 | 4 42 56.09 | . | |
| | 31 | ι Aurigæ | E. | 18.4 | 21.5 | 23.3 | 30.6 | 33.0 | 35.5 | 42.8 | 44.6 | 47.6 | 49 33.93 | - 0.24 | -32.19 | -32.12 | 4 49 0.67 | + 0.03 | |
| | 32 | β Orionis | E. | 0.0 | 2.6 | 4.0 | 10.0 | 12.3 | 14.4 | 20.6 | 22.2 | 24.6 | 9 12.36 | - 1.29 | -32.03 | -32.12 | 5 8 38.95 | - 0.09 | |
| | 33 | β Tauri (R.) . . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 34 | β Tauri | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 35 | γ Tauri | F. | 8.8 | 11.4 | 13.0 | 19.4 | 21.5 | 23.6 | 30.0 | 31.5 | 34.1 | 13 21 48 | - 0.68 | -31.76 | -31.75 | 4 12 49.05 | + 0.02 | |
| | 36 | ε Tauri | F. | 46.9 | 49.6 | 51.1 | 57.6 | 59.8 | 2.0 | 8.5 | 10.0 | 12.8 | 21 59.81 | - 0.60 | -31.73 | -31.75 | 4 21 27.46 | - 0.03 | |
| | 37 | α Tauri | F. | 12.9 | 15.8 | 17.0 | 23.5 | 25.6 | 27.7 | 34.1 | 35.7 | 38.4 | 29 25.60 | - 0.66 | -31.75 | -31.75 | 4 28 53.19 | - 0.02 | |
| | 38 | Vibilia | F. | 12.6 | 15.4 | 17.0 | 23.7 | 25.8 | 28.0 | 34.6 | 36.3 | 39.0 | 42 25.82 | - 0.52 | . | -31.75 | 4 41 53.55 | . | |
| | 39 | δ Ursæ Minoris, S. P. | F. | . | . | 40.6 | 5.2 | 30.7 | 56.0 | 20.0 | . | . | 12 30.32 | -21.40 | . | -31.75 | 18 11 37.17 | - 0.24 | |
| | 40 | 51 Cephei | F. | . | . | 25.8 | 8.7 | 52.1 | 32.9 | 15.5 | . | . | 42 51.18 | +24.05 | . | -31.75 | 6 42 43.48 | - 0.08 | |
| | 41 | Niobe | F. | 38.6 | 43.7 | . | . | 11.7 | 13.6 | 17.7 | 37.3 | 57.0 | 46 58.54 | + 0.54 | . | -31.42 | 3 46 27.66 | . | |
| | 42 | γ Tauri | F. | 8.4 | 11.0 | 12.6 | 18.9 | 21.0 | 23.1 | 29.4 | 31.0 | 33.8 | 13 21.02 | - 0.59 | -31.37 | -31.42 | 4 12 49.01 | - 0.04 | |
| | 43 | ε Tauri | F. | 46.5 | 49.2 | 50.8 | 57.2 | 59.5 | 1.7 | 8.0 | 9.7 | 12.4 | 21 59.44 | - 0.52 | -31.40 | -31.42 | 4 21 27.50 | - 0.03 | |
| | 44 | α Draconis, S. P. . | F. | . | . | . | . | . | . | 23.5 | 18.5 | 12.2 | 28 46.12 | - 3.95 | . | -31.42 | 16 28 10.75 | - 0.10 | |
| | 45 | Vibilia | F. | 8.3 | 11.0 | 12.8 | 19.4 | 21.7 | 23.8 | 30.5 | 32.1 | 34.8 | 38 21.00 | - 0.44 | . | -31.42 | 4 37 49.74 | . | |
| | 46 | ι Aurigæ (R.) . . . | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 47 | ι Aurigæ | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 48 | ε Ursæ Minoris, S. P. | F. | . | . | 40.9 | 25.4 | 10.0 | 55.3 | 39.7 | . | . | 59 10.18 | - 9.49 | . | -31.39 | 16 58 29.30 | - 0.26 | |
| | 49 | Antigone | F. | 1.1 | 6.9 | 9.1 | . | . | 15.4 | 19.0 | 20.9 | 23.4 | 8 11 05 | - 0.75 | . | -31.39 | 5 7 38.91 | . | |
| | 50 | β Tauri | F. | 50.3 | 53.4 | 55.0 | 2.0 | 4.3 | 6.6 | 13.6 | 15.3 | 18.4 | 19 4.32 | - 0.27 | -31.44 | -31.39 | 5 18 32.66 | + 0.03 | |

5, 22, 27, 28, 30, 38, 41, 45, 47, 49. Thread A used.

9. Bisections at threads B₁ and B₃.10. Bisections at threads D₂ and D₃.

29. Telescope micrometer reading decreased five revolutions in reduction.

33, 44. Thread B used.

41. Transit observed at threads B₁, B₂, set D, and VI and VII.

48. Bisections at set C.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom't. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|--------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | |
| | | r. " | " " | " " | " " | | | | | | | | | | | |
| 1 | 294 54 | 10 4.3 | 28.7 | 29.8 | 4.8 | 31 | .. | 230 | .. | 230 | .. | 70.9 | 65 0 59.1 | .. + 2 7.1 | 116 9 27.4 | - 1.9 |
| 2 | 295 38 | 10.0 | 7.5 | 8.9 | 14.6 | 38 | 415 | 375 | .. | .. | .. | 70.9 | 61 18 57.4 | .. + 1 47.9 | 112 27 6.5 | .. |
| 3 | 298 4 | 7.1 | 1.1 | 2.5 | 9.7 | 32 | .. | .. | .. | 835 | 900 | 70.9 | 61 51 29.1 | .. + 1 50.1 | 112 59 19.7 | .. |
| 4 | 281 58 | 10.1 | 5.0 | 7.9 | 11.5 | 33 | .. | 915 | .. | 915 | .. | 72.6 | 77 57 35.3 | .. + 4 30.6 | 129 8 27.1 | + 10.0 |
| 5 | 231 58 | 10.1 | 5.0 | 7.9 | 11.5 | 34 | .. | 105 | .. | 995 | .. | 72.6 | 77 55 17.9 | .. + 4 29.5 | 129 6 8.9 | + 10.0 |
| 6 | 358 52 | 4.5 | 29.8 | 29.0 | 4.0 | 32 | .. | 990 | .. | 850 | .. | 72.6 | 1 3 28.1 | 37.5 + 1.1 | 52 9 50.1 | + 34.1 |
| 7 | 211 36 | 10.3 | 6.0 | 7.3 | 10.0 | 37 | 460 | 440 | .. | .. | .. | 72.6 | 118 20 42.8 | .. - 36.1 | 82 46 14.8 | + 0.5 |
| 8 | 328 16 | 14.8 | 8.8 | 7.9 | 13.0 | 31 | .. | .. | .. | 410 | 465 | 72.6 | 31 30 15.2 | .. + 31.4 | 82 45 12.8 | - 1.4 |
| 9 | 130 12 | 2.0 | 29.5 | 28.0 | 4.4 | 33 | 330 | 335 | .. | .. | .. | 72.6 | 229 44 46.8 | .. + 1 9.7 | 1 20 24.7 | - 3.0 |
| 10 | 49 40 | 1.8 | 26.0 | 26.3 | 28.8 | 32 | .. | .. | .. | 150 | 065 | 72.6 | 310 15 14.8 | .. - 1 9.7 | 1 20 26.3 | - 1.4 |
| 11 | 312 14 | 9.7 | 5.0 | 2.8 | 11.5 | 33 | .. | 320 | .. | 210 | .. | 72.6 | 47 41 38.7 | .. + 1 4.9 | 93 40 4.8 | + 1.5 |
| 12 | 335 46 | 4.9 | 0.8 | 28.2 | 3.6 | 36 | .. | 510 | .. | 130 | .. | 72.6 | 24 10 22.6 | .. + 26.5 | 75 17 10.3 | + 0.9 |
| 13 | 329 36 | 13.0 | 8.8 | 7.0 | 13.2 | 36 | .. | .. | .. | 932 | 920 | 72.6 | 30 20 38.8 | .. + 31.6 | 81 27 31.6 | - 0.5 |
| 14 | 341 14 | 7.3 | 1.8 | 2.7 | 9.5 | 29 | .. | 910 | .. | 770 | .. | 72.6 | 18 40 44.3 | .. + 20.0 | 69 47 25.5 | - 0.8 |
| 15 | 343 56 | 7.0 | 2.2 | 2.3 | 7.3 | 36 | .. | 270 | .. | 175 | .. | 72.6 | 16 0 21.4 | .. + 17.0 | 67 6 59.6 | 0.0 |
| 16 | 331 48 | 11.4 | 6.5 | 5.7 | 12.0 | 31 | .. | 705 | .. | 675 | .. | 72.6 | 23 7 16.1 | .. + 31.6 | 79 11 8.9 | - 1.7 |
| 17 | 324 40 | 6.5 | 2.3 | 0.5 | 7.9 | 36 | .. | .. | .. | 445 | 420 | 72.6 | 35 16 25.0 | .. + 41.9 | 80 23 28.1 | - 1.7 |
| 18 | 341 38 | 5.9 | 1.8 | 0.5 | 7.0 | 34 | .. | 430 | .. | 230 | .. | 72.6 | 18 17 51.9 | .. + 19.6 | 69 21 32.7 | - 0.2 |
| 19 | 169 24 | 5.3 | 1.8 | 2.9 | 5.9 | 34 | 030 | 970 | .. | .. | .. | 72.6 | 190 31 45.0 | .. + 11.0 | 49 31 25.2 | - 2.5 |
| 20 | 10 28 | 7.3 | 1.7 | 3.5 | 7.2 | 35 | .. | .. | .. | 780 | 760 | 72.6 | 349 28 16.1 | .. - 11.0 | 40 31 26.3 | - 1.4 |
| 21 | 68 44 | 5.8 | 29.8 | 0.8 | 3.3 | 35 | .. | 875 | .. | 800 | .. | 72.6 | 291 12 12.1 | .. - 2 31.5 | 312 16 1.8 | - 1.9 |
| 22 | 280 24 | 7.5 | 3.3 | 6.0 | 11.0 | 33 | .. | 960 | .. | 860 | .. | 72.6 | 79 29 14.4 | .. + 5 9.4 | 130 40 45.0 | + 14.8 |
| 23 | 280 24 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 24 | 280 24 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 25 | 344 46 | 6.1 | 1.8 | 1.5 | 7.6 | 34 | .. | 045 | .. | 915 | .. | 72.6 | 15 9 46.6 | .. + 16.1 | 65 16 23.9 | - 0.4 |
| 26 | 352 34 | 6.5 | 1.5 | 1.0 | 3.2 | 36 | .. | 020 | .. | 980 | .. | 72.6 | 7 22 16.4 | .. + 7.7 | 58 28 45.3 | - 2.4 |
| 27 | 344 34 | 8.5 | 5.0 | 3.0 | 9.6 | 34 | .. | 165 | .. | 070 | .. | 72.6 | 15 19 17.5 | .. + 16.0 | 66 25 54.7 | - 1.6 |
| 28 | 12 30 | 8.3 | 3.8 | 3.6 | 7.6 | 37 | .. | 820 | .. | 710 | .. | 72.6 | 347 24 12.9 | .. - 13.2 | 38 30 20.9 | + 0.9 |
| 29 | 307 18 | 11.0 | 5.8 | 5.7 | 10.0 | 37 | .. | 450 | .. | 350 | .. | 72.6 | 22 37 26.3 | .. + 24.7 | 73 41 12.2 | + 0.9 |
| 30 | 342 54 | 3.1 | 29.7 | 28.5 | 4.3 | 41 | .. | 685 | .. | 550 | .. | 72.6 | 17 1 7.2 | 36.5 + 18.1 | 68 7 46.5 | - 2.0 |
| 31 | 354 0 | 5.0 | 29.3 | 0.7 | 6.0 | 31 | .. | 880 | .. | 830 | .. | 72.6 | 5 55 12.4 | .. + 6.1 | 57 1 39.7 | + 0.7 |
| 32 | 312 42 | 6.2 | 1.8 | 3.0 | 9.2 | 31 | .. | 490 | .. | 300 | .. | 72.6 | 47 13 7.6 | .. + 1 4.0 | 93 20 32.8 | + 0.2 |
| 33 | 190 20 | 5.3 | 2.8 | 3.1 | 5.3 | 28 | 070 | 000 | .. | .. | .. | 72.6 | 169 36 45.5 | .. - 10.9 | 61 29 45.6 | + 0.8 |
| 34 | 319 32 | 6.7 | 0.5 | 2.8 | 7.6 | 31 | .. | .. | .. | 570 | 470 | 72.6 | 10 23 10.1 | .. + 10.9 | 61 29 42.2 | - 2.6 |
| 35 | 336 22 | 6.0 | 29.5 | 28.8 | 4.7 | 32 | .. | 110 | .. | 065 | .. | 72.4 | 23 33 15.4 | 31.5 + 25.9 | 71 40 2.5 | - 1.6 |
| 36 | 339 56 | 3.7 | 28.1 | 26.3 | 4.4 | 30 | .. | .. | .. | 022 | 002 | 72.4 | 19 58 42.9 | .. + 21.6 | 71 5 25.7 | - 1.0 |
| 37 | 337 18 | 6.3 | 29.9 | 29.1 | 4.9 | 32 | 664 | 634 | .. | .. | .. | 72.4 | 22 37 23.5 | .. + 21.7 | 73 41 9.4 | - 1.9 |
| 38 | 342 54 | 3.1 | 26.5 | 26.2 | 3.8 | 39 | .. | 270 | .. | 160 | .. | 72.4 | 17 0 23.7 | 32.0 + 18.1 | 68 7 8.0 | - 1.9 |
| 39 | 54 24 | 6.1 | 0.4 | 29.7 | 5.5 | 32 | 740 | 710 | 735 | 775 | 775 | 72.4 | 335 31 25.1 | .. - 1 22.4 | 356 36 24.9 | - 1.5 |
| 40 | 48 16 | 6.6 | 29.6 | 29.6 | 4.0 | 37 | 970 | 984 | 992 | 978 | 978 | 72.4 | 311 40 45.7 | 33.5 - 1 6.0 | 2 46 0.9 | - 1.3 |
| 41 | 11 54 | 4.1 | 0.2 | 0.7 | 5.0 | 40 | .. | .. | .. | 486 | 460 | 72.1 | 313 0 51.8 | 33.8 - 12.8 | 39 7 0.2 | + 0.8 |
| 42 | 336 22 | 5.5 | 1.8 | 1.6 | 6.5 | 32 | .. | 135 | .. | 026 | .. | 72.1 | 23 33 16.5 | .. + 26.3 | 71 40 4.9 | - 0.2 |
| 43 | 339 56 | 0.6 | 26.7 | 25.8 | 3.3 | 30 | .. | 350 | .. | 220 | .. | 72.1 | 19 55 44.5 | .. + 21.9 | 71 5 27.6 | + 0.8 |
| 44 | 71 58 | 3.8 | 25.2 | 26.4 | 1.1 | 27 | .. | .. | .. | 288 | 322 | 72.1 | 237 58 31.6 | 33.6 - 3 3.9 | 339 1 48.9 | - 1.7 |
| 45 | 342 56 | 2.1 | 27.9 | 25.9 | 2.6 | 36 | .. | 371 | .. | 284 | .. | 72.1 | 16 57 43.9 | .. + 18.4 | 68 4 23.5 | - 1.9 |
| 46 | 185 52 | 9 28.7 | 25.9 | 26.6 | 28.8 | 38 | 598 | 578 | .. | .. | .. | 72.1 | 174 4 48.5 | .. - 6.3 | 57 1 33.0 | + 0.3 |
| 47 | 354 0 | 10 0.1 | 24.8 | 26.4 | 1.2 | 42 | .. | .. | .. | 078 | 958 | 72.1 | 5 55 10.8 | .. + 6.3 | 57 1 35.3 | - 0.4 |
| 48 | 58 46 | 9 28.9 | 26.1 | 26.4 | 0.5 | 32 | 540 | 542 | 550 | 565 | 555 | 72.1 | 301 9 17.8 | .. - 1 39.6 | 352 13 50.4 | - 2.0 |
| 49 | 329 6 | 10 5.6 | 1.9 | 29.4 | 5.7 | 37 | .. | 010 | .. | 020 | .. | 72.1 | 30 47 57.9 | .. + 35.0 | 81 54 55.1 | - 1.8 |
| 50 | 349 32 | 3.7 | 27.3 | 28.2 | 3.9 | 37 | .. | .. | .. | 930 | 914 | 72.1 | 10 23 12.1 | .. + 11.1 | 61 29 44.4 | - 0.2 |

| No. | Barom. | At. Ther | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " " | " " | " " | " " |
| 3 | 29.70 | 37.5 | 2 | - 7.9 | + 16 17.1 | .. | + 16 9.2 |
| 6 | 29.65 | 39.0 | 3 | - 7.9 | - 16 17.1 | .. | - 16 25.0 |
| 30 | 29.67 | 37.5 | 16 | - 0.1 | .. | .. | 0.1 |
| 35 | 29.43 | 35.0 | | | | | |
| 38 | 29.40 | 35.0 | | | | | |
| 40 | 29.28 | 35.5 | | | | | |
| 41 | 30.00 | 36.5 | | | | | |
| 44 | 30.00 | 36.6 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Correction. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|---------|---------|-----------|--------------------------------|-----|------|-----|----|-----|------|-------|-----|--------------|-------|----------------|---------------------------|----------|---------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. m. s. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

10, 18. Bisections at sets B and D.

17. Bisections observed half way between VI and VII and at thread VII.

18, 20, 41. Thread B used.

19, 21. Thread A used.

27. Bisections at set C.

28. Bisections at threads D₂ and D₃.

34. Bisections at threads II and III.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | |
| | | r. " | " " | " " | " " | | | | | | | " | ° ' " | ° | ' " | ° ' " | " |
| 1 | 320 40 | 10 4.2 | 0.9 | 28.4 | 6.7 | 35 | .. | 668 | .. | 626 | .. | 72.1 | 39 16 9.8 | .. | + | 49.4 | 90 23 20.4 |
| 2 | 319 46 | 7.6 | 2.0 | 2.2 | 8.2 | 32 | .. | .. | .. | 996 | 966 | 72.1 | 40 9 32.3 | .. | + | 51.0 | 91 16 44.5 |
| 3 | 344 42 | 4.9 | 0.8 | 0.3 | 7.6 | 36 | 320 | 286 | .. | .. | .. | 72.1 | 15 14 20.0 | 31.2 | + | 16.5 | 66 20 57.7 |
| 4 | 332 44 | 3.0 | 28.1 | 28.4 | 3.3 | 35 | .. | .. | .. | 612 | 005 | 72.1 | 27 11 59.1 | .. | + | 31.1 | 78 18 51.4 |
| 5 | 332 44 | 3.0 | 28.1 | 28.4 | 3.3 | 36 | 875 | 862 | .. | .. | .. | 72.1 | 27 12 25.8 | .. | + | 31.1 | 78 19 18.1 |
| 6 | 54 24 | 7.6 | 3.6 | 3.7 | 8.5 | 32 | 748 | 746 | 740 | .. | .. | 72.1 | 305 31 28.5 | .. | - | 24.7 | 356 36 25.0 |
| 7 | 337 34 | 7.5 | 2.2 | 3.2 | 8.1 | 38 | .. | .. | .. | .. | 440 | 72.1 | 22 22 56.5 | .. | + | 25.0 | 73 29 42.7 |
| 8 | 48 16 | 4.4 | 29.2 | 0.0 | 4.6 | 38 | 148 | .. | .. | .. | .. | 72.1 | 311 40 47.6 | .. | - | 8.0 | 2 46 0.8 |
| 9 | 73 32 | 0.6 | 24.8 | 22.0 | 27.5 | 34 | .. | .. | .. | 582 | 570 | 72.1 | 286 23 44.9 | .. | - | 3 23.7 | 337 26 42.4 |
| 10 | 67 52 | 4.5 | 29.0 | 27.7 | 3.5 | 34 | .. | .. | .. | 066 | 060 | 72.1 | 292 3 44.2 | .. | - | 2 28.8 | 343 7 36.6 |
| 11 | 333 18 | 5.9 | 2.2 | 1.2 | 8.2 | 32 | 806 | 800 | .. | .. | .. | 72.1 | 26 37 27.3 | .. | + | 30.4 | 77 44 18.9 |
| 12 | 337 8 | 7.7 | 3.0 | 1.8 | 9.6 | 33 | .. | .. | .. | 694 | 662 | 72.1 | 22 47 43.5 | .. | + | 25.5 | 73 51 30.2 |
| 13 | 345 44 | 4.1 | 29.1 | 27.4 | 6.2 | 34 | 418 | 394 | .. | .. | .. | 72.1 | 14 11 49.3 | 29.8 | + | 15.4 | 65 18 25.9 |
| 14 | 52 6 | 6.0 | 29.7 | 0.0 | 5.3 | 39 | .. | 594 | 582 | 572 | 555 | 72.1 | 307 51 10.0 | .. | - | 1 18.0 | 358 56 13.2 |
| 15 | 337 10 | 6.6 | 2.3 | 29.4 | 5.5 | 35 | .. | .. | .. | 110 | 090 | 72.1 | 22 46 3.3 | .. | + | 25.5 | 73 52 50.0 |
| 16 | 337 50 | 3.5 | 29.6 | 3.0 | 5.2 | 33 | .. | 390 | .. | 300 | .. | 72.1 | 22 5 34.9 | .. | + | 24.7 | 73 12 20.8 |
| 17 | 29 52 | 5.0 | 27.7 | 28.4 | 4.5 | 36 | .. | .. | .. | 166 | 106 | 72.1 | 330 4 18.7 | .. | - | 35.0 | 21 10 4.9 |
| 18 | 63 42 | 1.1 | 25.1 | 25.2 | 0.7 | 34 | 985 | 995 | .. | .. | .. | 72.1 | 296 16 11.7 | .. | - | 2 2.5 | 347 20 30.4 |
| 19 | 317 38 | 7.7 | 4.1 | 3.9 | 10.0 | 28 | .. | .. | .. | 238 | 210 | 72.1 | 42 13 47.4 | .. | + | 55.1 | 93 21 3.7 |
| 20 | 317 38 | 7.7 | 4.1 | 3.9 | 10.0 | 44 | .. | .. | .. | 108 | 054 | 72.1 | 42 22 56.0 | .. | + | 55.4 | 93 30 12.6 |
| 21 | 339 34 | 7.1 | 3.1 | 29.8 | 7.8 | 47 | .. | .. | .. | 512 | 490 | 72.1 | 20 22 40.9 | .. | + | 22.6 | 71 29 24.7 |
| 22 | 339 40 | 7.2 | 2.2 | 0.0 | 7.5 | 38 | .. | .. | .. | 330 | 310 | 72.1 | 20 16 53.4 | .. | + | 22.4 | 71 23 37.0 |
| 23 | 170 18 | 5.5 | 2.3 | 3.7 | 7.1 | 33 | 076 | 048 | .. | .. | .. | 72.1 | 189 37 30.8 | .. | + | 16.3 | 41 28 40.1 |
| 24 | 9 34 | 6.1 | 1.4 | 0.6 | 7.9 | 36 | .. | .. | .. | .. | 758 | 72.1 | 350 22 30.1 | .. | - | 10.3 | 41 28 41.0 |
| 25 | 325 26 | 6.7 | 1.5 | 0.2 | 8.5 | 37 | .. | .. | .. | 315 | 250 | 72.1 | 34 30 37.4 | 29.8 | + | 41.7 | 85 37 40.3 |
| 26 | 339 16 | 4.6 | 29.5 | 29.9 | 6.2 | 33 | .. | 838 | .. | 786 | .. | 72.1 | 20 39 41.8 | .. | + | 22.9 | 71 46 25.9 |
| 27 | 42 54 | 4.0 | 27.8 | 28.8 | 5.1 | 38 | 010 | 005 | 985 | 980 | 980 | 72.1 | 317 2 44.6 | .. | - | 56.5 | 8 8 9.3 |
| 28 | 31 24 | 4.2 | 27.5 | 28.5 | 4.1 | 36 | .. | .. | .. | 110 | 100 | 72.1 | 328 32 15.8 | .. | - | 37.1 | 19 37 59.9 |
| 29 | 346 16 | 6.5 | 2.0 | 1.3 | 9.5 | 35 | 296 | 248 | .. | .. | .. | 72.1 | 13 40 5.6 | .. | + | 14.8 | 64 46 41.6 |
| 30 | 345 24 | 3.3 | 28.0 | 27.3 | 4.7 | 39 | 170 | 144 | .. | .. | .. | 72.1 | 14 33 1.1 | .. | + | 15.8 | 65 39 37.9 |
| 31 | 333 4 | 4.9 | 28.4 | 27.9 | 4.8 | 39 | .. | .. | .. | .. | 500 | 72.1 | 26 53 8.9 | .. | + | 30.8 | 78 0 0.9 |
| 32 | 335 4 | 4.1 | 28.0 | 28.2 | 5.3 | 36 | 495 | 485 | .. | 420 | 412 | 72.1 | 24 52 21.1 | .. | + | 28.1 | 75 59 10.4 |
| 33 | 333 38 | 3.1 | 27.9 | 27.1 | 3.7 | 39 | .. | .. | .. | 236 | .. | 72.1 | 26 19 3.4 | .. | + | 30.0 | 77 25 54.6 |
| 34 | 341 8 | 4.6 | 0.0 | 29.1 | 4.9 | 33 | 705 | 695 | .. | .. | .. | 72.1 | 18 47 38.9 | .. | + | 20.7 | 69 54 20.8 |
| 35 | 323 58 | 2.6 | 28.1 | 25.7 | 5.0 | 36 | .. | .. | .. | 558 | 478 | 72.1 | 35 58 21.8 | .. | + | 44.1 | 87 5 27.1 |
| 36 | 330 28 | 5.1 | 0.5 | 29.3 | 6.8 | 36 | .. | 830 | .. | 740 | .. | 72.1 | 29 28 27.6 | .. | + | 34.3 | 80 35 23.1 |
| 37 | 331 26 | 2.2 | 28.0 | 27.0 | 4.2 | 34 | .. | .. | .. | 145 | 140 | 72.1 | 28 29 45.5 | .. | + | 33.0 | 79 36 39.7 |
| 38 | 354 4 | 7.4 | 3.0 | 0.5 | 8.0 | 39 | .. | 936 | .. | 836 | .. | 72.1 | 5 53 1.7 | .. | + | 6.3 | 56 59 29.2 |
| 39 | 207 36 | 6.3 | 4.6 | 3.7 | 7.5 | 29 | 436 | 400 | .. | .. | .. | 72.1 | 152 18 36.4 | .. | - | 31.9 | 78 48 16.7 |
| 40 | 332 14 | 6.7 | 2.0 | 29.8 | 6.2 | 32 | .. | .. | .. | 292 | 256 | 72.1 | 27 41 20.7 | .. | + | 31.9 | 78 48 13.8 |
| 41 | 306 56 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 42 | 332 16 | 8.4 | 3.7 | 1.0 | 8.7 | 37 | .. | 655 | .. | 595 | .. | 72.1 | 27 40 43.0 | .. | + | 31.8 | 78 47 36.0 |
| 43 | 320 54 | 7.5 | 2.6 | 2.2 | 8.6 | 32 | .. | 720 | .. | 646 | .. | 72.1 | 39 1 27.0 | 29.2 | + | 49.2 | 90 8 37.4 |
| 44 | 328 16 | 5.5 | 0.4 | 28.4 | 7.3 | 34 | 756 | 734 | .. | .. | .. | 72.1 | 31 39 55.5 | .. | + | 37.5 | 82 46 54.2 |
| 45 | 164 26 | 8.4 | 5.1 | 5.0 | 10.8 | 29 | 190 | 154 | .. | .. | .. | 72.1 | 195 28 33.8 | .. | + | 16.8 | 35 37 30.6 |
| 46 | 15 24 | 5.9 | 1.6 | 1.5 | 4.9 | 32 | .. | .. | .. | 705 | 668 | 72.1 | 344 31 27.0 | .. | - | 16.8 | 35 37 31.4 |
| 47 | 328 22 | 6.2 | 1.7 | 1.5 | 7.5 | 38 | .. | .. | .. | 776 | 766 | 72.1 | 31 35 0.2 | .. | + | 37.4 | 82 41 58.8 |
| 48 | 343 12 | 4.1 | 29.4 | 28.0 | 6.1 | 38 | 308 | 298 | .. | .. | .. | 72.1 | 16 44 49.1 | .. | + | 18.3 | 67 51 28.6 |
| 49 | 313 12 | 4.1 | 29.4 | 28.0 | 6.1 | 37 | .. | .. | .. | 968 | 938 | 72.1 | 16 44 45.5 | 28.6 | + | 18.3 | 67 51 25.0 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-------|
| | in. | ° | | ' " | ' " | ' " | ' " |
| 3 | 29.98 | 34.8 | 32 | — 0.2 | .. | .. | — 0.2 |
| 13 | 29.98 | 33.2 | | | | | |
| 25 | 29.96 | 33.6 | | | | | |
| 44 | 29.94 | 33.0 | | | | | |
| 50 | 29.93 | 32.5 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|---------|---------|------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | |
| 1876. | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| Dec. 12 | 1 | ♂ Bootis | S. | .. | 2.7 | 5.0 | 7.4 | 9.9 | 12.0 | 16.7 | 18.4 | 21.2 | 40 7.42 | - 0.46 | -30.85 | -30.93 | 14 39 36.03 | - 0.10 |
| | 2 | ♂ Bootis | S. | 32.4 | 35.7 | 37.8 | .. | .. | .. | 59.5 | 1.6 | 4.9 | 57 48.67 | - 0.04 | .. | -30.93 | 14 57 17.70 | - 0.07 |
| | 3 | Venus II, S. . . . | S. | 26.4 | 29.1 | 30.6 | 37.0 | 39.1 | 41.2 | 47.6 | 49.3 | 52.0 | 2 39.14 | - 1.46 | .. | -30.93 | 15 2 6.75 | - 0.47 |
| | 4 | Venus N. | S. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 5 | β Libre | S. | .. | 50.4 | 52.6 | 54.6 | 56.6 | 58.8 | 3.0 | 4.5 | 6.9 | 10 54.62 | - 1.32 | -31.01 | -30.93 | 15 10 22.37 | + 0.08 |
| 13 | 6 | Sun I, S. | S. | 46.7 | 49.3 | 51.0 | 57.7 | 59.8 | 2.3 | 8.9 | 10.5 | 13.4 | 24 59.96 | - 1.68 | .. | -30.91 | 17 24 27.37 | .. |
| | 7 | Sun II, N. | S. | 8.9 | 11.6 | 13.0 | 19.9 | 22.1 | 24.4 | 30.8 | 32.6 | 35.5 | 27 22.09 | - 1.68 | .. | -30.91 | 17 26 49.50 | .. |
| | 8 | Polaris | S. | .. | .. | 23.0 | 57.5 | 26.0 | 51.0 | 21.0 | .. | .. | 13 25.18 | + 19.69 | .. | -30.86 | 1 13 44.01 | - 1.35 |
| | 9 | α Piscium | S. | 14.3 | 16.8 | 18.3 | 24.5 | 26.5 | 28.6 | 34.9 | 35.4 | 39.0 | 39 26.59 | - 0.95 | -30.87 | -30.85 | 1 38 54.79 | - 0.01 |
| | 10 | β Arietis | S. | 10.0 | 12.9 | 14.5 | 21.0 | 23.2 | 25.3 | 31.8 | 33.3 | 36.2 | 48 23.13 | - 0.68 | -30.85 | -30.85 | 1 47 51.60 | + 0.02 |
| | 11 | Durch. 2°, 315. . | S. | 49.0 | 51.6 | 53.2 | 59.3 | 1.4 | 3.4 | 9.6 | 11.1 | 13.7 | 56 1.37 | - 1.08 | .. | -30.84 | 1 55 29.45 | - 3.98 |
| | 12 | α Arietis | S. | 33.5 | 36.3 | 38.0 | 44.6 | 46.8 | 49.0 | 55.6 | 57.3 | 0.0 | 0 46.77 | - 0.61 | -30.84 | -30.84 | 2 0 15.34 | + 0.01 |
| | 13 | Neptune | S. | 0.5 | 3.2 | 4.6 | 10.9 | 13.0 | 15.1 | 21.2 | 22.8 | 25.5 | 5 12.08 | - 0.90 | .. | -30.84 | 2 4 41.24 | .. |
| | 14 | γ Ceti | S. | 16.5 | 19.0 | 20.6 | 26.7 | 28.8 | 30.8 | 36.8 | 38.5 | 40.9 | 37 23.73 | - 1.07 | -30.89 | -30.82 | 2 36 56.84 | + 0.07 |
| | 15 | β Ursæ Minoris, S. P. | S. | 25.1 | 25.7 | 9.8 | 16.6 | 39.0 | 31.0 | 7.9 | 2 5 | 52.6 | 51 38.89 | - 5.42 | .. | -30.82 | 14 51 2.65 | + 0.19 |
| | 16 | α Ceti | S. | 11.8 | 14.3 | 15.9 | 22.0 | 24.0 | 26.0 | 32.2 | 33.7 | 36.4 | 56 21.03 | - 1.06 | -30.78 | -30.82 | 2 55 52.15 | - 0.02 |
| | 17 | B. A. C. 1125 . . . | S. | 59.6 | 3.0 | 5.0 | 10.3 | 12.9 | 15.9 | 18.6 | 21.2 | .. | 33 15.79 | - 2.23 | .. | -30.80 | 3 32 42.76 | - 4.06 |
| | 18 | Vibilia | S. | .. | .. | 18.2 | 20.4 | 22.5 | 24.6 | 26.9 | .. | .. | 37 22.53 | - 0.64 | .. | -30.77 | 4 36 51.12 | .. |
| | 19 | Antigone | S. | 6.8 | 9.2 | 10.5 | 16.8 | 19.0 | 21.0 | 27.2 | 28.6 | 31.0 | 7 18.93 | - 0.96 | .. | -30.76 | 5 6 47.21 | .. |
| | 20 | δ Orionis (R.) . . | S. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 21 | δ Orionis | S. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 22 | B. A. C. 1841 . . . | S. | 45.7 | 48.8 | 50.5 | 57.7 | 0.1 | 2.5 | 9.7 | 11.5 | 14.5 | 42 0.11 | - 1.94 | .. | -30.74 | 5 41 27.43 | - 3.94 |
| | 23 | α Orionis (R.) . . | S. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 24 | α Orionis | S. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 25 | 22 Camelopardalis (R.) | S. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 26 | 22 Camelopardalis . | S. | .. | .. | 38.7 | 44.6 | 50.3 | .. | .. | .. | .. | 5 50.35 | + 2.01 | .. | -30.73 | 6 5 21.67 | + 0.44 |
| | 27 | δ Ursæ Minoris, S. P. | S. | 55.0 | 13.0 | 16.5 | 37.5 | 2.4 | .. | .. | .. | .. | 12 23.26 | -21.04 | .. | -30.73 | 18 11 36.49 | - 0.19 |
| | 28 | γ Geninorum . . . | S. | 56.7 | 59.3 | 1.0 | 7.2 | 9.4 | 11.6 | 17.4 | 19.6 | 22.0 | 31 9.36 | - 0.78 | -30.70 | -30.72 | 6 30 37.86 | - 0.05 |
| | 29 | α Canis Majoris . . | S. | 4.5 | 7.2 | 8.9 | 15.2 | 17.2 | 19.4 | 25.7 | 27.4 | 30.0 | 40 17.28 | - 1.52 | -30.83 | -30.72 | 6 39 45.04 | + 0.03 |
| | 30 | B. A. C. 2853 . . . | S. | 54.6 | 57.4 | 59.0 | 5.5 | 7.5 | 9.6 | 16.2 | 17.8 | 20.5 | 25 7.57 | - 0.74 | .. | -30.67 | 8 24 35.16 | - 4.71 |
| | 31 | B. A. C. 2453 . . . | S. | 1.3 | 4.0 | 5.5 | 12.0 | 14.2 | 16.3 | 22.9 | 24.5 | 27.2 | 38 14.21 | - 0.74 | .. | -30.66 | 8 37 42.81 | - 4.65 |
| | 32 | B. A. C. 2970 . . . | S. | .. | .. | .. | .. | .. | .. | 32.5 | 33.9 | 56.7 | 40 44.09 | - 0.80 | .. | -30.66 | 8 40 12.55 | - 4.45 |
| | 33 | B. A. C. 3171 . . . | S. | 26.5 | 29.1 | 30.7 | 37.2 | 39.3 | 41.4 | 48.0 | 49.5 | 52.3 | 12 39.33 | - 0.75 | .. | -30.65 | 9 12 7.93 | - 4.44 |
| | 34 | α Hydre | S. | 53.0 | 55.6 | 57.0 | 3.3 | 5.3 | 7.4 | 13.6 | 14.8 | 17.7 | 22 5.30 | - 1.32 | -30.62 | -30.64 | 9 21 33.34 | - 0.05 |
| | 35 | B. A. C. 3252 . . . | S. | 13.9 | 17.0 | 19.0 | 26.6 | 29.5 | 32.0 | 39.6 | 41.6 | 44.8 | 26 29.33 | - 0.23 | .. | -30.64 | 9 25 58.46 | - 5.05 |
| | 36 | B. A. C. 3261 . . . | S. | 58.0 | 1.2 | 3.0 | 10.7 | 13.4 | 15.9 | 23.5 | 25.6 | 28.7 | 27 13.33 | - 0.23 | .. | -30.64 | 9 26 42.46 | - 5.04 |
| | 37 | B. A. C. 3345 . . . | S. | .. | 24.6 | 26.8 | 28.8 | .. | 33.1 | 37.2 | 38.8 | 41.5 | 41 28.88 | - 0.89 | .. | -30.63 | 9 40 57.36 | - 4.10 |
| | 38 | Uranus | S. | 2.4 | 5.0 | 6.5 | 13.0 | 15.0 | 17.0 | 23.4 | 25.1 | 27.8 | 49 15.02 | - 0.89 | .. | -30.63 | 9 48 43.55 | .. |
| | 39 | α Leonis | S. | .. | 17.3 | 19.4 | 21.5 | 23.5 | 25.6 | 29.9 | 31.4 | 33.9 | 2 21.46 | - 0.87 | -30.61 | -30.62 | 10 1 49.97 | - 0.05 |
| | 40 | B. A. C. 3522 . . . | S. | 21.4 | 24.0 | 25.7 | 30.0 | 32.3 | 34.7 | 36.7 | .. | .. | 13 34.46 | - 0.71 | .. | -30.62 | 10 13 3.14 | - 4.03 |
| | 41 | B. A. C. 3532 . . . | S. | 0.8 | 3.5 | 5.0 | 9.2 | 11.2 | 13.2 | 15.2 | 17.3 | .. | 15 13.20 | - 1.08 | .. | -30.62 | 10 14 41.49 | - 3.69 |
| | 42 | B. A. C. 3561 . . . | S. | 6.2 | 8.7 | 10.3 | 16.5 | 18.4 | 20.7 | 26.7 | 28.5 | 31.1 | 19 18.57 | - 0.93 | .. | -30.62 | 10 18 47.09 | - 3.80 |
| | 43 | B. A. C. 3602 . . . | S. | .. | 19.4 | 21.7 | 24.0 | 26.5 | 29.1 | 33.8 | 35.6 | 38.6 | 25 24.11 | - 0.36 | .. | -30.61 | 10 24 53.14 | - 4.35 |
| | 44 | γ Leonis (R.) . . . | S. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 45 | γ Leonis | S. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 46 | α Ursæ Majoris (R.) | S. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 47 | α Ursæ Majoris . . | S. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | 48 | B. A. C. 3832 . . . | S. | 47.5 | 50.0 | 51.6 | 57.7 | 59.8 | 1.8 | 8.0 | 9.5 | 11.9 | 7 59.76 | - 1.14 | .. | -30.59 | 11 7 23.03 | - 3.34 |
| | 49 | B. A. C. 3850 . . . | S. | 17.3 | 19.8 | 21.4 | 27.4 | 29.5 | 31.6 | 37.7 | 39.2 | 41.9 | 11 29.53 | - 1.09 | .. | -30.59 | 11 10 57.85 | - 3.35 |
| | 50 | B. A. C. 3877 . . . | S. | 49.9 | 52.7 | 54.2 | 0.4 | 2.3 | 4.5 | 10.9 | 12.4 | 14.8 | 18 2.46 | - 0.91 | .. | -30.59 | 11 17 30.96 | - 3.43 |

4. Telescope micrometer reading decreased one revolution in reduction.

15. Bisections at set C.

17. Bisections at set D.

17, 18, 19, 32, 35. Thread A used.

30, 36, 43, 45, 47. Thread B used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellan'us Corrections. | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|---------------------------|-------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | ° ' " | ° ' " | " " | " " | " " | | | | | | | ° ' " | ° ' " | " " | ° ' " | " " | | |
| 1 | 348 33 | 10 10.1 | 7.1 | 4.5 | 8.0 | 34 | .. | .. | .. | 580 | 540 | 70.5 | 11 17 57.6 | 34.4 | + | 12.0 | 62 24 30.8 | - 2.4 |
| 2 | 1 54 | 9.4 | 9.0 | 5.8 | 8.2 | 31 | .. | .. | .. | 905 | 860 | 70.5 | 358 1 17.4 | .. | - | 2.1 | 49 7 36.5 | - 1.3 |
| 3 | 305 50 | 5.4 | 4.9 | 3.1 | 7.5 | 35 | .. | 730 | .. | 655 | .. | 70.5 | 54 6 11.4 | .. | + | 1 22.5 | 105 13 55.1 | .. |
| 4 | 305 50 | 5.4 | 4.9 | 3.1 | 7.5 | 35 | 770 | .. | .. | .. | 718 | 70.5 | 54 5 56.8 | .. | + | 1 22.5 | 105 13 40.5 | .. |
| 5 | 312 8 | 10.7 | 11.5 | 9.7 | 12.2 | 35 | .. | 535 | .. | 400 | .. | 70.5 | 47 48 13.8 | 39.0 | + | 1 5.7 | 98 55 40.7 | - 1.5 |
| 6 | 297 34 | 3.3 | 3.0 | 2.0 | 3.5 | 33 | 445 | 450 | .. | .. | .. | 70.5 | 62 21 33.9 | .. | + | 1 50.8 | 113 29 45.9 | .. |
| 7 | 298 6 | 3.2 | 4.2 | 3.0 | 6.7 | 31 | .. | .. | .. | 170 | 145 | 70.5 | 61 49 1.7 | 48.3 | + | 1 48.3 | 112 57 11.2 | .. |
| 8 | 49 40 | 8.0 | 4.5 | 3.8 | 5.7 | 31 | 785 | .. | 860 | .. | 790 | 70.3 | 310 15 12.4 | 43.2 | - | 1 9.4 | 1 20 24.2 | - 2.2 |
| 9 | 329 36 | 10.5 | 9.5 | 7.1 | 11.0 | 37 | .. | 235 | .. | 140 | .. | 70.3 | 30 20 38.6 | .. | + | 34.5 | 81 27 34.3 | - 1.2 |
| 10 | 341 14 | 12.7 | 11.4 | 6.7 | 12.9 | 29 | .. | 730 | .. | 595 | .. | 70.3 | 18 40 44.8 | .. | + | 19.9 | 69 47 25.9 | - 0.3 |
| 11 | 323 20 | 5.8 | 4.5 | 1.0 | 5.5 | 34 | 240 | 230 | .. | .. | .. | 70.3 | 36 35 47.1 | .. | + | 43.7 | 87 42 52.0 | +23.9 |
| 12 | 343 56 | 10.4 | 8.0 | 5.5 | 10.0 | 36 | .. | .. | .. | 050 | 030 | 70.3 | 16 0 21.0 | .. | + | 16.9 | 67 6 59.1 | - 0.4 |
| 13 | 331 48 | 10.5 | 9.1 | 6.0 | 10.9 | 39 | .. | 040 | .. | 960 | .. | 70.3 | 28 9 5.9 | .. | + | 31.5 | 79 15 58.6 | .. |
| 14 | 323 46 | 11.4 | 10.5 | 7.0 | 13.5 | 33 | .. | .. | .. | 850 | 780 | 70.3 | 36 9 48.9 | .. | + | 43.1 | 87 16 53.2 | + 0.2 |
| 15 | 66 20 | 6.8 | 4.9 | 0.6 | 5.5 | 31 | 300 | .. | .. | .. | 320 | 70.3 | 293 35 3.4 | .. | - | 2 14.4 | 344 39 10.2 | + 1.0 |
| 16 | 324 40 | 6.5 | 5.3 | 29.5 | 6.5 | 36 | .. | 820 | .. | 690 | .. | 70.3 | 35 16 26.8 | .. | + | 41.7 | 86 23 29.7 | - 0.6 |
| 17 | 280 24 | 12.3 | 10.8 | 10.4 | 14.5 | 33 | .. | .. | .. | 830 | 860 | 70.3 | 79 29 16.6 | .. | + | 5 8.3 | 130 40 46.1 | +13.2 |
| 18 | 342 58 | 15.5 | 13.5 | 7.6 | 13.0 | 40 | 600 | 880 | .. | .. | .. | 70.3 | 16 57 4.7 | .. | + | 18.0 | 68 3 43.9 | - 1.9 |
| 19 | 329 6 | 11.3 | 9.6 | 6.1 | 11.6 | 34 | .. | 430 | .. | 120 | .. | 70.3 | 30 47 22.9 | 40.2 | + | 35.3 | 81 54 19.4 | - 1.8 |
| 20 | 219 12 | 11.5 | 10.2 | 8.2 | 8.3 | 33 | 925 | 925 | .. | .. | .. | 70.3 | 140 43 47.7 | .. | - | 48.4 | 90 23 21.9 | + 0.5 |
| 21 | 320 40 | 6.5 | 5.2 | 1.0 | 7.5 | 35 | .. | .. | .. | 610 | 560 | 70.3 | 39 16 10.4 | .. | + | 48.4 | 90 23 20.0 | - 1.4 |
| 22 | 288 44 | 11.7 | 10.1 | 9.0 | 13.0 | 34 | 160 | 015 | .. | .. | .. | 70.3 | 71 11 51.3 | .. | + | 2 52.3 | 122 21 4.8 | +11.2 |
| 23 | 211 26 | 8.2 | 8.1 | 6.7 | 7.4 | 35 | 080 | 020 | .. | .. | .. | 70.3 | 148 30 2.9 | .. | - | 36.3 | 82 36 54.6 | + 0.8 |
| 24 | 328 26 | 8.8 | 6.0 | 1.5 | 7.3 | 34 | .. | .. | .. | 515 | 465 | 70.3 | 31 29 54.5 | .. | + | 36.3 | 82 36 52.0 | - 1.8 |
| 25 | 149 28 | 8.5 | 6.0 | 5.6 | 8.3 | 32 | 890 | 830 | .. | .. | .. | 70.3 | 210 27 27.5 | .. | + | 34.8 | 20 38 18.9 | - 0.6 |
| 26 | 30 24 | 8.5 | 5.0 | 1.7 | 4.8 | 36 | .. | .. | .. | 040 | 800 | 70.3 | 329 32 32.2 | .. | - | 34.8 | 20 38 18.6 | - 0.9 |
| 27 | 54 24 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 70.3 | .. | .. | .. | .. | .. | .. |
| 28 | 337 34 | 8.5 | 5.0 | 2.2 | 6.8 | 38 | .. | 720 | .. | 555 | .. | 70.3 | 22 22 56.9 | .. | + | 24.4 | 73 29 42.5 | - 0.1 |
| 29 | 304 30 | 7.6 | 4.2 | 1.0 | 7.2 | 31 | .. | 055 | .. | 015 | .. | 70.3 | 55 24 59.7 | 39.5 | + | 1 25.8 | 106 32 46.7 | + 0.6 |
| 30 | 339 34 | 7.3 | 4.7 | 0.5 | 5.2 | 27 | .. | 710 | .. | 600 | .. | 70.3 | 20 22 40.2 | 38.0 | + | 22.1 | 71 29 23.5 | - 9.0 |
| 31 | 339 40 | 3.0 | 0.3 | 26.0 | 0.8 | 38 | .. | 880 | .. | 790 | .. | 70.3 | 20 16 54.3 | .. | + | 22.0 | 71 23 37.5 | -10.5 |
| 32 | 333 36 | 9.2 | 7.5 | 2.5 | 7.5 | 42 | .. | .. | .. | 760 | 710 | 70.3 | 26 19 28.3 | .. | + | 29.4 | 77 26 18.9 | - 9.2 |
| 33 | 339 16 | 7.0 | 4.0 | 1.6 | 8.0 | 33 | .. | 835 | .. | 750 | .. | 70.3 | 20 39 42.3 | .. | + | 22.4 | 71 46 25.9 | -14.1 |
| 34 | 312 56 | 8.2 | 5.0 | 4.3 | 9.5 | 35 | 000 | 950 | .. | .. | .. | 70.3 | 47 0 0.9 | .. | + | 1 3.7 | 98 7 25.8 | - 0.3 |
| 35 | 358 2 | 8.0 | 6.9 | 2.8 | 8.3 | 36 | 310 | 310 | .. | .. | .. | 70.3 | 1 51 48.0 | .. | + | 2.0 | 52 58 11.2 | -20.7 |
| 36 | 358 2 | 8.0 | 6.9 | 2.8 | 8.3 | 37 | .. | .. | .. | 060 | 035 | 70.3 | 1 57 7.1 | .. | + | 2.0 | 53 3 30.3 | -20.7 |
| 37 | 333 4 | 9.8 | 6.5 | 2.7 | 7.0 | 39 | .. | .. | .. | 360 | 350 | 70.3 | 26 53 9.7 | .. | + | 30.1 | 78 0 1.0 | -15.1 |
| 38 | 335 4 | 9.0 | 6.0 | 2.7 | 7.0 | 35 | .. | 130 | .. | 050 | .. | 70.3 | 24 52 3.1 | .. | + | 27.5 | 75 58 51.8 | .. |
| 39 | 333 38 | 10.0 | 6.7 | 2.6 | 8.7 | 39 | .. | 020 | .. | 900 | .. | 70.3 | 26 19 3.2 | .. | + | 29.4 | 77 25 53.8 | - 1.2 |
| 40 | 341 8 | 9.5 | 7.2 | 4.7 | 9.2 | 33 | 560 | 540 | .. | .. | .. | 70.3 | 13 47 40.2 | .. | + | 20.2 | 69 54 21.6 | -20.4 |
| 41 | 323 58 | 11.7 | 9.8 | 6.5 | 12.3 | 36 | 080 | 040 | .. | .. | .. | 70.3 | 35 58 21.0 | .. | + | 43.1 | 87 5 25.3 | -14.9 |
| 42 | 330 28 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 70.3 | .. | .. | .. | .. | .. | .. |
| 43 | 354 4 | 10.7 | 7.8 | 5.6 | 10.6 | 28 | .. | .. | .. | 690 | 685 | 70.3 | 5 53 1.2 | .. | + | 6.1 | 56 59 28.5 | -25.4 |
| 44 | 207 36 | 7.4 | 7.3 | 8.4 | 9.1 | 29 | 120 | 125 | .. | .. | .. | 70.3 | 152 18 32.6 | 38.0 | - | 31.2 | 78 48 19.8 | + 4.2 |
| 45 | 332 16 | 7.3 | 5.0 | 2.2 | 6.5 | 30 | .. | .. | .. | 335 | 265 | 70.3 | 27 41 22.2 | .. | + | 31.2 | 78 48 14.6 | - 1.0 |
| 46 | 156 24 | 5.5 | 4.9 | 3.5 | 5.1 | 29 | 495 | 465 | .. | .. | .. | 70.3 | 203 30 33.8 | .. | + | 25.9 | 27 35 21.5 | - 2.4 |
| 47 | 23 28 | 9.5 | 7.0 | 3.5 | 6.2 | 30 | .. | .. | .. | 455 | 380 | 70.3 | 336 29 26.2 | .. | - | 25.9 | 27 35 21.5 | - 2.4 |
| 48 | 321 40 | 4.0 | 0.4 | 27.5 | 3.9 | 35 | 550 | 540 | .. | .. | .. | 70.3 | 38 16 50.4 | .. | + | 46.9 | 89 23 58.5 | -17.5 |
| 49 | 323 44 | 11.3 | 8.2 | 2.9 | 9.5 | 33 | 620 | 575 | .. | 470 | 470 | 70.3 | 36 11 41.0 | .. | + | 43.5 | 87 18 45.7 | -18.4 |
| 50 | 332 16 | 11.3 | 7.1 | 4.8 | 9.0 | 37 | .. | 725 | .. | 610 | .. | 70.3 | 27 40 44.5 | .. | + | 31.2 | 78 47 36.9 | -21.8 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " | " | " | " |
| 1 | 29.92 | 34.0 | 3 | - 4.5 | - 7.4 | .. | - 11.9 |
| 5 | 29.92 | 39.0 | 4 | - 4.5 | + 7.4 | - 0.2 | + 2.7 |
| 7 | 29.85 | 44.3 | 6 | - 8.0 | - 16 17.3 | .. | - 16 25.3 |
| 8 | 29.86 | 46.2 | 7 | - 7.9 | + 16 17.3 | .. | + 16 9.4 |
| 19 | 29.87 | 42.8 | 13 | - 0.1 | .. | .. | - 0.1 |
| 29 | 29.85 | 41.8 | 38 | - 0.2 | .. | .. | - 0.2 |
| 30 | 29.85 | 40.8 | | | | | |
| 44 | 29.84 | 40.8 | | | | | |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. | | |
|---------|---------|-----------------------------------|-----------|--------------------------------|-------|-------|---------|-------|-------|-------|-------|-------|------------|--------------|---------------|-----------------|---------------------------|----------------------------|------------|--------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't | Clock. adopted. | | | | |
| 1876. | | | | | | | | | | | | m. | s. | s. | s. | s. | h. m. s. | s. | | |
| Dec. 13 | 1 | <i>v</i> Leonis | S. | 58.7 | 1.1 | 2.7 | 8.9 | 10.9 | 13.0 | 18.9 | 20.6 | 23.2 | 31 | 10.89 | — 1.15 | —30.54 | —30.58 | 11 30 39.16 | — 0.08 | |
| | 2 | B. A. C. 3982 . . . | S. | 51.6 | 54.2 | 55.8 | 1.9 | 3.9 | 6.0 | 12.2 | 13.7 | 16.3 | 40 | 3.96 | — 0.99 | . . . | —30.58 | 11 39 32.19 | — 3.23 | |
| | 3 | <i>β</i> Leonis | S. | 6.0 | 8.6 | 10.1 | 16.5 | 18.6 | 20.8 | 27.1 | 28.7 | 31.4 | 43 | 18.64 | — 0.82 | —30.53 | —30.58 | 11 42 47.24 | — 0.07 | |
| | 4 | Groom, 4163, S. P. | S. | . . . | . . . | 41.0 | 33.0 | 26.1 | 19.0 | 11.8 | . . . | . . . | 49 | 26.14 | — 5.17 | . . . | —30.58 | 23 48 50.39 | — 0.17 | |
| | 5 | B. A. C. 4452 . . . | S. | 56.2 | 57.6 | 1.7 | 3.8 | 5.9 | 7.9 | 10.0 | 14.0 | 15.5 | 55 | 5.84 | — 0.99 | . . . | —30.57 | 11 54 34.28 | — 3.13 | |
| | 6 | B. A. C. 4066 ¹ . . | S. | 16.5 | 19.2 | 21.0 | . . . | . . . | . . . | 38.6 | 40.4 | 43.1 | 58 | 20.80 | — 0.65 | . . . | —30.57 | 11 57 58.58 | — 3.25 | |
| | 7 | B. A. C. 4066 ² . . | S. | . . . | . . . | 25.7 | 27.9 | 30.1 | 32.3 | 34.5 | . . . | . . . | 58 | 20.11 | — 0.65 | . . . | —30.57 | 11 57 58.89 | — 3.25 | |
| | 8 | <i>η</i> Virginis | S. | 56.3 | 58.9 | 0.1 | 4.3 | . . . | . . . | . . . | . . . | 20.7 | 14 | 8.46 | — 1.15 | —30.63 | —30.57 | 12 13 36.74 | + 0.04 | |
| 15 | 9 | Sun I, S. | E. | 37.1 | 40.0 | 41.7 | 48.3 | 50.5 | 52.7 | 59.4 | 1.2 | 3.8 | 33 | 50.52 | — 1.53 | . . . | —30.22 | 17 33 18.77 | . . . | |
| | 10 | Sun II, N. | E. | 59.6 | 2.3 | 4.0 | 10.6 | 12.9 | 15.2 | 22.0 | 23.8 | 26.3 | 36 | 12.97 | — 1.53 | . . . | —30.22 | 17 35 41.22 | . . . | |
| | 11 | <i>γ</i> Draconis (R.) . . | E. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | |
| | 12 | <i>γ</i> Draconis | E. | . . . | . . . | 5.8 | 9.0 | 12.5 | 15.6 | 19.0 | . . . | . . . | 54 | 2.40 | + 0.43 | . . . | —30.21 | 17 53 42.62 | — 0.43 | |
| | 13 | <i>δ</i> Ursæ Minoris . . | E. | . . . | . . . | 14.0 | 48.3 | 22.5 | 57.9 | 6.3 | 32.4 | 16.0 | 11 | 48.53 | +18.11 | . . . | —30.20 | 18 11 36.44 | 0.0 | |
| | 14 | <i>α</i> Lyrae | E. | 59.3 | 2.7 | 4.6 | 12.5 | 15.1 | 17.6 | 25.4 | 27.5 | 30.8 | 33 | 15.06 | — 0.03 | —30.21 | —30.19 | 18 32 44.79 | + 0.04 | |
| | 15 | <i>β</i> Lyrae | E. | 46.5 | 49.6 | 51.5 | 58.8 | 1.2 | 3.6 | 10.9 | 12.8 | 15.8 | 46 | 1.19 | — 0.25 | —30.14 | —30.18 | 18 15 30.76 | — 0.01 | |
| | 16 | <i>γ</i> Aquilæ | E. | 2.5 | 5.1 | 6.7 | 13.0 | 15.1 | 17.2 | 23.4 | 25.0 | 27.6 | 0 | 15.07 | — 0.73 | —30.18 | —30.17 | 18 59 44.17 | + 0.09 | |
| | 17 | <i>γ</i> Aquilæ | E. | . . . | . . . | . . . | 51.7 | 56.6 | 58.7 | 2.8 | 4.4 | 7.0 | 49 | 54.57 | — 0.80 | —30.16 | —30.14 | 19 40 23.63 | + 0.05 | |
| | 18 | <i>α</i> Aquilæ (R.) . . . | E. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | |
| | 19 | <i>α</i> Aquilæ | E. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | |
| | 20 | <i>α</i> Cygni | E. | 25.4 | 29.0 | 31.0 | 39.7 | 42.6 | 45.4 | 54.2 | 56.0 | 59.8 | 37 | 42.57 | + 0.16 | —30.02 | —30.10 | 20 37 12.63 | — 0.06 | |
| | 21 | <i>α</i> Cygni | E. | 57.4 | 0.3 | 2.1 | 9 111.4 | 13.8 | 20.9 | 22.7 | 25.7 | 8 | 11.49 | 8 | 11.49 | — 0.34 | —30.15 | —30.08 | 21 7 41.07 | + 0.08 |
| | 22 | 32 ¹ Camelopard, S. P. | E. | 24.0 | 8.0 | 30.4 | 10.2 | 50.0 | 30.5 | 19.4 | 30.6 | 16.3 | 48 | 50.11 | —12.43 | . . . | —29.92 | 12 48 7.76 | — 1.73 | |
| | 23 | 32 ² Camelopard, S. P. | E. | 32.4 | 16.5 | 38.4 | 17.7 | 57.8 | 38.3 | 18.0 | 39.0 | 23.8 | 48 | 57.99 | —12.12 | . . . | —29.92 | 12 48 15.65 | — 1.20 | |
| | 24 | <i>ε</i> Piscium | E. | 52.6 | 55.0 | 56.6 | 2.8 | 4.9 | 7.0 | 13.0 | 14.7 | 17.3 | 57 | 4.83 | — 0.82 | —29.89 | —29.93 | 0 56 34.13 | — 0.02 | |
| | 25 | Polaris (R.) | E. | 48 0 | . . . | 36.5 | . . . | . . . | . . . | . . . | . . . | . . . | 13 | 28.75 | +49.49 | . . . | —29.91 | 1 13 48.33 | + 4.30 | |
| | 26 | Polaris | E. | . . . | . . . | 28.5 | 56.5 | 26.5 | 51.0 | 21.0 | . . . | . . . | 13 | 25.16 | +49.87 | . . . | —29.91 | 1 13 45.12 | + 1.09 | |
| | 27 | Polaris | E. | . . . | . . . | . . . | . . . | . . . | 17.5 | 16.0 | 6.5 | 13 | 24.10 | +49.87 | . . . | —29.91 | 1 13 44.06 | + 0.03 | | |
| | 28 | <i>θ</i> Ceti | E. | 11.8 | 14.5 | 16.0 | 22.4 | 24.5 | 26.6 | 32.7 | 34.3 | 36.9 | 18 | 24.41 | — 1.16 | —29.93 | —29.91 | 1 17 53.34 | + 0.04 | |
| | 29 | <i>η</i> Piscium | E. | 15.4 | 16.9 | 21.0 | 23.1 | 25.3 | 27.5 | 29.6 | 33.8 | 35.4 | 25 | 25.33 | — 0.66 | —29.86 | —29.90 | 1 21 54.77 | + 0.03 | |
| | 30 | <i>α</i> Piscium | E. | 13.0 | 15.6 | 17.2 | 23.4 | 25.5 | 2.5 | 33.7 | 35.3 | 37.8 | 39 | 25.44 | — 0.79 | —29.90 | —29.89 | 1 38 54.76 | — 0.02 | |
| | 31 | <i>β</i> Arietis (R.) . . . | E. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | |
| | 32 | <i>β</i> Arietis | E. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | |
| | 33 | 50 Cassiopeiæ . . . | E. | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | |
| | 34 | <i>α</i> Arietis | E. | . . . | . . . | 11.2 | 43 4 | 43.7 | 47.9 | 50.2 | . . . | . . . | 0 | 45.69 | — 0.47 | —29.90 | —29.88 | 2 0 15.34 | + 0.03 | |
| | 35 | Neptune | E. | 52.0 | 54.7 | 56.4 | 2.5 | 4.6 | 6.8 | 12.8 | 14.4 | 17.0 | 5 | 4.58 | — 0.74 | . . . | —29.87 | 2 4 33.97 | . . . | |
| | 36 | Lalande 4803 | E. | 39.7 | 42.2 | 43.7 | 50.0 | 52.0 | 54.0 | 0.2 | 1.7 | 4.4 | 29 | 51.99 | — 0.84 | . . . | —29.85 | 2 29 21.39 | — 4.17 | |
| | 37 | Lalande 4903 ¹ . . . | E. | 33.6 | 36.3 | 37.9 | 44.0 | 46.1 | 48.3 | 51.6 | 56.3 | 59.0 | 32 | 46.23 | — 0.66 | . . . | —29.85 | 2 32 15.72 | — 4.27 | |
| | 38 | Niobe | E. | . . . | . . . | 38.0 | 40.9 | 44.5 | 47.9 | 51.2 | . . . | . . . | 43 | 44.52 | + 0.48 | . . . | —29.80 | 3 43 15.20 | . . . | |
| | 39 | B. A. C. 1291 | E. | 20.9 | 33.0 | 34.9 | 42.5 | 45.0 | 47.7 | 55.0 | 57.0 | 0.2 | 6 | 45.02 | — 1.83 | . . . | —29.79 | 4 6 13.40 | — 4.05 | |
| | 40 | B. A. C. 1312 | E. | 48.7 | 51.6 | 53.6 | 1.5 | 4.0 | 6.7 | 11.4 | 16.2 | 19.5 | 10 | 1.02 | — 1.89 | . . . | —29.78 | 4 9 32.35 | — 4.04 | |
| | 41 | B. A. C. 1311 ¹ . . . | E. | 24.0 | 26.8 | 28.5 | 35.3 | 37.5 | 39.7 | 46.5 | 48.4 | 51.1 | 15 | 37.53 | — 0.40 | . . . | —29.78 | 4 15 7.35 | — 5.08 | |
| | 42 | B. A. C. 1311 ² . . . | E. | 24.7 | 27.5 | 29.2 | 36.0 | 38.0 | 40.4 | 47.2 | 49.0 | 51.7 | 15 | 38.19 | — 0.40 | . . . | —29.78 | 4 15 8.01 | — 5.08 | |
| | 43 | B. A. C. 1378 | E. | 44 6 | 47.0 | 48.8 | 55.0 | 57.2 | 59.4 | 5.6 | 7.3 | 10.0 | 21 | 57.21 | — 0.66 | . . . | —29.78 | 4 21 26.77 | — 4.79 | |
| | 44 | Anonymous | E. | 28.0 | 30.0 | 34.0 | 36.6 | 38.7 | 40.9 | 43.0 | 47.5 | 49.2 | 34 | 38.66 | — 0.49 | . . . | —29.77 | 4 34 8.40 | — 5.05 | |
| | 45 | Lalande 9484 | E. | 17.5 | 19.2 | 23.7 | 26.0 | 28.5 | 30.7 | 33.0 | 37.6 | 39.4 | 57 | 28.10 | — 0.34 | . . . | —29.75 | 4 56 58.31 | — 5.33 | |
| | 46 | Antigone | E. | 23.0 | 25.9 | 27.6 | 33.3 | 35.4 | 37.8 | 43.8 | 45.2 | 47.8 | 5 | 35.53 | — 0.80 | . . . | —29.75 | 5 5 4.98 | . . . | |
| | 47 | Durch. 27 ² , 741 . . | E. | . . . | 37.0 | 39.6 | 41.8 | 44.0 | 46.4 | 51.0 | 52.7 | 55.5 | 9 | 41.76 | — 0.34 | . . . | —29.74 | 5 9 11.68 | — 5.37 | |
| | 48 | Weisse 633 | E. | 12.5 | 14.9 | 16.5 | . . . | . . . | . . . | 33.0 | 34.5 | 37.0 | 27 | 24.73 | — 1.11 | . . . | —29.73 | 5 26 53.89 | — 4.42 | |
| | 49 | Weisse 632 | E. | . . . | . . . | 20.9 | 23.0 | 25.1 | 27.1 | 29.1 | . . . | . . . | 27 | 25.05 | — 1.11 | . . . | —29.73 | 5 26 54.21 | — 4.42 | |
| | 50 | Weisse 1110 | E. | 22.7 | 25.4 | 27.0 | 33.3 | 35.4 | 37.5 | 43.8 | 45.1 | 48.0 | 45 | 35.39 | — 0.66 | . . . | —29.72 | 5 45 5.01 | — 4.95 | |

4, 25, 27. Bisections at sets B and D.

22, 23, 26, 33. Bisections at set C.

32, 33, 38, 44, 46, 47. Thread A used.

37. Thread B used.

41, 42. Telescope micrometer reading decreased five revolutions in reduction.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | 5. | | | | | | |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | ° ' " | ° ' " | ° ' " | ° ' " | ° ' " |
| 1 | 320 54 | 10 8.5 | 5.9 | 2.0 | 7.9 | 32 | .. | 870 | .. | 735 | .. | 70.3 | 39 1 27.9 | .. | + | 48.2 | 90 8 37.3 |
| 2 | 328 16 | 13.5 | 11.0 | 7.7 | 13.0 | 34 | 300 | 300 | .. | .. | .. | 70.3 | 31 39 55.3 | 37.2 | + | 36.7 | 82 46 53.2 |
| 3 | 336 18 | 10.5 | 8.3 | 3.3 | 8.0 | 33 | .. | 620 | .. | 180 | .. | 70.3 | 23 37 40.9 | .. | + | 26.0 | 74 44 28.1 |
| 4 | 67 16 | 8.8 | 5.6 | 2.6 | 5.5 | 34 | 700 | .. | .. | .. | 605 | 70.3 | 292 39 55.5 | .. | - | 21.6 | 343 43 55.1 |
| 5 | 328 22 | 5.5 | 2.1 | 29.3 | 4.5 | 39 | 170 | 200 | .. | .. | .. | 70.3 | 31 35 1.6 | .. | + | 36.6 | 82 41 59.4 |
| 6 | 343 12 | 8.1 | 4.8 | 29.9 | 5.1 | 38 | .. | .. | .. | 165 | 085 | 70.3 | 16 44 50.4 | .. | + | 17.9 | 67 51 29.5 |
| 7 | 343 12 | 8.1 | 4.8 | 29.9 | 5.1 | 38 | 040 | 070 | .. | .. | .. | 70.3 | 16 44 46.1 | .. | + | 17.9 | 67 51 25.2 |
| 8 | 321 4 | 9.1 | 5.4 | 1.9 | 7.5 | 34 | .. | .. | .. | .. | 070 | 70.3 | 38 51 48.3 | 36.8 | + | 48.0 | 89 58 57.5 |
| 9 | 297 24 | 8.3 | 3.6 | 1.4 | 7.3 | 34 | 140 | 070 | .. | .. | .. | 70.7 | 62 27 46.3 | .. | + | 56.8 | 113 36 4.3 |
| 10 | 298 0 | 3.3 | 28.5 | 28.4 | 3.7 | 32 | .. | .. | .. | 145 | 125 | 70.7 | 61 55 13.6 | 28.4 | + | 54.2 | 113 3 29.0 |
| 11 | 167 20 | 5.0 | 2.5 | 1.2 | 3.2 | 36 | 280 | 225 | .. | .. | .. | 70.7 | 192 36 16.6 | .. | + | 13.7 | 38 29 50.9 |
| 12 | 12 32 | 8.0 | 3.5 | 1.2 | 4.5 | 33 | .. | .. | .. | 885 | 850 | 70.7 | 347 23 44.5 | .. | - | 13.7 | 38 29 52.0 |
| 13 | 47 38 | 9.2 | 3.5 | 1.7 | 5.6 | 36 | 120 | .. | .. | .. | 090 | 70.7 | 312 18 18.0 | .. | - | 7.0 | 3 23 32.2 |
| 14 | 359 42 | 6.2 | 2.0 | 28.8 | 4.1 | 33 | .. | 170 | .. | 115 | .. | 70.7 | 0 13 30.6 | .. | + | 0.2 | 51 19 52.0 |
| 15 | 354 16 | 7.2 | 4.7 | 0.5 | 5.0 | 36 | .. | 350 | .. | 300 | .. | 70.7 | 5 40 20.8 | .. | + | 6.1 | 56 46 45.1 |
| 16 | 334 44 | 7.3 | 3.0 | 0.3 | 7.3 | 36 | .. | 400 | .. | 250 | .. | 70.7 | 25 12 20.8 | .. | + | 28.7 | 76 19 10.7 |
| 17 | 331 24 | 5.6 | 2.0 | 28.5 | 3.5 | 35 | .. | .. | .. | 970 | 950 | 70.7 | 28 34 14.0 | .. | + | 33.1 | 79 41 8.3 |
| 18 | 210 16 | 7.1 | 6.3 | 3.3 | 2.0 | 33 | 250 | 230 | .. | .. | .. | 70.7 | 149 39 32.7 | .. | - | 35.6 | 81 27 24.1 |
| 19 | 329 36 | 10.0 | 6.8 | 5.3 | 7.7 | 36 | .. | .. | .. | 340 | 295 | 70.7 | 30 20 21.6 | .. | + | 35.6 | 81 27 21.4 |
| 20 | 5 52 | 3.6 | 0.2 | 29.5 | 1.5 | 31 | .. | 965 | .. | 815 | .. | 70.7 | 354 3 9.9 | 31.5 | - | 6.3 | 45 9 24.8 |
| 21 | 350 46 | 9.5 | 6.0 | 3.8 | 6.5 | 34 | .. | 880 | .. | 850 | .. | 70.7 | 9 10 0.5 | .. | + | 9.8 | 60 16 31.5 |
| 22 | 56 56 | 11.1 | 6.2 | 3.2 | 4.7 | 35 | 050 | .. | .. | .. | 035 | 71.5 | 303 0 3.7 | .. | - | 34.0 | 354 4 50.9 |
| 23 | 56 56 | 11.1 | 6.2 | 3.2 | 4.7 | 33 | 870 | .. | .. | .. | 830 | 71.5 | 302 59 45.4 | .. | - | 34.0 | 354 4 32.6 |
| 24 | 328 16 | 11.2 | 6.3 | 2.8 | 9.5 | 31 | .. | 860 | .. | 780 | .. | 71.5 | 31 39 15.6 | .. | + | 37.7 | 82 46 14.5 |
| 25 | 130 12 | 5.9 | 4.3 | 29.1 | 3.2 | 38 | 330 | 100 | .. | .. | .. | 71.5 | 229 44 46.4 | 25.3 | + | 12.2 | 1 20 22.6 |
| 26 | 49 40 | 5.6 | 28.8 | 0.3 | 5.7 | 32 | 230 | .. | .. | .. | 250 | 71.5 | 310 15 17.5 | .. | - | 12.2 | 1 20 26.5 |
| 27 | 40 40 | 6.5 | 1.2 | 29.2 | 1.3 | 32 | .. | .. | .. | 630 | 010 | 71.5 | 310 15 15.9 | .. | - | 12.2 | 1 20 24.9 |
| 28 | 312 14 | 13.2 | 7.5 | 7.3 | 13.4 | 33 | .. | 180 | .. | 020 | .. | 71.5 | 47 41 38.0 | .. | + | 7.2 | 98 49 6.4 |
| 29 | 335 46 | 14.5 | 10.8 | 5.6 | 11.3 | 35 | .. | .. | .. | 900 | 860 | 71.5 | 24 10 21.8 | 25.0 | + | 27.5 | 75 17 10.5 |
| 30 | 329 36 | 10.3 | 5.0 | 2.7 | 7.5 | 37 | .. | .. | .. | 160 | 100 | 71.5 | 30 20 36.7 | .. | + | 35.8 | 81 27 33.7 |
| 31 | 198 38 | 12.6 | 10.0 | 5.7 | 8.8 | 39 | 535 | 450 | .. | .. | .. | 71.5 | 161 19 13.8 | .. | - | 20.7 | 69 47 28.1 |
| 32 | 341 14 | 9.4 | 3.4 | 0.5 | 7.0 | 39 | .. | .. | .. | 860 | 810 | 71.5 | 18 40 43.6 | .. | + | 20.7 | 69 47 25.5 |
| 33 | 32 50 | 8.0 | 0.7 | 1.2 | 4.3 | 38 | 890 | .. | .. | .. | 870 | 71.5 | 327 4 26.1 | .. | - | 39.6 | 18 10 7.7 |
| 34 | 343 56 | 11.5 | 7.3 | 3.5 | 7.8 | 36 | .. | 020 | .. | 940 | .. | 71.5 | 16 0 19.4 | .. | + | 17.6 | 67 6 53.2 |
| 35 | 331 46 | 10.8 | 6.8 | 3.5 | 8.0 | 33 | .. | 205 | .. | 145 | .. | 71.5 | 28 9 36.2 | .. | + | 32.7 | 79 16 30.1 |
| 36 | 327 20 | 7.1 | 0.0 | 1.0 | 6.5 | 30 | .. | 755 | .. | 690 | .. | 71.5 | 32 34 55.0 | .. | + | 39.0 | 83 41 5.2 |
| 37 | 335 24 | 8.5 | 4.5 | 0.5 | 6.8 | 30 | .. | 050 | .. | 960 | .. | 71.5 | 24 33 17.8 | .. | + | 27.9 | 75 49 6.9 |
| 38 | 11 28 | 7.7 | 4.0 | 0.5 | 3.8 | 34 | .. | 280 | .. | 180 | .. | 71.5 | 345 25 15.9 | .. | - | 12.5 | 39 31 24.6 |
| 39 | 285 30 | 5.2 | 0.4 | 1.2 | 4.4 | 33 | .. | 550 | .. | 510 | .. | 71.5 | 74 25 36.8 | 27.5 | + | 35.2 | 125 35 33.2 |
| 40 | 283 46 | 10.2 | 4.7 | 4.3 | 8.2 | 34 | .. | .. | .. | 820 | 890 | 71.5 | 70 10 1.9 | .. | + | 2.6 | 127 20 25.7 |
| 41 | 346 22 | 6.2 | 2.8 | 1.5 | 3.9 | 35 | 805 | .. | .. | .. | 680 | 71.5 | 13 32 55.5 | .. | + | 14.7 | 61 39 31.4 |
| 42 | 346 22 | 6.2 | 2.8 | 1.5 | 3.9 | 34 | .. | 605 | .. | 535 | .. | 71.5 | 13 32 37.4 | .. | + | 14.6 | 64 39 13.2 |
| 43 | 335 30 | 5.7 | 2.3 | 28.3 | 3.5 | 31 | .. | 400 | .. | 320 | .. | 71.5 | 24 25 3.6 | .. | + | 27.6 | 75 31 52.4 |
| 44 | 342 58 | 6.9 | 1.3 | 29.0 | 4.2 | 35 | .. | .. | .. | 640 | 590 | 71.5 | 16 55 36.8 | .. | + | 18.5 | 68 2 16.5 |
| 45 | 348 34 | 7.1 | 3.4 | 0.0 | 6.0 | 34 | .. | 670 | .. | 550 | .. | 71.5 | 11 21 55.2 | .. | + | 12.2 | 62 28 28.6 |
| 46 | 329 8 | 6.7 | 4.0 | 1.1 | 5.8 | 37 | .. | 620 | .. | 480 | .. | 71.5 | 30 46 6.8 | .. | + | 35.1 | 81 53 4.1 |
| 47 | 348 36 | 9.3 | 6.3 | 2.0 | 6.9 | 39 | .. | .. | .. | 115 | 065 | 71.5 | 11 18 33.3 | .. | + | 12.1 | 62 25 6.6 |
| 48 | 314 28 | 8.2 | 5.5 | 3.1 | 8.0 | 32 | 990 | .. | .. | .. | 820 | 71.5 | 45 27 30.8 | .. | + | 1.6 | 96 31 53.6 |
| 49 | 314 28 | 8.2 | 5.5 | 3.1 | 8.0 | 35 | .. | 435 | .. | 350 | .. | 71.5 | 45 28 9.0 | .. | + | 1.6 | 96 35 31.8 |
| 50 | 335 24 | 7.0 | 3.8 | 29.2 | 4.4 | 30 | .. | 190 | .. | 115 | .. | 71.5 | 24 30 46.2 | .. | + | 27.7 | 75 37 35.1 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|----------|
| | in. | ° | | " | " | " | " |
| 2 | 29.85 | 39.8 | 9 | 8.0 | 16 17.6 | . | 16 25.6 |
| 8 | 29.85 | 39.2 | 10 | 7.9 | + 16 17.6 | . | + 16 9.7 |
| 10 | 30.10 | 30.3 | 35 | 0.1 | . | . | 0.1 |
| 20 | 30.05 | 34.5 | | | | | |
| 25 | 29.94 | 28.0 | | | | | |
| 29 | 29.94 | 27.8 | | | | | |
| 39 | 29.86 | 29.0 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. |
|---------|---------|------------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|----------|------------|--------------|---------------|----------------|---------------------------|-------|--------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't | Clock adopted. | h. | m. | s. | |
| 1876. | | | | | | | | | | | | | m. s. | s. | s. | s. | | | | |
| Dec. 15 | 1 | a Orionis. | E. | 50.6 | 53.0 | 54.6 | 0.7 | 2.8 | 4.9 | 11.0 | 12.7 | 15.3 | 49 2.84 | -0.82 | -29.75 | -29.72 | 5 48 | 32.30 | 0.00 | |
| | 2 | B. A. C. 1951 | E. | 37.2 | 40.0 | 41.7 | 18.3 | 50.6 | 52.9 | 59.6 | 1.2 | 4.0 | 50 50.61 | -0.45 | . | -29.72 | 5 59 | 20.44 | -5.29 | |
| | 3 | Σ 853 ¹ | E. | 37.4 | 40.0 | 41.6 | . | . | . | 58.3 | 59.8 | 2.4 | 2 49.92 | -0.72 | . | -29.72 | 6 2 | 19.48 | -4.87 | |
| | 4 | Σ 853 ² | E. | . | . | 46.0 | 48.1 | 50.3 | 52.3 | 54.4 | . | . | 2 50.23 | -0.72 | . | -29.72 | 6 2 | 19.79 | -4.87 | |
| | 5 | Ursæ Minoris, S. P. | E. | . | . | 38.0 | 1.9 | 27.5 | 53.0 | 18.2 | . | . | 12 27.54 | -21.01 | . | -29.71 | 18 11 | 36.82 | +0.46 | |
| | 6 | μ Geminorum | E. | 49.7 | 52.5 | 54.2 | 0.7 | 3.0 | 5.2 | 11.8 | 13.4 | 16.3 | 16 2.98 | -0.47 | -29.73 | -29.70 | 6 15 | 32.81 | -0.01 | |
| | 7 | B. A. C. 2122 | E. | 24.8 | 28.0 | 30.0 | 35.3 | 37.8 | 41.0 | 43.4 | 46.0 | . | 25 40.73 | -1.99 | . | -29.70 | 6 25 | 9.04 | -3.73 | |
| | 8 | Brisbane 1256. | E. | . | . | . | . | 18.9 | 51.8 | 57.3 | 59.0 | 2.6 | 25 46.42 | -1.99 | . | -29.70 | 6 25 | 14.73 | -3.73 | |
| | 9 | B. A. C. 2135 | E. | 50.0 | 2.4 | 4.5 | 12.6 | 15.2 | 17.9 | 26.0 | 27.9 | 31.0 | 27 15.17 | -1.99 | . | -29.70 | 6 26 | 43.48 | -3.72 | |
| | 10 | γ Geminorum | E. | 58.0 | 59.7 | 3.9 | 6.0 | 8.1 | 10.4 | 12.5 | 16.7 | 18.3 | 31 8.18 | -0.62 | -29.64 | -29.69 | 6 30 | 37.87 | -0.08 | |
| | 11 | Concordia | E. | 12.7 | 15.3 | 17.1 | 21.1 | . | . | . | . | . | 41 25.46 | -0.63 | . | -29.69 | 6 40 | 55.14 | . | |
| 17 | 12 | Polaris. | S. | . | 24.0 | 31.0 | 20.0 | 19.0 | 19.0 | 44.0 | 12.0 | . | 13 17.91 | +52.70 | . | -28.53 | 1 13 | 42.08 | -0.40 | |
| | 13 | θ ¹ Ceti | S. | 10.5 | 13.3 | 14.7 | 20.8 | 22.9 | 25.0 | 31.0 | 32.7 | 35.3 | 18 22.91 | -1.03 | -28.57 | -28.53 | 1 17 | 53.35 | +0.06 | |
| | 14 | B. A. C. 501 | S. | 29.7 | 33.6 | 35.3 | 43.7 | 46.4 | 49.1 | 57.6 | 59.5 | 3.0 | 33 46.37 | +0.30 | . | -28.53 | 1 33 | 18.14 | -4.09 | |
| | 15 | Weisse 791 ¹ | S. | 48.0 | 50.8 | 52.2 | . | . | . | 8.7 | 10.3 | 12.8 | 40 0.47 | -0.62 | . | -28.53 | 1 45 | 31.32 | -3.93 | |
| | 16 | Weisse 791 ² | S. | . | . | 56.4 | 58.6 | 0.6 | 2.7 | 4.7 | . | . | 46 0.61 | -0.62 | . | -28.53 | 1 45 | 31.46 | -3.93 | |
| | 17 | β Arietis | S. | 10.0 | 11.8 | 16.1 | 18.3 | 20.5 | 22.5 | 24.9 | 29.2 | 30.8 | 48 20.46 | -0.38 | -28.51 | -28.53 | 1 47 | 51.55 | 0.00 | |
| | 18 | B. A. C. 590 | S. | 55.3 | 59.2 | 1.6 | 10.7 | 13.8 | 16.8 | 26.0 | 28.3 | 32.3 | 51 13.78 | +0.57 | . | -28.53 | 1 50 | 45.82 | -4.47 | |
| | 19 | α Arietis | S. | 31.0 | 33.5 | 35.2 | 41.9 | 44.2 | 46.3 | 53.9 | 54.7 | 57.4 | 0 44.13 | -0.32 | -28.50 | -28.53 | 2 0 | 15.28 | -0.02 | |
| | 20 | ι Cassiopeæ (R.) | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 21 | ι Cassiopeæ | S. | . | . | 14.9 | 20.1 | 25.2 | 30.4 | 35.6 | . | . | 19 25.27 | +2.07 | . | -28.53 | 2 18 | 58.81 | +0.46 | |
| | 22 | Lalande 4903 ¹ | S. | 32.0 | 34.7 | 36.4 | 40.5 | 42.7 | 44.7 | 46.8 | 49.0 | . | 32 44.74 | -0.52 | . | -28.53 | 2 32 | 15.69 | -4.26 | |
| | 23 | Lalande 4903 ² | S. | . | . | . | . | . | . | 53.6 | 55.2 | 57.9 | 32 45.21 | -0.52 | . | -28.53 | 2 32 | 16.16 | -4.26 | |
| | 24 | ρ ³ Arietis | S. | 46.9 | 49.6 | 51.3 | 57.6 | 59.7 | 1.8 | 8.4 | 9.9 | 12.6 | 49 59.76 | -0.45 | . | -28.53 | 2 49 | 30.78 | -4.41 | |
| | 25 | ζ Arietis (R.) | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 26 | ζ Arietis | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | |
| | 27 | ε Ursæ Minoris, S. P. | S. | 0.0 | 47.6 | 40.0 | 9.9 | 59.9 | 49.7 | 20.2 | 12.4 | 0.4 | 49 0.01 | -6.84 | . | -28.53 | 15 48 | 24.64 | -0.27 | |
| 19 | 28 | Sun I, S. | E. | 20.8 | 23.6 | 25.3 | 32.0 | 34.1 | 36.3 | 43.2 | 44.6 | 47.4 | 51 34.14 | -1.46 | . | -28.24 | 17 51 | 4.44 | . | |
| | 29 | Sun II, N. | E. | 43.3 | 46.1 | 47.9 | 54.5 | 56.7 | 58.8 | 5.4 | 7.3 | 9.9 | 53 56.66 | -1.46 | . | -28.24 | 17 53 | 26.96 | . | |
| | 30 | δ Ursæ Minoris | E. | . | . | . | 43.5 | 47.5 | 53.0 | 0.5 | . | 9.0 | 11 43.04 | +20.15 | . | -28.24 | 18 11 | 34.95 | +0.08 | |
| | 31 | α Lyre | E. | 57.3 | 0.5 | 2.5 | 10.3 | 13.0 | 15.6 | 23.3 | 25.4 | 28.7 | 33 12.96 | +0.08 | -28.26 | -28.24 | 18 32 | 44.80 | +0.04 | |
| | 32 | β Lyre | E. | 44.4 | 47.5 | 49.3 | 56.7 | 59.2 | 1.6 | 8.9 | 10.7 | 13.8 | 45 59.12 | -0.10 | -28.22 | -28.24 | 18 45 | 30.78 | +0.01 | |
| | 33 | ζ Aquilæ | E. | 0.3 | 3.0 | 4.8 | 10.9 | 13.0 | 15.1 | 21.5 | 23.0 | 25.7 | 0 13.03 | -0.62 | -28.24 | -28.24 | 18 59 | 44.17 | +0.08 | |
| | 34 | γ Aquilæ | E. | 40.0 | 42.6 | 44.2 | 50.4 | 52.5 | 54.6 | 0.7 | 2.4 | 4.9 | 40 52.48 | -0.69 | -28.18 | -28.24 | 19 40 | 23.55 | -0.03 | |
| | 35 | α Cygni | E. | 23.3 | 27.0 | 29.1 | 37.7 | 40.8 | 43.5 | 52.0 | 54.3 | 57.9 | 37 40.62 | +0.32 | -28.28 | -28.25 | 20 37 | 12.69 | +0.05 | |
| | 36 | γ Delphini | E. | 12.0 | 14.8 | 16.5 | 22.8 | 25.0 | 27.1 | 33.4 | 35.0 | 37.6 | 41 24.91 | -0.57 | . | -28.25 | 20 40 | 56.09 | -1.79 | |
| | 37 | Moon I. | E. | 28.2 | 31.3 | 33.0 | 39.6 | 41.9 | 44.2 | 50.8 | 52.4 | 55.3 | 3 41.86 | -1.38 | . | -28.25 | 21 3 | 12.23 | +64.68 | |
| | 38 | ζ Cygni | E. | 55.3 | 58.2 | 0.1 | 7.0 | 9.5 | 11.8 | 18.8 | 20.7 | 23.6 | 8 9.44 | -0.21 | -28.27 | -28.25 | 21 7 | 40.98 | +0.03 | |
| | 39 | β Aquarii | E. | 21.4 | 23.8 | 25.6 | 31.7 | 33.8 | 35.8 | 42.0 | 43.4 | 46.0 | 25 33.72 | -1.06 | -28.25 | -28.25 | 21 25 | 4.41 | +0.03 | |
| | 40 | β Ceti | E. | 42.1 | 44.9 | 46.5 | 53.0 | 55.0 | 57.2 | 3.7 | 5.4 | 8.0 | 37 55.09 | -1.30 | -28.28 | -28.26 | 0 37 | 25.53 | +0.07 | |
| | 41 | Weisse (2) 1062 | E. | 42.3 | 45.8 | 47.6 | 53.0 | 55.8 | 58.4 | 1.0 | 3.8 | . | 42 55.41 | +0.23 | . | -28.26 | 0 42 | 30.38 | -3.38 | |
| | 42 | B. A. C. 227 | E. | 17.7 | 19.5 | 24.9 | 27.7 | 30.4 | 33.3 | 35.9 | 40.9 | 43.3 | 43 30.40 | +0.23 | . | -28.26 | 0 43 | 2.37 | -3.38 | |
| | 43 | 32 ¹ Camelopard., S. P. | E. | . | . | 29.9 | 8.9 | 49.4 | 30.6 | 9.9 | . | . | 48 49.64 | -13.40 | . | -28.26 | 12 48 | 7.98 | -2.17 | |
| | 44 | 32 ² Camelopard., S. P. | E. | . | . | 36.7 | 16.2 | 57.0 | 37.8 | 17.0 | . | . | 48 56.84 | -13.38 | . | -28.26 | 12 48 | 15.20 | -1.56 | |
| | 45 | ε Piscium | E. | 50.6 | 53.0 | 54.9 | 1.0 | 3.0 | 5.2 | 11.4 | 12.9 | 15.4 | 57 3.04 | -0.70 | -28.21 | -28.26 | 0 56 | 34.08 | -0.03 | |
| | 46 | Polaris (R.) | E. | 41.0 | 27.0 | 33.0 | . | . | . | . | . | . | 13 22.97 | +47.97 | . | -28.26 | 1 13 | 42.68 | +1.95 | |
| | 47 | Polaris | E. | . | . | . | 52.5 | 18.5 | 47.0 | 14.5 | . | . | 13 19.42 | +54.59 | . | -28.26 | 1 13 | 45.75 | +5.02 | |
| | 48 | Polaris | E. | . | . | . | . | . | . | 9.5 | 59.5 | 13 15.20 | +54.59 | . | . | -28.26 | 1 13 | 41.53 | +0.80 | |
| | 49 | θ ¹ Ceti | E. | 10.2 | 12.8 | 14.3 | 20.5 | 22.7 | 24.7 | 30.8 | 32.5 | 35.0 | 18 22.61 | -1.06 | -28.26 | -28.26 | 1 17 | 53.29 | +0.02 | |
| | 50 | η Piscium | E. | . | . | . | 23.5 | 25.6 | 27.8 | 32.0 | 33.6 | 36.4 | 25 23.58 | -0.53 | -28.27 | -28.26 | 1 24 | 54.79 | +0.08 | |

- 7, 8, 11. Thread A used.
 9, 19, 20. Thread B used.
 27, 43, 44. Bisections at set C.
 43, 44. Telescope micrometer readings have been interchanged in the reduction.
 46. Bisections at threads B₁, B₂, and B₃.
 48. Bisections at threads D₁, D₂, and D₃.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| 1 | 328 26 | 10 10.0 | 7.3 | 1.8 | 8.0 | 34 | .. | 450 | .. | 400 | .. | 71.5 | 31 29 54.8 | .. | + | 37.2 | 82 36 53.2 | - 0.8 |
| 2 | 344 42 | 5.0 | 1.7 | 28.0 | 3.0 | 36 | .. | 475 | .. | 395 | .. | 71.5 | 15 14 20.8 | .. | + | 16.5 | 66 20 58.5 | + 8.4 |
| 3 | 332 44 | 8.5 | 4.4 | 0.5 | 4.0 | 34 | 850 | .. | .. | .. | 810 | 71.5 | 27 11 58.7 | .. | + | 31.2 | 78 18 51.1 | + 8.4 |
| 4 | 332 44 | 8.5 | 4.4 | 0.5 | 4.0 | 36 | .. | 670 | .. | 540 | .. | 71.5 | 27 12 25.8 | .. | + | 31.2 | 78 19 18.2 | + 8.4 |
| 5 | 54 24 | 8.5 | 3.7 | 29.8 | 8.5 | 32 | 760 | .. | .. | .. | 780 | 71.5 | 305 31 27.6 | .. | - | 24.8 | 356 36 24.0 | - 0.3 |
| 6 | 343 38 | 9.2 | 5.5 | 1.8 | 5.7 | 37 | .. | 695 | .. | 555 | .. | 71.5 | 16 18 42.7 | .. | + | 17.7 | 67 25 21.6 | - 0.8 |
| 7 | 280 43 | 4.8 | 4.4 | 3.9 | 7.6 | 36 | 760 | .. | .. | .. | 580 | 71.5 | 79 5 53.5 | 27.5 | + | 5 6.0 | 130 17 20.7 | + 9.1 |
| 8 | 280 48 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 9 | 280 48 | 4.8 | 4.4 | 3.9 | 7.6 | 33 | .. | 230 | .. | 100 | .. | 71.5 | 79 10 6.0 | .. | + | 5 7.9 | 130 21 35.1 | + 9.0 |
| 10 | 337 34 | 10.0 | 4.7 | 2.3 | 7.1 | 38 | .. | .. | .. | 335 | 295 | 71.5 | 22 22 54.6 | .. | + | 25.0 | 73 29 40.8 | - 2.0 |
| 11 | 336 54 | 5.8 | 1.7 | 28.0 | 4.0 | 31 | 960 | .. | .. | .. | 900 | 71.5 | 22 58 38.9 | .. | + | 25.7 | 74 5 25.8 | - 2.0 |
| 12 | 49 40 | 9 28.8 | 23.4 | 21.2 | 22.3 | 32 | 870 | .. | 830 | .. | 800 | 73.2 | 310 15 19.4 | .. | - | 1 14.7 | 1 20 25.9 | + 0.4 |
| 13 | 312 14 | 10 6.8 | 3.2 | 29.9 | 5.8 | 33 | .. | 240 | .. | 130 | .. | 73.2 | 47 41 34.5 | 17.1 | + | 1 9.5 | 98 49 5.2 | + 0.9 |
| 14 | 3 42 | 5.4 | 2.0 | 29.5 | 2.0 | 30 | .. | 880 | .. | 705 | .. | 73.2 | 356 12 56.6 | .. | - | 4.2 | 47 19 13.6 | +35.4 |
| 15 | 331 14 | 4.5 | 1.6 | 28.9 | 2.9 | 30 | .. | .. | .. | 160 | 110 | 73.2 | 28 40 46.9 | .. | + | 34.6 | 79 47 42.7 | +26.1 |
| 16 | 331 14 | 4.5 | 1.6 | 28.9 | 2.9 | 30 | 040 | 980 | .. | .. | .. | 73.2 | 28 40 43.2 | .. | + | 34.6 | 79 47 39.0 | +26.1 |
| 17 | 341 14 | 4.6 | 0.6 | 29.2 | 3.5 | 29 | .. | .. | .. | 930 | 850 | 73.2 | 18 40 43.3 | .. | + | 21.4 | 69 47 25.9 | - 0.3 |
| 18 | 9 38 | 4.3 | 1.4 | 0.0 | 3.5 | 32 | .. | .. | .. | 510 | 332 | 73.2 | 350 17 22.7 | .. | - | 10.8 | 41 23 33.1 | +36.0 |
| 19 | 343 56 | 5.5 | 2.1 | 29.0 | 3.5 | 26 | .. | .. | .. | 130 | 150 | 73.2 | 16 0 18.8 | .. | + | 18.2 | 67 6 54.2 | - 5.3 |
| 20 | 152 0 | 0.7 | 28.8 | 26.7 | 28.5 | 29 | 540 | 470 | .. | .. | .. | 73.2 | 207 57 3.2 | .. | + | 33.6 | 23 8 44.4 | - 4.0 |
| 21 | 27 52 | 5.3 | 0.2 | 28.6 | 2.5 | 30 | .. | .. | .. | 900 | 805 | 73.2 | 332 2 58.7 | .. | - | 33.6 | 23 8 46.3 | - 2.1 |
| 22 | 335 22 | 5.2 | 1.0 | 28.0 | 1.9 | 32 | .. | 305 | .. | 165 | .. | 73.2 | 24 33 17.7 | .. | + | 28.9 | 75 40 7.8 | +26.0 |
| 23 | 335 22 | 5.2 | 1.0 | 28.0 | 1.9 | 32 | .. | .. | .. | .. | 010 | 73.2 | 24 33 15.4 | .. | + | 28.9 | 75 40 5.5 | +25.9 |
| 24 | 338 34 | 7.5 | 5.0 | 29.7 | 5.3 | 31 | .. | 510 | .. | 350 | .. | 73.2 | 21 21 8.3 | 17.1 | + | 24.7 | 72 27 54.2 | +25.9 |
| 25 | 198 14 | 6.0 | 5.0 | 0.9 | 2.3 | 35 | 460 | 520 | .. | .. | .. | 73.2 | 161 42 8.4 | .. | - | 20.9 | 69 24 33.7 | + 0.9 |
| 26 | 341 38 | 3.5 | 29.5 | 26.6 | 2.3 | 34 | .. | .. | .. | 410 | 280 | 73.2 | 18 17 50.0 | .. | + | 20.9 | 69 24 32.1 | - 0.7 |
| 27 | 62 50 | 1.7 | 26.9 | 23.7 | 26.0 | 34 | 290 | .. | .. | .. | 040 | 73.2 | 297 5 42.6 | 16.0 | - | 2 3.3 | 348 10 0.5 | - 1.3 |
| 28 | 297 20 | 1.0 | 25.8 | 26.2 | 27.5 | 30 | 570 | 540 | .. | .. | .. | 73.9 | 62 34 47.6 | .. | + | 1 58.4 | 113 43 7.2 | .. |
| 29 | 297 52 | 2.2 | 27.7 | 27.0 | 1.5 | 28 | .. | .. | .. | 290 | 275 | 73.9 | 62 2 16.4 | 24.3 | + | 1 55.7 | 113 10 33.3 | .. |
| 30 | 47 38 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 31 | 359 42 | 3.1 | 28.7 | 28.5 | 28.7 | 33 | .. | 300 | .. | 220 | .. | 73.9 | 0 13 32.5 | .. | + | 0.2 | 51 19 53.9 | + 1.2 |
| 32 | 354 16 | 1.6 | 28.0 | 24.5 | 27.2 | 36 | .. | .. | .. | 585 | 535 | 73.9 | 5 40 22.1 | .. | + | 6.1 | 56 46 49.4 | - 0.1 |
| 33 | 334 44 | 7.8 | 2.3 | 0.3 | 6.5 | 36 | .. | 180 | .. | 090 | .. | 73.9 | 25 12 20.8 | .. | + | 28.9 | 76 19 10.9 | + 1.1 |
| 34 | 331 22 | 2.0 | 25.5 | 23.3 | 28.0 | 36 | .. | 310 | .. | 230 | .. | 73.9 | 28 34 15.8 | .. | + | 33.4 | 79 41 10.4 | - 0.6 |
| 35 | 5 52 | 3.7 | 29.7 | 27.2 | 27.3 | 31 | .. | 905 | .. | 845 | .. | 73.9 | 354 3 11.1 | .. | - | 6.4 | 45 9 25.9 | - 0.6 |
| 36 | 336 44 | 5.9 | 0.8 | 26.0 | 1.5 | 36 | .. | 270 | .. | 140 | .. | 73.9 | 23 12 18.7 | .. | + | 26.3 | 74 19 6.2 | +11.2 |
| 37 | 300 51 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 38 | 350 46 | 6.7 | 2.6 | 29.0 | 2.2 | 35 | .. | 120 | .. | 040 | .. | 73.9 | 9 10 3.1 | 28.2 | + | 9.9 | 60 16 34.2 | + 1.3 |
| 39 | 314 56 | 9.5 | 7.1 | 3.3 | 8.0 | 32 | .. | 340 | .. | 240 | .. | 73.9 | 44 59 24.6 | .. | + | 1 1.2 | 96 6 47.0 | + 1.8 |
| 40 | 302 24 | 3.2 | 28.5 | 26.2 | 29.3 | 34 | .. | 370 | .. | 230 | .. | 73.6 | 57 31 47.3 | 22.0 | + | 1 37.4 | 108 39 45.9 | - 0.8 |
| 41 | 1 26 | 6.0 | 2.5 | 29.5 | 1.3 | 29 | .. | .. | .. | 720 | 710 | 73.6 | 358 28 41.6 | .. | - | 1.7 | 49 35 1.1 | +35.4 |
| 42 | 1 26 | 6.0 | 2.5 | 29.5 | 1.3 | 30 | .. | 550 | .. | 460 | .. | 73.6 | 358 28 52.6 | .. | - | 1.6 | 49 35 12.2 | +35.5 |
| 43 | 56 56 | 12.0 | 7.0 | 5.2 | 6.9 | 33 | 700 | .. | .. | .. | 620 | 73.6 | 303 0 4.3 | .. | - | 1 35.0 | 354 4 50.5 | +42.2 |
| 44 | 56 56 | 12.0 | 7.0 | 5.2 | 6.9 | 34 | 880 | .. | .. | .. | 820 | 73.6 | 302 59 46.1 | .. | - | 1 35.0 | 354 4 32.3 | + 3.3 |
| 45 | 328 16 | 12.5 | 8.7 | 4.8 | 8.5 | 31 | .. | 590 | .. | 490 | .. | 73.6 | 31 39 14.5 | .. | + | 38.3 | 82 46 14.0 | - 0.8 |
| 46 | 130 12 | 3.8 | 1.8 | 0.5 | 1.0 | 38 | 305 | 220 | 200 | .. | .. | 73.6 | 229 44 47.8 | .. | + | 1 13.4 | 1 20 20.0 | - 5.1 |
| 47 | 49 40 | 3.6 | 27.6 | 26.5 | 28.4 | 32 | 375 | .. | 310 | .. | 350 | 73.6 | 310 15 17.5 | .. | - | 1 13.4 | 1 20 25.3 | + 0.2 |
| 48 | 49 40 | 3.8 | 28.6 | 26.5 | 27.5 | 32 | .. | .. | 310 | 275 | 290 | 73.6 | 310 15 19.1 | .. | - | 1 13.4 | 1 20 26.9 | + 1.8 |
| 49 | 312 14 | 10.5 | 6.5 | 3.0 | 9.0 | 33 | .. | .. | .. | 000 | 950 | 73.6 | 47 41 35.9 | .. | + | 1 8.3 | 98 49 5.4 | + 1.0 |
| 50 | 335 46 | 7.2 | 3.3 | 29.5 | 2.2 | 36 | .. | .. | .. | 175 | 145 | 73.6 | 24 10 20.7 | .. | + | 27.9 | 75 17 9.8 | 0.0 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| 7 | in. | ° | | | | | |
| 13 | 29.78 | 30.0 | 28 | - 8.0 | - 16 16.9 | . | - 16 24.9 |
| 24 | 30.43 | 20.3 | 29 | - 7.9 | + 16 16.9 | . | + 16 9.0 |
| 27 | 30.40 | 20.0 | | | | | |
| 29 | 30.35 | 19.0 | | | | | |
| 38 | 30.06 | 24.1 | | | | | |
| 40 | 30.10 | 28.4 | | | | | |
| | 30.18 | 25.0 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|---------|---------|-----------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | |
| 1876. | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| Dec. 10 | 1 | α Piscium . . . | E. | 11.3 | 13.8 | 15.4 | 21.6 | 23.6 | 25.7 | 31.9 | 33.5 | 36.0 | 39 23.64 | - 0.68 | -28.24 | -28.26 | 1 38 54.70 | - 0.05 |
| | 2 | B. A. C. 569 . . . | E. | 19.4 | 22.3 | 24.0 | 31.0 | 33.4 | 35.7 | 42.7 | 44.5 | 47.5 | 46 33.39 | - 0.15 | . | -28.26 | 1 46 4.98 | - 4.05 |
| | 3 | β Arietis . . . | E. | 7.0 | 9.8 | 11.6 | 18.2 | 20.2 | 22.4 | 29.0 | 30.6 | 33.3 | 48 20.23 | - 0.39 | -28.28 | -28.26 | 1 47 51.58 | + 0.04 |
| | 4 | γ Cassiopeæ . . . | E. | . | . | 10.9 | 17.8 | 24.5 | 30.9 | 37.3 | . | . | 53 24.31 | + 3.08 | . | -28.26 | 1 52 59.13 | + 0.33 |
| | 5 | α Arietis . . . | E. | 30.6 | 33.5 | 35.0 | 41.6 | 43.8 | 46.0 | 52.7 | 54.3 | 57.2 | 0 43.86 | - 0.32 | -28.24 | -28.26 | 2 0 15.28 | - 0.01 |
| | 6 | Neptune . . . | E. | . | . | . | . | . | 53.9 | 58.1 | 59.7 | 2.3 | 4 49.81 | - 0.62 | . | -28.26 | 2 4 20.93 | . |
| | 7 | Lalande 4803 . . . | E. | 37.9 | 40.4 | 41.9 | 48.1 | 50.2 | 52.3 | 58.4 | 0.0 | 2.6 | 29 50.20 | - 0.72 | . | -28.26 | 2 29 21.22 | - 4.15 |
| | 8 | Lalande 4903 ¹ . . . | E. | 31.8 | 34.5 | 36.0 | 42.3 | 44.4 | 46.7 | 52.8 | 54.4 | 57.0 | 32 44.43 | - 0.54 | . | -28.26 | 2 32 15.63 | - 4.25 |
| | 9 | B. A. C. 920 . . . | E. | 6.7 | 9.4 | 11.1 | 17.7 | 19.9 | 22.1 | 28.7 | 30.3 | 33.0 | 52 19.88 | - 0.37 | . | -28.26 | 2 51 51.25 | - 4.48 |
| | 10 | α Ceti . . . | E. | 8.8 | 11.5 | 13.2 | 19.0 | 21.2 | 23.3 | 29.4 | 30.9 | 33.4 | 56 21.19 | - 0.78 | -28.23 | -28.26 | 2 55 52.15 | - 0.01 |
| | 11 | ζ Arietis (R.) . . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 12 | ζ Arietis . . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 13 | γ Tauri . . . | E. | 0.7 | 3.3 | 4.9 | 11.2 | 13.4 | 15.5 | 21.9 | 23.5 | 26.0 | 13 13.38 | - 0.51 | -23.77 | -23.84 | 4 12 49.03 | - 0.06 |
| | 14 | ϵ Tauri . . . | E. | 38.9 | 41.6 | 43.3 | 49.8 | 51.8 | 54.0 | 0.5 | 2.2 | 4.8 | 21 51.88 | - 0.43 | -23.89 | -23.83 | 4 21 27.62 | + 0.05 |
| | 15 | α Tauri . . . | E. | 4.7 | 7.4 | 9.0 | 15.4 | 17.5 | 19.7 | 26.0 | 27.6 | 30.4 | 29 17.52 | - 0.49 | -23.76 | -23.82 | 4 28 53.21 | - 0.08 |
| | 16 | Vibilia . . . | E. | 34.3 | 37.1 | 39.0 | 45.8 | 47.9 | 50.0 | 56.5 | 58.2 | 0.9 | 31 47.74 | - 0.35 | . | -23.82 | 4 31 23.57 | . |
| | 17 | Anonymous . . . | E. | 19.3 | 22.1 | 23.8 | 30.2 | 32.6 | 34.7 | 41.3 | 43.0 | 45.6 | 34 32.51 | - 0.35 | . | -23.81 | 4 34 8.35 | - 5.08 |
| | 18 | Antigone . . . | E. | 55.6 | 57.8 | 59.5 | 5.8 | 7.9 | 9.8 | 16.0 | 18.0 | 20.3 | 2 7.86 | - 0.68 | . | -23.78 | 5 1 43.40 | . |
| | 19 | ω Draconis, S. P. . . | E. | 38.2 | 31.3 | 27.2 | 10.0 | 4.3 | 58.8 | 41.6 | 37.4 | 30.4 | 38 4.36 | - 4.23 | . | -23.74 | 17 37 36.39 | - 0.38 |
| | 20 | ψ^1 Draconis, S. P. . . | E. | 11.8 | 3.8 | 58.4 | 38.7 | 31.9 | 25.2 | 5.2 | 0.7 | 51.9 | 44 31.96 | - 4.94 | . | -23.74 | 17 44 3.28 | - 0.04 |
| | 21 | ψ^2 Draconis, S. P. . . | E. | 13.7 | 5.4 | 0.4 | 40.5 | 33.6 | 26.8 | 6.7 | 1.8 | 53.6 | 44 33.61 | - 4.94 | . | -23.71 | 5 44 4.93 | + 5.49 |
| | 22 | α Orionis . . . | E. | . | . | . | 56.7 | 58.8 | 0.9 | 4.9 | 6.5 | 9.0 | 48 56.72 | - 0.70 | -23.69 | -23.73 | 5 48 32.20 | - 0.07 |
| | 23 | B. A. C. 1951 . . . | E. | 31.2 | 34.0 | 35.7 | 42.3 | 44.6 | 46.8 | 53.4 | 55.2 | 58.0 | 59 44.58 | - 0.30 | . | -23.72 | 5 59 20.56 | - 5.35 |
| | 24 | δ Ursæ Minoris, S. P. . . | E. | . | 32.3 | 56.6 | 22.0 | 46.5 | 11.5 | 2.0 | 37.5 | 54.3 | 12 21.30 | -22.76 | . | -23.71 | 15 11 34.83 | - 1.00 |
| | 25 | μ Geminorum . . . | E. | 43.6 | 46.3 | 48.0 | 54.6 | 56.8 | 59.0 | 5.6 | 7.3 | 10.0 | 15 56.80 | - 0.33 | -23.63 | -23.70 | 6 15 32.77 | - 0.11 |
| | 26 | B. A. C. 2122 . . . | E. | 18.6 | 21.6 | 23.7 | . | . | . | 45.6 | 47.3 | 50.5 | 25 34.55 | - 1.94 | . | -23.69 | 6 25 8.92 | - 3.78 |
| | 27 | Brisbane 1256 . . . | E. | . | . | 34.9 | 37.6 | 40.0 | 42.9 | 45.0 | . | . | 25 40.09 | - 1.94 | . | -23.69 | 6 25 14.46 | - 3.78 |
| | 28 | B. A. C. 2135 . . . | E. | 52.6 | 56.3 | 58.2 | 6.2 | 9.0 | 11.6 | 19.0 | 21.7 | 25.0 | 27 8.91 | - 1.94 | . | -23.69 | 6 26 43.28 | - 3.77 |
| | 29 | γ Geminorum . . . | E. | 52.0 | 53.7 | 57.7 | 0.0 | 2.2 | 4.3 | 6.5 | 10.7 | 12.3 | 31 2.16 | - 0.49 | -23.68 | -23.68 | 6 30 37.99 | - 0.03 |
| | 30 | Concordia . . . | E. | 29.9 | 32.2 | 34.1 | 10.4 | 42.5 | 44.5 | 50.9 | 52.7 | 55.0 | 37 42.47 | - 0.50 | . | -23.67 | 6 37 18.30 | . |
| | 31 | α Canis Majoris . . . | E. | 0.0 | 1.6 | 5.6 | . | 0.0 | 12.3 | 14.4 | 18.4 | 20.0 | 40 10.01 | - 1.25 | -23.73 | -23.67 | 6 34 45.09 | - 0.02 |
| | 32 | Venus II, S. . . | F. | 51.0 | 53.7 | 55.4 | 1.2 | 3.9 | 6.0 | 12.4 | 14.0 | 16.8 | 37 3.89 | - 1.27 | . | -23.50 | 15 36 39.12 | - 0.45 |
| | 33 | Venus N. . . | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 34 | β^1 Scorpii . . . | F. | 27.8 | 30.5 | 32.3 | 35.6 | 38.7 | 40.9 | . | . | 54.0 | 58 40.89 | - 1.31 | -23.53 | -23.48 | 15 58 16.10 | + 0.08 |
| | 35 | δ Ophiuchi . . . | F. | 5.0 | 7.7 | 9.2 | 13.4 | 17.4 | 19.5 | 25.6 | 27.0 | 29.7 | 8 17.39 | - 0.95 | -23.43 | -23.48 | 16 7 52.96 | - 0.03 |
| | 36 | τ Herculis . . . | F. | 6.6 | 10.4 | 12.6 | 21.5 | 24.5 | 27.3 | 36.2 | 38.5 | 42.0 | 16 24.40 | + 0.47 | . | -23.47 | 16 16 1.40 | + 0.33 |
| | 37 | α Scorpii . . . | F. | 1.9 | 4.8 | 6.5 | 13.4 | 15.7 | 18.0 | 24.9 | 26.4 | 29.3 | 22 15.66 | - 1.49 | -23.37 | -23.47 | 16 21 50.70 | - 0.11 |
| | 38 | ζ Ophiuchi . . . | F. | . | 42.4 | 44.6 | 46.7 | 48.7 | 50.9 | 55.0 | 56.5 | 59.0 | 30 46.66 | - 1.10 | -23.47 | -23.46 | 16 30 22.10 | - 0.01 |
| | 39 | η Herculis . . . | F. | 46.9 | 50.3 | 52.3 | 0.1 | 2.9 | 5.4 | 23.2 | 25.3 | 28.6 | 39 2.78 | + 0.15 | -23.53 | -23.45 | 16 38 39.48 | + 0.09 |
| | 40 | α Ophiuchi . . . | F. | 23.7 | 26.3 | 28.0 | 34.2 | 36.3 | 38.3 | 41.7 | 46.0 | 48.9 | 29 36.27 | - 0.60 | -23.37 | -23.41 | 17 29 12.26 | - 0.01 |
| 20 | 41 | δ Ursæ Minoris . . . | F. | . | . | . | 2.0 | 37.5 | 11.0 | 46.0 | . | . | 11 36.88 | + 20.47 | . | -23.37 | 18 11 33.98 | - 1.80 |
| | 42 | α Lyre . . . | F. | 52.4 | 55.6 | 57.4 | 5.4 | 7.9 | 10.6 | 18.4 | 20.4 | 23.6 | 33 7.97 | + 0.13 | -23.32 | -23.35 | 18 32 44.75 | - 0.01 |
| | 43 | δ Aquilæ . . . | F. | 28.7 | 31.2 | 32.7 | 38.8 | 40.8 | 43.0 | 49.0 | 50.6 | 53.0 | 19 40.86 | - 0.82 | -23.36 | -23.32 | 19 19 16.72 | + 0.09 |
| | 44 | α Aquilæ . . . | F. | 57.4 | 0.0 | 1.6 | 7.7 | 9.8 | 11.9 | 18.1 | 19.7 | 22.2 | 45 9.82 | - 0.70 | -23.29 | -23.29 | 19 44 45.83 | + 0.08 |
| | 45 | ϵ Tauri . . . | F. | 38.0 | 40.8 | 42.4 | 48.9 | 51.0 | 53.3 | 59.8 | 1.3 | 3.9 | 21 51.04 | - 0.46 | -23.02 | -23.13 | 4 21 27.45 | - 0.12 |
| | 46 | α^2 Geminorum . . . | F. | 55.6 | 58.5 | 0.4 | 7.6 | 10.0 | 12.5 | 19.7 | 21.4 | 24.6 | 27 10.03 | - 0.10 | -23.12 | -23.06 | 7 26 46.87 | + 0.30 |
| | 47 | α Canis Minoris . . . | F. | 4.7 | 7.2 | 8.8 | 15.0 | 17.0 | 19.0 | 25.0 | 26.6 | 29.1 | 33 16.93 | - 0.76 | -23.00 | -23.06 | 7 32 53.11 | - 0.22 |
| | 48 | β Geminorum . . . | F. | . | 7.7 | 10.1 | 12.3 | 14.6 | 16.9 | 21.4 | 23.2 | 26.1 | 38 12.27 | - 0.21 | -23.06 | -23.06 | 7 37 49.00 | - 0.03 |
| | 49 | λ Ursæ Minoris, S. P. . . | F. | . | . | 12.0 | 22.0 | 30.0 | 36.0 | . | . | . | 47 20.08 | -69.36 | . | -23.05 | 19 45 47.67 | - 5.33 |
| | 50 | B. A. C. 2814 . . . | F. | 39.9 | 42.4 | 44.2 | 50.2 | 52.2 | 54.3 | 0.4 | 2.0 | 4.6 | 18 52.24 | - 0.95 | . | -23.04 | 8 18 28.25 | - 4.30 |

3. Telescope micrometer reading decreased five revolutions in reduction.
5, 6, 8, 28. Thread B used.
16, 18, 26, 27, 30, 50. Thread A used.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellan'us Corrections. | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|---------------------------|-------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | | r. " | " | " | " | | | | | | | | | | | | | |
| 1 | 329 36 | 10 8.1 | 3.5 | 29.8 | 3.0 | 37 | .. | 235 | .. | 180 | .. | 73.6 | 30 20 36.3 | .. | + | 36.4 | 81 27 33.9 | - 1.8 |
| 2 | 350 2 | 7.7 | 1.5 | 29.8 | 2.2 | 36 | .. | 950 | .. | 800 | .. | 73.6 | 9 54 30.6 | .. | + | 10.9 | 61 1 2.7 | +31.6 |
| 3 | 341 14 | 10.0 | 4.4 | 2.1 | 7.4 | 34 | .. | .. | .. | 640 | 610 | 73.6 | 18 40 43.6 | .. | + | 21.1 | 69 47 25.9 | - 0.3 |
| 4 | 32 50 | 1.6 | 24.8 | 23.7 | 25.0 | 29 | .. | 180 | .. | 950 | .. | 73.6 | 327 4 26.0 | .. | - | 40.3 | 18 10 6.9 | - 3.1 |
| 5 | 343 56 | 11.7 | 6.1 | 3.5 | 7.5 | 25 | .. | .. | .. | 830 | 780 | 73.6 | 16 0 18.8 | .. | + | 17.9 | 67 6 57.9 | - 1.6 |
| 6 | 331 46 | 8.5 | 2.7 | 0.8 | 4.6 | 27 | .. | .. | .. | 005 | 945 | 73.6 | 28 10 33.5 | .. | + | 33.4 | 79 17 28.1 | .. |
| 7 | 327 20 | 5.2 | 28.7 | 26.8 | 29.5 | 30 | .. | 840 | .. | 760 | .. | 73.6 | 32 34 54.7 | .. | + | 39.8 | 83 41 55.7 | +23.8 |
| 8 | 335 21 | 6.5 | 0.2 | 23.1 | 0.4 | 30 | .. | 160 | .. | 040 | .. | 73.6 | 24 33 17.6 | .. | + | 28.5 | 75 40 7.3 | +25.9 |
| 9 | 342 10 | 3.8 | 28.3 | 26.8 | 1.0 | 33 | .. | 730 | .. | 630 | .. | 73.6 | 17 45 38.8 | .. | + | 20.0 | 68 52 20.0 | +26.6 |
| 10 | 324 40 | 8.2 | 3.5 | 0.3 | 4.1 | 36 | .. | .. | .. | 320 | 300 | 73.6 | 35 16 23.9 | .. | + | 44.1 | 86 23 29.2 | - 1.5 |
| 11 | 198 14 | 10.0 | 7.8 | 3.3 | 4.7 | 35 | 30 | 290 | .. | .. | .. | 73.6 | 161 42 8.9 | .. | - | 20.6 | 69 24 32.9 | + 0.1 |
| 12 | 341 38 | 6.7 | 2.3 | 28.8 | 3.5 | 34 | .. | .. | .. | 275 | 225 | 73.6 | 18 17 51.3 | .. | + | 20.6 | 69 24 33.1 | + 0.3 |
| 13 | 336 22 | 9.5 | 5.2 | 4.3 | 5.0 | 31 | .. | .. | .. | 800 | 730 | 73.6 | 23 33 16.4 | .. | + | 27.2 | 74 40 4.8 | + 0.4 |
| 14 | 339 56 | 8.5 | 5.3 | 0.5 | 4.8 | 29 | .. | .. | .. | 660 | 580 | 73.6 | 19 58 42.3 | 21.0 | + | 22.7 | 71 5 26.2 | - 0.6 |
| 15 | 337 18 | 9.8 | 6.3 | 2.0 | 5.6 | 32 | .. | 340 | .. | 180 | .. | 73.6 | 22 37 22.9 | .. | + | 26.1 | 73 44 10.2 | - 1.3 |
| 16 | 343 0 | 7.3 | 1.5 | 28.5 | 2.2 | 33 | .. | 640 | .. | 570 | .. | 73.6 | 16 53 6.5 | .. | + | 19.0 | 67 59 46.7 | - 1.9 |
| 17 | 343 0 | 7.3 | 1.5 | 28.5 | 2.2 | 33 | .. | 370 | .. | 330 | .. | 73.6 | 16 55 36.1 | .. | + | 19.0 | 68 2 16.3 | +18.3 |
| 18 | 329 12 | 8.3 | 3.4 | 1.1 | 5.0 | 38 | .. | 005 | .. | 880 | .. | 73.6 | 30 42 14.9 | .. | + | 37.2 | 81 49 13.3 | - 1.8 |
| 19 | 72 10 | 2.5 | 26.4 | 22.6 | 25.3 | 33 | .. | 740 | .. | 695 | .. | 73.6 | 287 45 35.1 | .. | - 3 | 14.2 | 338 48 42.1 | + 1.3 |
| 20 | 68 48 | 6.8 | 2.5 | 28.3 | 29.0 | 37 | .. | 760 | .. | 780 | .. | 73.6 | 291 8 41.9 | .. | - 2 | 41.5 | 342 12 21.6 | - 0.6 |
| 21 | 68 48 | 6.8 | 2.5 | 28.3 | 29.0 | 39 | .. | 620 | .. | 660 | .. | 73.6 | 291 9 10.6 | .. | - 2 | 41.4 | 342 12 50.4 | +10.6 |
| 22 | 328 26 | 9.2 | 3.9 | 0.6 | 5.0 | 34 | .. | .. | .. | 310 | 275 | 73.6 | 31 29 53.6 | .. | + | 38.5 | 82 36 53.3 | - 1.1 |
| 23 | 344 42 | 8.2 | 3.0 | 1.7 | 6.6 | 36 | .. | 195 | .. | 080 | .. | 73.6 | 15 14 21.3 | .. | + | 17.1 | 66 20 59.6 | + 8.4 |
| 24 | 54 24 | 9.2 | 4.6 | 1.9 | 4.5 | 32 | 770 | .. | 720 | .. | 680 | 73.6 | 305 31 28.9 | .. | - 1 | 28.0 | 356 36 22.1 | - 0.8 |
| 25 | 343 38 | 7.5 | 2.3 | 28.7 | 4.8 | 37 | .. | .. | .. | 525 | 510 | 73.6 | 16 18 41.8 | .. | + | 18.1 | 67 25 21.4 | - 1.1 |
| 26 | 280 48 | 11.7 | 6.8 | 5.0 | 10.2 | 35 | .. | .. | .. | 170 | .. | 73.6 | 79 5 37.0 | .. | + | 5 18.3 | 130 17 16.5 | + 7.7 |
| 27 | 280 48 | 11.7 | 6.8 | 5.0 | 10.2 | 37 | .. | 050 | .. | 020 | .. | 73.6 | 79 6 4.7 | .. | + | 5 18.6 | 130 17 44.5 | + 7.7 |
| 28 | 280 48 | 11.7 | 6.8 | 5.0 | 10.2 | 31 | .. | .. | .. | 870 | .. | 73.6 | 79 9 52.2 | .. | + | 5 20.4 | 130 21 33.8 | + 7.7 |
| 29 | 337 34 | 9.8 | 5.3 | 0.9 | 4.9 | 38 | .. | .. | .. | 415 | 360 | 73.6 | 22 22 57.0 | .. | + | 26.0 | 73 29 44.2 | + 1.2 |
| 30 | 336 58 | 9.3 | 5.0 | 1.8 | 6.0 | 34 | .. | 000 | .. | 850 | .. | 73.6 | 22 55 14.5 | .. | + | 26.7 | 74 2 2.4 | - 2.0 |
| 31 | 304 30 | 6.8 | 2.7 | 1.3 | 6.5 | 30 | .. | 605 | .. | 565 | .. | 73.6 | 55 24 55.5 | 17.0 | + | 1 31.3 | 106 32 48.0 | + 0.4 |
| 32 | 303 28 | 4.4 | 27.7 | 27.3 | 2.5 | 34 | 976 | .. | .. | .. | 864 | 73.6 | 56 27 57.8 | 15.8 | + | 1 35.6 | 107 35 54.6 | .. |
| 33 | 303 28 | 4.4 | 27.7 | 27.3 | 2.5 | 34 | .. | 122 | .. | 020 | .. | 73.6 | 56 27 45.0 | .. | + | 1 35.6 | 107 35 41.8 | .. |
| 34 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 35 | 317 40 | 1.6 | 25.3 | 24.2 | 0.9 | 32 | .. | .. | .. | 760 | 730 | 73.6 | 42 15 23.1 | .. | + | 57.3 | 93 22 41.6 | + 1.8 |
| 36 | 7 38 | 6.3 | 1.6 | 29.5 | 0.4 | 33 | .. | .. | .. | 254 | 236 | 73.6 | 352 17 35.3 | .. | - | 8.5 | 43 23 48.0 | - 0.5 |
| 37 | 294 54 | 6.6 | 29.9 | 29.8 | 4.3 | 30 | .. | .. | .. | 514 | 482 | 73.6 | 65 0 53.2 | 19.9 | + | 2 14.5 | 116 9 28.9 | - 0.6 |
| 38 | 310 44 | 6.2 | 28.1 | 27.4 | 3.9 | 32 | .. | .. | .. | 920 | .. | 73.6 | 49 11 29.3 | .. | + | 1 12.8 | 100 19 3.3 | - 0.5 |
| 39 | 0 12 | 7.1 | 1.1 | 29.9 | 2.6 | 36 | .. | .. | .. | 610 | 580 | 73.6 | 359 44 27.2 | .. | - | 0.5 | 50 50 47.9 | + 2.8 |
| 40 | 333 42 | 0.6 | 23.1 | 20.8 | 25.7 | 36 | 126 | 095 | .. | 018 | 994 | 73.6 | 26 14 10.2 | 22.2 | + | 30.8 | 77 21 2.2 | - 1.8 |
| 41 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 42 | 359 42 | 3.6 | 25.9 | 25.0 | 0.2 | 33 | .. | 222 | .. | 200 | .. | 73.6 | 0 13 30.4 | .. | + | 0.2 | 51 19 51.8 | - 1.2 |
| 43 | 323 56 | 3.0 | 28.0 | 25.6 | 1.7 | 37 | .. | 946 | .. | 850 | .. | 73.6 | 36 0 42.9 | .. | + | 45.4 | 87 7 49.5 | - 0.6 |
| 44 | 329 36 | 3.1 | 28.0 | 24.9 | 0.9 | 36 | .. | .. | .. | 674 | 640 | 73.6 | 30 20 24.4 | 24.5 | + | 36.5 | 81 27 22.1 | - 1.4 |
| 45 | 339 56 | 6.4 | 0.3 | 27.4 | 4.4 | 29 | .. | 922 | .. | 910 | .. | 75.6 | 19 58 45.3 | 18.0 | + | 22.8 | 71 5 29.3 | + 2.5 |
| 46 | 353 12 | 6.8 | 1.0 | 27.4 | 4.0 | 35 | .. | 214 | .. | 148 | .. | 75.6 | 6 44 6.2 | 15.6 | + | 7.4 | 57 50 34.8 | + 0.9 |
| 47 | 326 36 | 7.5 | 1.3 | 27.9 | 3.7 | 36 | .. | .. | .. | 775 | .. | 75.6 | 33 20 31.4 | .. | + | 41.4 | 84 27 34.0 | - 0.6 |
| 48 | 349 22 | 8.1 | 1.0 | 29.0 | 5.4 | 35 | .. | .. | .. | 122 | 096 | 75.6 | 10 34 7.1 | .. | + | 11.7 | 61 40 40.0 | + 1.4 |
| 49 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 50 | 317 38 | 7.8 | 1.8 | 0.2 | 6.0 | 28 | .. | .. | .. | 186 | 150 | 75.6 | 42 13 47.7 | .. | + | 57.1 | 93 21 6.0 | - 4.6 |

For summary of the elements of reduction see page 3.

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|--------|
| | in. | ° | | " | " | " | " |
| 14 | 30.28 | 23.0 | 6 | - 0.1 | .. | .. | - 0.1 |
| 31 | 30.30 | 20.5 | 32 | - 5.6 | 6.5 | .. | - 12.1 |
| 32 | 30.42 | 16.8 | 33 | - 5.6 | + | 6.5 | + 0.7 |
| 37 | 30.42 | 21.4 | | | | | |
| 40 | 30.40 | 24.0 | | | | | |
| 44 | 30.45 | 27.4 | | | | | |
| 45 | 30.21 | 25.0 | | | | | |
| 46 | 30.14 | 20.0 | | | | | |

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | Miscellaneous Corrections. |
|---------|---------|------------------------------|-----------|--------------------------------|-------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|-----------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. m. s. | s. | |
| 1876. | | | | | | | | | | | | | m. s. | s. | s. | | | | |
| Dec. 20 | 1 | B. A. C. 2825 . . . | F. | 43.8 | 46.3 | 47.8 | 54.0 | 56.0 | 58.1 | 4.3 | 5.8 | 8.5 | 19 56.07 | - 0.96 | . . | -23.04 | 8 19 32.07 | - 4.29 | |
| | 2 | B. A. C. 2853 . . . | F. | 46.9 | 49.6 | 51.3 | 57.5 | 59.7 | 2.0 | 8.5 | 10.0 | 12.6 | 24 59.79 | - 0.47 | . . | -23.04 | 8 24 36.28 | - 4.91 | |
| | 3 | B. A. C. 2970 . . . | F. | 23.7 | 26.3 | 28.0 | 34.3 | 36.5 | 38.4 | 4.4 | 6.6 | 46.3 | 40 36.34 | - 0.60 | . . | -23.03 | 8 40 12.71 | - 4.65 | |
| | 4 | Uranus. | F. | 28.0 | 30.6 | 32.3 | . . | 42.8 | 44.9 | 49.2 | 50.7 | 53.2 | 48 40.68 | - 0.57 | . . | -23.01 | 9 48 17.10 | . . | |
| | 5 | a Leonis | F. | 1.4 | 3.8 | 5.3 | 11.8 | 13.9 | 16.0 | 22.2 | 23.7 | 26.3 | 2 13.82 | - 0.60 | -23.01 | -23.01 | 10 1 50.21 | - 0.04 | |
| 21 | 6 | Moon I. S. | S. | 38.6 | 41.2 | 42.7 | 49.0 | 51.0 | 53.2 | 59.6 | 1.2 | 3.9 | 35 51.16 | - 0.99 | . . | -22.75 | 22 35 27.42 | +62.28 | |
| | 7 | a Pegasi | S. | 48.4 | 50.8 | 52.5 | 58.7 | 0.9 | 3.0 | 9.3 | 10.8 | 13.5 | 59 0.88 | - 0.41 | -22.67 | -22.75 | 22 58 37.69 | - 0.05 | |
| | 8 | 4 Ceti | S. | 37.8 | 40.4 | 41.9 | 47.8 | 49.8 | 52.0 | 58.0 | 59.7 | 2.0 | 1 49.93 | - 0.84 | . . | -22.75 | 0 1 26.34 | - 3.30 | |
| | 9 | 5 Ceti | S. | 5.9 | 8.4 | 10.0 | 16.0 | 18.0 | 20.0 | 26.3 | 27.8 | 30.4 | 2 18.09 | - 0.81 | . . | -22.75 | 0 1 54.50 | - 3.30 | |
| | 10 | γ Pegasi | S. | 4.9 | 7.4 | 9.0 | 15.3 | 17.5 | 19.6 | 25.9 | 27.5 | 30.0 | 7 17.46 | - 0.43 | -22.75 | -22.75 | 0 6 54.28 | 0.00 | |
| | 11 | B. A. C. 54 | S. | . . | . . | 30.6 | 33.8 | 37.2 | 40.3 | 46.8 | 49.2 | 53.2 | 11 33.87 | + 0.79 | . . | -22.75 | 0 11 11.89 | - 2.77 | |
| | 12 | B. A. C. 69 | S. | . . | 6.7 | 9.4 | 12.2 | 14.8 | 17.5 | 22.8 | 24.9 | 28.3 | 15 12.18 | - 1.81 | . . | -22.75 | 0 14 47.62 | - 3.75 | |
| | 13 | κ Draconis, S. P. . . | S. | 18.1 | 19.1 | 5.5 | 47.3 | 41.0 | 35.2 | 17.1 | 12.1 | 5.0 | 28 41.27 | - 4.33 | . . | -22.74 | 12 28 14.20 | - 0.54 | |
| | 14 | β Ceti. | S. | 36.6 | 39.4 | 41.0 | 47.4 | 49.5 | 51.6 | 58.0 | 59.6 | 2.3 | 37 49.49 | - 1.18 | -22.83 | -22.74 | 0 37 25.57 | + 0.14 | |
| | 15 | Weisse 982 | S. | 31.0 | 33.6 | 35.0 | 41.3 | 43.3 | 45.4 | 51.5 | 53.0 | 55.7 | 57 43.31 | - 0.66 | . . | -22.74 | 0 57 19.91 | - 3.58 | |
| | 16 | Polaris | S. | . . | . . | 40.5 | 9.0 | 33.5 | 3.0 | . . | . . | . . | 13 7.80 | +53.48 | . . | -22.74 | 1 13 38.54 | - 0.37 | |
| | 17 | θ ¹ Ceti. | S. | 4.5 | 7.1 | 8.7 | 14.9 | 16.9 | 19.1 | 25.3 | 26.8 | 29.4 | 18 16.97 | - 0.95 | -22.75 | -22.73 | 1 17 53.29 | + 0.04 | |
| | 18 | η Piscium | S. | 5.2 | 7.8 | 9.4 | 15.8 | 17.8 | 20.0 | 26.3 | 28.0 | 30.4 | 25 17.86 | - 0.42 | -22.67 | -22.73 | 1 24 54.71 | + 0.01 | |
| | 19 | β Arietis | S. | 1.5 | 4.2 | 5.9 | 12.4 | 14.6 | 16.7 | 23.3 | 24.9 | 27.6 | 48 14.57 | - 0.29 | -22.73 | -22.73 | 1 47 51.55 | + 0.02 | |
| | 20 | Durch. 2°, 315. . . | S. | 40.7 | 43.1 | 44.8 | 50.9 | 52.9 | 54.9 | 1.0 | 2.6 | 5.0 | 55 52.88 | - 0.70 | . . | -22.73 | 1 55 29.45 | - 3.92 | |
| | 21 | a Arietis | S. | 25.0 | 27.8 | 29.5 | 36.0 | 38.3 | 40.4 | 47.0 | 48.7 | 51.6 | 0 38.26 | - 0.22 | -22.76 | -22.73 | 2 0 15.31 | + 0.04 | |
| | 22 | Neptune | S. | 25.8 | 28.6 | 30.2 | 36.2 | 38.4 | 40.5 | 46.6 | 48.2 | 50.9 | 4 38.38 | - 0.51 | . . | -22.73 | 2 4 15.14 | . . | |
| | 23 | ι Cassiopeæ (R.) . . | S. | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | |
| | 24 | ι Cassiopeæ | S. | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | |
| | 25 | 5 Ursæ Minoris, S. P. | S. | 5.7 | 55.3 | 48.1 | 23.2 | 14.8 | 6.0 | 40.2 | 33.8 | 22.5 | 28 14.40 | - 5.97 | . . | -22.72 | 14 27 45.71 | - 1.03 | |
| | 26 | γ ² Ceti. | S. | 7.9 | 10.5 | 11.9 | 18.0 | 20.0 | 22.0 | 28.2 | 29.7 | 32.5 | 37 20.08 | - 0.69 | -22.65 | -22.72 | 2 36 56.67 | - 0.07 | |
| | 27 | B. A. C. 920 | S. | 1.0 | 3.9 | 5.7 | 12.0 | 14.4 | 16.6 | 23.3 | 24.7 | 27.1 | 52 14.30 | - 0.26 | . . | -22.72 | 2 51 51.32 | - 4.47 | |
| | 28 | a Ceti. | S. | 3.3 | 5.9 | 7.2 | 13.5 | . . | 17.6 | 23.7 | 25.2 | 27.7 | 56 15.51 | - 0.67 | -22.67 | -22.72 | 2 55 52.12 | - 0.03 | |
| | 29 | a Persei (R.) | S. | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | |
| | 30 | a Persei | S. | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | |
| | 31 | ζ Ursæ Minoris, S. P. | S. | 52.9 | 40.8 | 33.9 | 3.6 | 53.3 | 43.5 | 13.7 | 6.3 | 53.7 | 48 53.52 | - 6.88 | . . | -22.71 | 15 48 23.93 | - 1.17 | |
| | 32 | Lalande 7788 | S. | 9.0 | 11.5 | 13.0 | 17.5 | 19.6 | 21.9 | 24.0 | 26.2 | . . | 4 21.80 | - 1.15 | . . | -22.71 | 4 3 57.94 | - 4.20 | |
| | 33 | Lalande 7791 | S. | . . | . . | . . | 27.6 | 29.7 | 31.6 | 36.3 | 37.8 | 40.4 | 4 27.56 | - 1.15 | . . | -22.71 | 4 4 3.70 | - 4.20 | |
| | 34 | 51 Tauri | S. | 17.8 | 20.6 | 22.2 | 26.5 | 28.8 | 30.9 | 33.1 | 35.3 | . . | 11 30.95 | - 0.25 | . . | -22.70 | 4 11 8.00 | - 4.96 | |
| | 35 | 53 Tauri | S. | 22 | 525.3 | 26.9 | . . | . . | . . | . . | . . | . . | 12 35.64 | - 0.26 | . . | -22.70 | 4 12 12.68 | - 4.95 | |
| | 36 | 56 Tauri | S. | . . | 39.9 | 42.0 | 44.3 | 46.5 | 48.8 | 53.0 | 54.6 | 57.4 | 12 44.28 | - 0.24 | . . | -22.70 | 4 12 21.34 | - 4.97 | |
| | 37 | Isis | S. | 39.2 | 41.9 | 43.7 | 50.9 | 52.4 | 54.5 | 1.0 | 2.6 | 5.0 | 21 52.26 | - 0.29 | . . | -22.70 | 4 21 29.27 | . . | |
| | 38 | Vibilia | S. | . . | . . | 59.3 | 3.7 | 8.1 | 12.6 | 17.0 | . . | . . | 30 8.15 | - 0.23 | . . | -22.70 | 4 29 45.22 | . . | |
| | 39 | 11 Orionis (R.) . . . | S. | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | |
| | 40 | 11 Orionis | S. | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | |
| | 41 | δ Orionis | S. | 56.2 | 58.6 | 0.2 | 6.3 | 8.3 | 10.4 | 16.5 | 18.0 | 20.5 | 26 8.33 | - 0.74 | -22.65 | -22.69 | 5 25 44.99 | - 0.07 | |
| | 42 | ε Orionis | S. | 11.2 | 13.8 | 15.2 | 21.3 | 23.4 | 25.4 | 31.5 | 33.0 | 35.6 | 30 23.38 | - 0.76 | -22.73 | -22.69 | 5 29 59.93 | + 0.03 | |
| | 43 | Weisse 1110 | S. | 15 | 6 | 18.2 | 19.7 | 26.1 | 28.1 | 30.2 | 36.5 | 38.2 | 40.9 | 45 28.17 | - 0.41 | . . | -22.69 | 5 45 5.07 | - 5.03 |
| | 44 | B. A. C. 1891 | S. | 50.3 | 53.2 | 55.4 | 2.6 | 5.3 | 7.5 | 15.3 | 17.0 | 20.2 | 49 5.20 | - 1.67 | . . | -22.69 | 5 48 40.84 | - 3.97 | |
| 23 | 45 | 4 Ceti. | P. | 36.8 | 39.4 | 41.0 | 47.1 | 49.1 | 51.2 | 57.4 | 58.8 | 1.4 | 1 49.13 | - 0.91 | . . | -21.86 | 0 1 26.36 | - 3.28 | |
| | 46 | 5 Ceti. | P. | 4.9 | 7.5 | 9.1 | 15.2 | 17.3 | 19.3 | 25.4 | 27.0 | 29.5 | 2 17.24 | - 0.91 | . . | -21.86 | 0 1 54.47 | - 3.28 | |
| | 47 | B. A. C. 54 | P. | 13.7 | 17.7 | 20.1 | 29.9 | 33.1 | 36.3 | 46.0 | 48.4 | 52.4 | 11 33.07 | + 0.71 | . . | -21.86 | 0 11 11.92 | - 2.72 | |
| | 48 | B. A. C. 78 | P. | 41.0 | 43.1 | 48.7 | 51.6 | 54.5 | 57.2 | 0.0 | 5.7 | 7.8 | 17 54.40 | + 0.37 | . . | -21.86 | 0 17 32.91 | - 2.94 | |
| | 49 | Groomt ridge 63 . . | P. | 55.6 | 59.0 | 1.2 | 9.7 | 12.5 | 15.1 | 23.8 | 25.9 | 29.4 | 19 12.47 | + 0.37 | . . | -21.86 | 0 18 50.98 | - 2.94 | |
| | 50 | B. A. C. 100 | P. | 41.8 | 45.4 | 47.4 | 55.9 | 58.9 | 1.6 | 10.2 | 12.2 | 15.9 | 21 58.81 | + 0.37 | . . | -21.87 | 0 21 37.31 | - 3.00 | |

1, 8, 33, 45, 48. Thread B used.
 9, 24, 36, 37, 38, 40, 46, 50. Thread A used.
 9. Telescope micrometer reading decreased five revolutions in reduction.
 13, 25, 31, 47. Bisections at set C.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. |
| | ° ' " | 10 | " | " | " | | | | | | | " | ° ' " | ° ' " | ° ' " | ° ' " | " |
| 1 | 317 38 | 7.8 | 1.8 | 0.2 | 6.0 | 28 | .. | .. | .. | .. | 055 | 75.6 | 42 22 56.9 | .. + | 57.4 | 93 30 15.5 | - 4.6 |
| 2 | 339 34 | 6.1 | 1.3 | 27.1 | 4.6 | 37 | .. | .. | .. | 575 | 558 | 75.6 | 20 22 43.5 | .. + | 23.4 | 71 29 28.1 | - 9.7 |
| 3 | 333 36 | 4.6 | 28.6 | 26.4 | 1.6 | 32 | .. | 920 | .. | 840 | .. | 75.6 | 26 19 28.8 | 15.0 + | 31.1 | 77 26 21.1 | - 10.2 |
| 4 | 335 6 | 4.2 | 27.6 | 23.6 | 0.5 | 33 | .. | 020 | .. | 945 | .. | 75.6 | 24 49 29.0 | .. + | 29.1 | 75 56 19.3 | .. |
| 5 | 333 38 | 3.0 | 27.5 | 23.2 | 29.5 | 39 | .. | 255 | .. | 222 | .. | 75.6 | 26 19 4.2 | 15.5 + | 31.1 | 77 25 56.5 | + 0.2 |
| 6 | 310 44 | 8.6 | 6.3 | 1.8 | 6.0 | 32 | 205 | .. | 980 | .. | 890 | 74.3 | 49 11 19.6 | 26.1 + | 1 10.5 | 100 18 51.3 | .. |
| 7 | 335 36 | 7.6 | 3.7 | 29.2 | 3.5 | 36 | .. | 705 | .. | 590 | .. | 74.3 | 24 20 28.3 | .. + | 27.6 | 75 27 17.1 | 0.0 |
| 8 | 317 52 | 5.6 | 2.5 | 0.2 | 4.2 | 35 | 585 | 480 | .. | .. | .. | 74.3 | 42 6 42.2 | .. + | 55.4 | 93 13 58.8 | + 20.2 |
| 9 | 317 52 | 5.6 | 2.5 | 0.2 | 4.2 | 36 | .. | .. | .. | 560 | 525 | 74.3 | 42 0 37.2 | .. + | 55.2 | 93 7 53.6 | + 20.2 |
| 10 | 335 32 | 6.0 | 1.5 | 27.5 | 0.5 | 31 | 440 | 480 | .. | .. | .. | 74.3 | 24 23 6.0 | .. + | 27.8 | 75 29 55.0 | + 1.2 |
| 11 | 11 46 | 6.6 | 3.6 | 0.5 | 3.5 | 29 | .. | .. | .. | 125 | 150 | 74.3 | 348 8 34.8 | .. - | 12.9 | 39 14 43.1 | + 37.5 |
| 12 | 281 12 | 7.0 | 3.0 | 1.7 | 6.7 | 34 | .. | .. | .. | 880 | 960 | 74.3 | 78 44 3.3 | .. + | 4 59.9 | 129 55 24.4 | + 8.7 |
| 13 | 70 32 | 4.4 | 29.0 | 26.5 | 28.4 | 35 | 690 | .. | .. | .. | 790 | 74.3 | 289 24 10.4 | .. - | 2 52.8 | 340 27 38.8 | + 2.7 |
| 14 | 302 24 | 5.0 | 0.0 | 28.0 | 2.7 | 34 | 290 | 240 | .. | .. | .. | 74.3 | 57 31 48.6 | .. + | 1 36.3 | 108 39 46.1 | - 0.8 |
| 15 | 325 36 | 9.0 | 4.4 | 0.0 | 6.6 | 28 | .. | 240 | .. | 060 | .. | 74.3 | 34 18 19.7 | .. + | 42.0 | 85 25 22.9 | + 24.2 |
| 16 | 49 40 | 0.5 | 26.9 | 23.5 | 23.5 | 32 | 288 | .. | 325 | .. | 260 | 74.3 | 310 15 14.4 | .. - | 1 12.6 | 1 20 23.0 | - 1.8 |
| 17 | 312 14 | 9.0 | 4.6 | 0.0 | 8.0 | 33 | .. | .. | .. | 130 | 155 | 74.3 | 47 41 37.3 | 21.8 + | 1 7.6 | 98 49 6.1 | + 1.4 |
| 18 | 335 46 | 11.8 | 5.5 | 1.6 | 6.0 | 36 | .. | .. | .. | 125 | 980 | 74.3 | 24 10 22.9 | .. + | 27.7 | 75 17 11.8 | + 2.0 |
| 19 | 341 14 | 8.5 | 4.5 | 29.0 | 5.7 | 29 | .. | 800 | .. | 700 | .. | 74.3 | 18 40 43.7 | .. + | 20.9 | 69 47 25.8 | - 0.4 |
| 20 | 323 20 | 4.2 | 29.5 | 25.2 | 1.7 | 34 | 180 | 170 | .. | .. | .. | 74.3 | 36 35 46.2 | .. + | 45.8 | 87 42 53.2 | + 23.3 |
| 21 | 343 56 | 6.6 | 2.7 | 28.5 | 3.0 | 36 | .. | 260 | .. | 140 | .. | 74.3 | 16 0 20.7 | .. + | 17.7 | 67 6 59.6 | + 0.1 |
| 22 | 331 46 | 7.5 | 2.6 | 29.4 | 4.0 | 38 | .. | 770 | .. | 700 | .. | 74.3 | 28 11 0.2 | .. + | 33.1 | 79 17 54.5 | .. |
| 23 | 152 0 | 4.4 | 1.8 | 0.6 | 3.2 | 39 | 270 | 160 | .. | .. | .. | 74.3 | 207 57 4.4 | .. + | 32.8 | 23 8 44.0 | - 3.6 |
| 24 | 27 52 | 5.0 | 28.8 | 26.1 | 29.7 | 40 | .. | .. | .. | 870 | 860 | 74.3 | 332 2 58.0 | .. - | 32.8 | 23 8 46.4 | - 1.2 |
| 25 | 64 46 | 8.8 | 2.8 | 29.6 | 1.5 | 35 | 045 | .. | .. | .. | 940 | 74.3 | 295 10 2.6 | .. - | 2 11.1 | 346 14 12.7 | + 2.4 |
| 26 | 323 46 | 11.0 | 8.4 | 3.0 | 9.6 | 33 | .. | 710 | .. | 595 | .. | 74.3 | 36 9 46.9 | .. + | 45.3 | 87 16 53.4 | - 0.2 |
| 27 | 342 10 | 4.0 | 28.9 | 25.0 | 28.7 | 33 | 660 | 710 | .. | .. | .. | 74.3 | 17 45 37.9 | .. + | 19.9 | 68 52 19.0 | + 26.6 |
| 28 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 29 | 169 24 | 7.3 | 5.8 | 2.6 | 4.0 | 33 | 990 | 885 | .. | .. | .. | 74.3 | 190 31 46.7 | .. + | 11.5 | 40 34 23.0 | - 2.4 |
| 30 | 10 28 | 9.0 | 4.1 | 0.7 | 5.0 | 35 | .. | .. | .. | 525 | 460 | 74.3 | 349 28 13.2 | .. - | 11.5 | 40 34 22.9 | - 2.5 |
| 31 | 62 50 | 2.4 | 28.5 | 24.1 | 26.1 | 33 | 970 | .. | .. | .. | 965 | 74.3 | 297 5 41.4 | 17.0 - | 2 1.1 | 348 10 1.5 | + 1.1 |
| 32 | 303 16 | 7.0 | 2.8 | 29.5 | 4.3 | 34 | 735 | 730 | .. | .. | .. | 74.3 | 56 39 57.8 | .. + | 1 34.4 | 107 47 53.4 | + 14.4 |
| 33 | 303 16 | 7.0 | 2.8 | 29.5 | 4.3 | 30 | .. | .. | .. | 810 | 870 | 74.3 | 56 41 47.6 | .. + | 1 34.5 | 107 49 43.4 | + 14.4 |
| 34 | 342 20 | 4.6 | 1.0 | 26.6 | 0.0 | 36 | 970 | 970 | .. | .. | .. | 74.3 | 17 36 29.6 | .. + | 19.8 | 68 43 10.6 | + 20.5 |
| 35 | 341 54 | 11.5 | 6.4 | 0.8 | 5.9 | 36 | 750 | 770 | .. | .. | .. | 74.3 | 18 2 31.9 | .. + | 20.3 | 69 9 13.4 | + 20.3 |
| 36 | 342 30 | 5.9 | 2.4 | 26.8 | 1.4 | 39 | .. | .. | .. | 615 | 550 | 74.3 | 17 24 39.0 | .. + | 19.5 | 68 31 19.7 | + 20.4 |
| 37 | 340 28 | 10.4 | 5.3 | 0.1 | 4.6 | 40 | .. | 990 | .. | 760 | .. | 74.3 | 19 27 1.2 | .. + | 22.0 | 70 33 44.4 | - 1.8 |
| 38 | 343 2 | 6.3 | 2.5 | 28.0 | 0.5 | 36 | .. | 060 | .. | 040 | .. | 74.3 | 16 51 44.1 | 16.6 + | 18.9 | 67 58 24.2 | - 1.9 |
| 39 | 203 36 | 8.7 | 6.2 | 1.3 | 1.5 | 37 | 950 | 850 | .. | .. | .. | 74.3 | 156 20 47.3 | .. - | 27.3 | 74 46 1.2 | + 3.5 |
| 40 | 336 16 | 6.1 | 3.0 | 28.1 | 2.5 | 41 | .. | .. | .. | 475 | 520 | 74.3 | 23 39 9.1 | .. + | 27.3 | 74 45 57.6 | - 0.1 |
| 41 | 320 40 | 3.0 | 28.5 | 24.4 | 0.0 | 35 | .. | 735 | .. | 610 | .. | 74.3 | 39 16 8.8 | .. + | 51.0 | 90 23 21.0 | - 1.5 |
| 42 | 319 46 | 10.3 | 4.5 | 1.6 | 5.5 | 32 | .. | 890 | .. | 780 | .. | 74.3 | 40 9 31.8 | .. + | 52.7 | 91 16 45.7 | - 1.3 |
| 43 | 335 24 | 5.6 | 1.0 | 28.0 | 1.0 | 29 | .. | .. | .. | 905 | 890 | 74.3 | 24 30 43.8 | .. + | 28.5 | 75 37 33.5 | + 9.9 |
| 44 | 287 16 | 10.7 | 4.7 | 5.2 | 9.0 | 24 | .. | 350 | .. | 450 | .. | 74.3 | 72 39 56.8 | 14.0 + | 3 18.2 | 123 49 36.2 | + 8.6 |
| 45 | 317 52 | 8.7 | 5.5 | 0.2 | 5.7 | 35 | 540 | 495 | .. | .. | .. | 73.4 | 42 6 43.1 | 27.9 + | 55.5 | 93 13 59.8 | + 20.0 |
| 46 | 317 52 | 8.7 | 5.5 | 0.2 | 5.7 | 31 | .. | .. | .. | 565 | 510 | 73.4 | 42 0 38.2 | .. + | 55.2 | 93 7 54.6 | + 20.1 |
| 47 | 11 46 | 12.5 | 8.6 | 3.3 | 6.7 | 29 | 030 | .. | .. | .. | 965 | 73.4 | 348 8 34.4 | .. - | 12.9 | 39 14 42.7 | + 37.5 |
| 48 | 4 42 | 7.2 | 5.0 | 29.9 | 1.6 | 42 | 545 | 535 | .. | .. | .. | 73.4 | 355 18 29.5 | .. - | 5.0 | 46 24 45.7 | + 35.9 |
| 49 | 4 42 | 7.2 | 5.0 | 29.9 | 1.6 | 38 | .. | 380 | .. | 265 | .. | 73.4 | 355 14 53.3 | .. - | 5.1 | 46 21 9.4 | + 35.9 |
| 50 | 4 42 | 7.2 | 5.0 | 29.9 | 1.6 | 31 | .. | 690 | .. | 555 | .. | 73.4 | 355 10 37.2 | .. - | 5.2 | 46 16 53.2 | + 36.0 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|--------|
| 3 | 30.11 | 19.6 | 4 | 0.2 | .. | .. | 0.2 |
| 5 | 30.06 | 19.4 | 6 | 41 9.1 | 14 54.2 | .. | 56 3.3 |
| 6 | 29.87 | 28.9 | 22 | 0.1 | .. | .. | 0.1 |
| 17 | 29.89 | 24.8 | | | | | |
| 31 | 29.87 | 21.3 | | | | | |
| 38 | 29.86 | 20.9 | | | | | |
| 44 | 29.85 | 19.1 | | | | | |
| 45 | 30.17 | 29.2 | | | | | |

For summary of the elements of reduction see page 3.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | | | Miscellaneous Corrections. | | | |
|---------|---------|-------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|--------|----|----------------------------|-------|----|-------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | h. | m. | s. | | | | |
| | | | | | | | | | | | | | | | | | | | | | s. | s. | s. |
| 1876. | | | | | | | | | | | | | m. | s. | | | | | | | | | |
| Dec. 23 | 1 | a Cassiopeæ (R.) | P. | . | . | . | . | 56.4 | 0.1 | 7.5 | 10.0 | 11.8 | 33 | 52.85 | + | 1.03 | . | -21.88 | 0 | 33 | 32.00 | + | 0.06 |
| | 2 | a Cassiopeæ | P. | . | . | . | . | 56.4 | 0.1 | 7.5 | 10.0 | 11.8 | 33 | 52.85 | - | 1.27 | -21.91 | -21.88 | 0 | 37 | 25.49 | + | 0.08 |
| | 3 | β Ceti | P. | 35.7 | 38.4 | 40.0 | 46.6 | 48.7 | 50.8 | 57.2 | 58.8 | 1.6 | 37 | 48.64 | - | 0.68 | -21.94 | -21.88 | 0 | 56 | 34.16 | + | 0.08 |
| | 4 | ε Piscium | P. | 44.3 | 47.0 | 48.6 | 54.6 | 56.7 | 58.8 | 5.0 | 6.5 | 9.0 | 56 | 56.72 | - | 0.68 | -21.94 | -21.88 | 0 | 56 | 34.16 | + | 0.08 |
| | 5 | Polaris | P. | . | . | . | 8.2 | 40.0 | 4.8 | 32.6 | 57.8 | . | 13 | 5.14 | + | 53.34 | . | -21.89 | 1 | 13 | 36.59 | - | 0.57 |
| | 6 | θ ¹ Ceti | P. | 3.8 | 6.4 | 8.0 | 14.2 | 16.2 | 18.3 | 24.6 | 26.0 | 28.6 | 18 | 16.23 | - | 1.03 | -21.95 | -21.89 | 1 | 17 | 53.31 | + | 0.08 |
| | 7 | η Piscium | P. | 4.6 | 7.2 | 8.7 | 15.0 | 17.2 | 19.3 | 25.6 | 27.2 | 29.9 | 25 | 17.19 | - | 0.51 | -21.93 | -21.90 | 1 | 24 | 54.78 | + | 0.10 |
| | 8 | β Arietis | P. | 0.7 | 3.5 | 5.0 | 11.6 | 13.8 | 16.0 | 22.6 | 24.0 | 26.8 | 48 | 13.78 | - | 0.37 | -21.88 | -21.91 | 1 | 47 | 51.50 | - | 0.01 |
| | 9 | α Arietis | P. | 24.2 | 26.9 | 28.5 | 35.2 | 37.4 | 39.6 | 46.3 | 48.0 | 50.7 | 0 | 37.42 | - | 0.30 | -21.85 | -21.91 | 2 | 0 | 15.21 | - | 0.05 |
| | 10 | ξ ¹ Ceti | P. | 40.0 | 42.5 | 44.1 | 50.3 | 52.4 | 54.4 | 0.5 | 2.0 | 4.7 | 6 | 52.32 | - | 0.66 | -21.93 | -21.92 | 2 | 6 | 29.74 | + | 0.05 |
| | 11 | ι Cassiopeæ (R.) | P. | . | . | . | . | . | . | . | . | . | 19 | 18.40 | + | 2.13 | . | -21.92 | 2 | 18 | 58.61 | + | 0.42 |
| | 12 | ι Cassiopeæ | P. | . | . | . | 7.9 | 13.2 | 18.5 | 23.4 | 28.9 | . | 29 | 43.84 | - | 0.70 | . | -21.92 | 2 | 29 | 21.22 | - | 4.13 |
| | 13 | Lalande 4803 | P. | 31.4 | 34.0 | 35.6 | 41.8 | 43.9 | 45.9 | 52.2 | 53.6 | 56.2 | 29 | 43.84 | - | 0.51 | . | -21.92 | 2 | 33 | 15.64 | - | 4.24 |
| | 14 | Lalande 4903 ¹ | P. | 25.5 | 28.0 | 29.6 | 35.9 | 38.0 | 40.2 | 46.6 | 48.1 | 50.7 | 33 | 38.07 | - | 0.78 | -21.95 | -21.93 | 2 | 36 | 56.75 | + | 0.02 |
| | 15 | γ ² Ceti | P. | 7.2 | 9.8 | 11.2 | 17.4 | 19.5 | 21.5 | 27.6 | 29.2 | 31.7 | 37 | 19.46 | - | 0.35 | . | -21.93 | 2 | 51 | 51.18 | - | 4.47 |
| | 16 | B. A. C. 920 | P. | 0.3 | 3.0 | 4.8 | 11.3 | 13.6 | 15.6 | 22.1 | 23.8 | 26.6 | 52 | 13.46 | - | 0.76 | -21.91 | -21.93 | 2 | 55 | 52.14 | . | 0.00 |
| | 17 | a Ceti | P. | 2.5 | 5.2 | 6.7 | 12.8 | 14.9 | 16.9 | 23.0 | 24.5 | 27.0 | 56 | 14.83 | + | 0.64 | . | -21.94 | 3 | 15 | 34.33 | + | 0.05 |
| | 18 | a Persei (R.) | P. | . | . | . | . | . | . | 8.3 | 10.4 | 14.5 | 15 | 55.63 | + | 0.54 | . | -21.95 | 3 | 34 | 12.02 | + | 0.25 |
| | 19 | a Persei | P. | . | . | . | . | . | . | 45.5 | 47.8 | 51.5 | 34 | 33.43 | + | 0.54 | . | -21.95 | . | . | . | . | . |
| | 20 | δ Persei (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 21 | δ Persei | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| 26 | 22 | Polaris | P. | . | . | . | 31.0 | . | 27.5 | 56.1 | . | . | 13 | 0.07 | + | 51.35 | . | -20.05 | 1 | 13 | 31.37 | - | 3.49 |
| | 23 | θ ¹ Ceti | P. | 2.0 | 4.6 | 6.2 | 12.5 | 14.5 | 16.6 | 22.6 | 24.3 | 26.9 | 18 | 14.47 | - | 1.15 | -20.10 | -20.05 | 1 | 17 | 53.27 | + | 0.03 |
| | 24 | η Piscium | P. | 2.7 | 5.5 | 7.0 | 13.3 | 15.3 | 17.5 | 23.9 | 25.5 | 28.0 | 25 | 15.41 | - | 0.64 | -20.05 | -20.05 | 1 | 24 | 54.72 | + | 0.07 |
| | 25 | ο Piscium | P. | 5.7 | 7.3 | 11.3 | 13.4 | 15.6 | 17.6 | 19.7 | 23.7 | 25.1 | 39 | 15.49 | - | 0.78 | -20.05 | -20.05 | 1 | 38 | 54.66 | - | 0.03 |
| | 26 | β Arietis | P. | 58.9 | 1.7 | 3.4 | 9.8 | 12.0 | 14.2 | 20.7 | 22.3 | 25.0 | 48 | 12.00 | - | 0.51 | -19.99 | -20.04 | 1 | 47 | 51.45 | - | 0.03 |
| | 27 | ξ ¹ Ceti | P. | 38.0 | 40.8 | 42.3 | 48.4 | 50.6 | 52.7 | 58.9 | 0.4 | 2.9 | 6 | 50.56 | - | 0.79 | -20.06 | -20.04 | 2 | 6 | 29.73 | + | 0.06 |
| | 28 | Moon I. | P. | 57.6 | 0.3 | 1.8 | 8.6 | 10.9 | 13.0 | 19.8 | 21.4 | 24.3 | 35 | 10.86 | - | 0.53 | . | -20.03 | 2 | 34 | 50.30 | + | 70.70 |
| | 29 | a Hydræ | P. | 42.4 | 44.9 | 46.5 | 52.7 | 54.7 | 56.7 | 3.0 | 4.6 | 7.2 | 21 | 54.74 | - | 1.00 | -20.00 | -19.98 | 9 | 21 | 33.76 | - | 0.01 |
| | 30 | B. A. C. 3336 | P. | 50.1 | 52.8 | 54.4 | . | . | . | . | . | . | 40 | 2.56 | - | 0.65 | . | -19.96 | 9 | 39 | 41.95 | - | 4.39 |
| | 31 | B. A. C. 3337 | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 32 | a Leonis | P. | 58.4 | 0.9 | 2.5 | 8.7 | 10.9 | 13.0 | 19.2 | 20.8 | 23.3 | 2 | 10.86 | - | 0.52 | -19.94 | -19.95 | 10 | 1 | 50.39 | - | 0.05 |
| | 33 | Weisse (2) 28 | P. | 56.2 | 58.8 | 0.6 | 7.0 | 9.1 | 11.2 | 13.4 | 17.7 | 19.4 | 4 | 9.12 | - | 0.34 | . | -19.95 | 10 | 3 | 48.83 | - | 4.58 |
| | 34 | Durch. 19 ⁵ , 2312 | P. | 21.7 | 24.4 | 26.2 | 32.6 | 34.8 | 36.9 | 43.4 | 45.0 | 47.7 | 5 | 34.74 | - | 0.34 | . | -19.95 | 10 | 5 | 14.45 | - | 4.57 |
| | 35 | B. A. C. 3522 | P. | 10.9 | 13.6 | 15.3 | 21.7 | 23.9 | 26.9 | 32.5 | 34.2 | 36.9 | 13 | 23.89 | - | 0.33 | . | -19.95 | 10 | 13 | 3.61 | - | 4.53 |
| | 36 | B. A. C. 3539 | P. | 4.0 | 7.2 | 9.2 | 16.8 | 19.3 | 21.8 | 29.4 | 31.3 | 34.4 | 16 | 19.27 | + | 0.15 | . | -19.95 | 10 | 15 | 59.47 | - | 5.03 |
| | 37 | B. A. C. 3561 | P. | 55.3 | 58.0 | 59.6 | 5.8 | 7.8 | 9.9 | 16.0 | 17.7 | 20.3 | 19 | 7.82 | - | 0.60 | . | -19.95 | 10 | 18 | 47.27 | - | 4.23 |
| | 38 | B. A. C. 3575 | P. | 18.3 | 20.8 | 22.4 | 28.5 | . | 32.6 | 38.9 | 40.5 | 43.0 | 21 | 30.63 | - | 0.57 | . | -19.95 | 10 | 21 | 10.11 | - | 4.24 |
| | 39 | B. A. C. 3602 | P. | 58.9 | 1.9 | 3.8 | 11.0 | 13.5 | 15.9 | 23.3 | 25.4 | 28.2 | 25 | 13.51 | + | 0.05 | . | -19.95 | 10 | 24 | 53.61 | - | 4.84 |
| | 40 | 226 Cephei, S. P. | P. | . | . | . | 36.0 | 28.3 | 19 8 | 11.7 | . | . | 30 | 28.06 | - | 6.09 | . | -19.94 | 22 | 30 | 2.03 | - | 0.02 |
| | 41 | ι Leonis | P. | 56.4 | 59.0 | 0.7 | 6.8 | 9.0 | 11.0 | 17.2 | 18.8 | 21.4 | 43 | 8.92 | - | 0.55 | -19.96 | -19.93 | 10 | 42 | 48.44 | + | 0.03 |
| | 42 | a Ursæ Majoris (R.) | P. | . | . | . | 23.6 | 28.0 | 32.6 | 37.0 | 45.7 | 49.2 | 56 | 28.12 | + | 1.75 | . | -19.93 | 10 | 56 | 9.94 | + | 0.17 |
| | 43 | a Ursæ Majoris | P. | . | . | . | 23.6 | 28.0 | 32.6 | 37.0 | 45.7 | 49.2 | 56 | 28.12 | - | 0.80 | . | -19.92 | 11 | 7 | 28.54 | - | 3.78 |
| | 44 | B. A. C. 3832 | P. | 37.0 | 39.5 | 41.0 | 47.2 | 49.4 | 51.4 | 57.4 | 58.9 | 1.5 | 7 | 49.26 | - | 0.75 | . | -19.92 | 11 | 10 | 58.33 | - | 3.79 |
| | 45 | B. A. C. 3850 | P. | 6.9 | 9.3 | 10.8 | 16.9 | 19.0 | 21.0 | 27.2 | 28.7 | 31.2 | 11 | 19.00 | - | 4.09 | . | -19.92 | 23 | 13 | 32.75 | - | 0.04 |
| | 46 | ο Cephei, S. P. | P. | 28.7 | 22.0 | 17.9 | 2.1 | 57.0 | 51.4 | 35.6 | 31.3 | 24.8 | 13 | 56.76 | . | . | . | . | . | . | . | . | . |
| | 47 | B. A. C. 3877 ¹ | P. | 39.4 | 42.1 | 43.6 | . | . | . | 0.3 | 2.0 | 4.5 | 17 | 51.98 | - | 0.55 | . | -19.91 | 11 | 17 | 31.52 | - | 3.88 |
| | 48 | B. A. C. 3877 ² | P. | . | . | . | 50.0 | 52.1 | 54.3 | 56.3 | . | . | 17 | 52.13 | - | 0.55 | . | -19.91 | 11 | 17 | 31.67 | - | 3.88 |
| | 49 | v Leonis (R.) | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 50 | v Leonis | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |

4. Telescope micrometer reading increased two revolutions in reduction.
 12, 34. Thread A used.
 30. Bisections at threads II and III.
 40, 41, 43, 46. Thread B used.
 40. Bisections at set C.
 46. Bisections at sets B and D.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|--------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. |
| | ° ' " | 10 | " | " | " | | | | | | | " | ° ' " | ° | ' " | ° ' " | " |
| 1 | 162 58 | 6.6 | 5.5 | 0.6 | 2.9 | 35 | 490 | 405 | .. | .. | .. | 73.4 | 196 58 7.8 | .. | + 18.8 | 34 7 54.6 | - 1.5 |
| 2 | 16 54 | 10.5 | 6.0 | 2.3 | 5.5 | 34 | .. | .. | .. | 165 | 115 | 73.4 | 343 1 53.3 | 26.5 | - 18.8 | 34 7 55.7 | - 0.4 |
| 3 | 302 24 | 8.6 | 4.4 | 0.9 | 5.3 | 34 | .. | 085 | .. | 930 | .. | 73.4 | 57 31 48.2 | .. | + 1 36.5 | 108 39 45.9 | - 1.1 |
| 4 | 328 16 | 11.0 | 7.7 | 1.5 | 7.0 | 31 | .. | 840 | .. | 680 | .. | 73.4 | 31 39 46.5 | .. | + 38.0 | 82 46 45.7 | + 0.7 |
| 5 | 49 40 | 7.0 | 2.5 | 27.6 | 29.6 | 31 | 985 | .. | 040 | .. | 995 | 73.4 | 310 15 14.8 | .. | - 1 12.7 | 1 20 23.3 | - 1.2 |
| 6 | 312 14 | 11.1 | 8.0 | 3.0 | 10.0 | 33 | .. | 075 | .. | 990 | .. | 73.4 | 47 41 36.5 | .. | + 1 7.7 | 98 49 5.4 | + 0.6 |
| 7 | 335 46 | 11.2 | 6.2 | 0.0 | 5.5 | 36 | .. | 210 | .. | 050 | .. | 73.4 | 24 10 21.8 | .. | + 27.7 | 75 17 10.7 | + 0.8 |
| 8 | 341 14 | 8.6 | 4.5 | 28.5 | 4.3 | 29 | .. | 940 | .. | 825 | .. | 73.4 | 18 40 44.4 | 25.2 | + 20.9 | 69 47 26.5 | + 0.2 |
| 9 | 343 56 | 12.0 | 8.2 | 3.5 | 7.5 | 35 | 950 | 965 | .. | .. | .. | 73.4 | 16 0 20.5 | .. | + 17.7 | 67 6 59.4 | - 0.1 |
| 10 | 329 18 | 12 3 | 8.2 | 2.2 | 7.5 | 29 | .. | 780 | .. | 655 | .. | 73.4 | 30 36 45.6 | .. | + 36.6 | 81 43 43.4 | - 1.0 |
| 11 | 152 0 | 7.5 | 4.5 | 0.5 | 2.5 | 39 | 240 | 185 | .. | .. | .. | 73.4 | 207 57 4.8 | .. | + 32.8 | 23 8 43.6 | - 3.7 |
| 12 | 27 52 | 11.2 | 6.7 | 2.0 | 5.5 | 40 | .. | .. | .. | 435 | 375 | 73.4 | 332 2 56.5 | .. | - 32.8 | 23 8 44.9 | - 2.4 |
| 13 | 327 20 | 8.7 | 3.4 | 29.3 | 3.7 | 30 | .. | 665 | .. | 585 | .. | 73.4 | 32 34 55.5 | .. | + 39.5 | 83 41 56.2 | + 23.6 |
| 14 | 335 22 | 9.0 | 5.1 | 0.5 | 4.5 | 32 | .. | 180 | .. | 050 | .. | 73.4 | 24 33 19.4 | .. | + 28.3 | 75 40 8.9 | + 25.7 |
| 15 | 323 46 | 11.0 | 8.2 | 2.1 | 9.1 | 33 | .. | 830 | .. | 705 | .. | 73.4 | 36 9 47.4 | .. | + 45.2 | 87 16 53.8 | + 0.1 |
| 16 | 342 10 | 6.8 | 3 0 | 28.0 | 2.7 | 33 | .. | 565 | .. | 425 | .. | 73.4 | 17 45 38.4 | .. | + 19.8 | 68 52 19.4 | + 26.6 |
| 17 | 324 40 | 7.6 | 4.7 | 28.2 | 5.4 | 36 | .. | 570 | .. | 410 | .. | 73.4 | 35 16 25.5 | 24.3 | + 43.8 | 86 23 30.5 | - 0.5 |
| 18 | 169 24 | 11.9 | 10.8 | 6.0 | 7.0 | 33 | 690 | 650 | .. | .. | .. | 73.4 | 190 31 45.7 | .. | + 11.5 | 40 34 24.0 | - 1.1 |
| 19 | 10 28 | 12.5 | 8.3 | 3.9 | 7.5 | 35 | .. | .. | .. | 395 | 355 | 73.4 | 349 28 14.0 | .. | - 11.5 | 40 34 23.7 | - 1.4 |
| 20 | 171 26 | 9.9 | 9.5 | 4.0 | 5.5 | 34 | 930 | 850 | .. | .. | .. | 73.4 | 188 30 2.8 | .. | + 9.3 | 42 36 9.1 | - 2.4 |
| 21 | 8 26 | 13.2 | 9.5 | 5.0 | 7.8 | 31 | .. | .. | .. | 340 | 285 | 73.4 | 351 29 58.5 | 24.2 | - 9.3 | 42 36 10.4 | - 1.1 |
| 22 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 23 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 24 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 25 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 26 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 27 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 28 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| 29 | 312 56 | 9.7 | 5.1 | 0.0 | 4.8 | 34 | .. | 930 | .. | 835 | .. | 73.5 | 47 0 1.8 | 22.1 | + 1 6.1 | 98 7 29.1 | - 0.1 |
| 30 | 328 20 | 7.0 | 2.5 | 27.4 | 0.6 | 36 | 865 | 820 | .. | .. | .. | 73.5 | 31 36 28.3 | .. | + 38.0 | 82 43 27.5 | - 15.9 |
| 31 | 333 26 | 11.8 | 8.4 | 0.5 | 6.6 | 36 | .. | .. | .. | 915 | 845 | 73.5 | 26 30 35.3 | .. | + 30.8 | 77 37 27.3 | - 17.2 |
| 32 | 333 38 | 12.8 | 8.1 | 1.7 | 7.4 | 39 | .. | 020 | .. | 860 | .. | 73.5 | 26 19 6.6 | .. | + 30.6 | 77 25 58.4 | + 1.1 |
| 33 | 340 34 | 7.5 | 2.5 | 26.3 | 0.0 | 37 | .. | .. | .. | 910 | 830 | 73.5 | 19 22 45.3 | .. | + 21.8 | 70 29 28.3 | - 21.4 |
| 34 | 340 34 | 7.5 | 2.5 | 26.3 | 0.0 | 39 | .. | 490 | .. | 340 | .. | 73.5 | 19 20 34.6 | .. | + 21.7 | 70 27 17.5 | - 21.6 |
| 35 | 341 8 | 10.8 | 7.0 | 1.0 | 5.9 | 33 | .. | 620 | .. | 515 | .. | 73.5 | 18 47 43.1 | .. | + 21.1 | 69 54 25.4 | - 22.5 |
| 36 | 356 52 | 8.9 | 5.5 | 29.5 | 1.7 | 32 | .. | 750 | .. | 655 | .. | 73.5 | 3 3 27.7 | .. | + 3.3 | 54 9 52.2 | - 26.8 |
| 37 | 330 28 | 10.7 | 6.7 | 0.6 | 5.1 | 36 | .. | 750 | .. | 620 | .. | 73.5 | 29 28 30.3 | .. | + 35.0 | 80 35 26.5 | - 19.9 |
| 38 | 331 26 | 9.1 | 6.3 | 0.6 | 3.8 | 33 | .. | 970 | .. | 855 | .. | 73.5 | 28 29 47.1 | .. | + 33.6 | 79 36 41.9 | - 20.3 |
| 39 | 354 4 | 6.5 | 3.4 | 27.0 | 1.5 | 39 | .. | 235 | .. | 090 | .. | 73.5 | 5 53 4.8 | .. | + 6.4 | 56 59 32.4 | - 27.0 |
| 40 | 65 26 | 9.4 | 5.8 | 28.5 | 1.7 | 31 | .. | 615 | .. | 625 | .. | 73.5 | 294 31 43.2 | 20.4 | - 2 15.0 | 345 35 49.4 | + 0.8 |
| 41 | 332 16 | 9.9 | 6.0 | 29.8 | 2.5 | 30 | .. | 400 | .. | 300 | .. | 73.5 | 27 41 24.5 | .. | + 32.5 | 78 48 18.2 | 0.0 |
| 42 | 156 24 | 8.5 | 7.8 | 0.9 | 3.1 | 29 | 105 | 065 | .. | .. | .. | 73.5 | 203 30 31.3 | .. | + 27.0 | 27 35 22.9 | - 1.8 |
| 43 | 23 28 | 12.1 | 9.0 | 4.5 | 6.5 | 30 | .. | .. | .. | 345 | 290 | 73.5 | 336 29 29.4 | .. | - 27.0 | 27 35 23.6 | - 1.1 |
| 44 | 321 40 | 5.0 | 29.5 | 24.5 | 28.3 | 38 | .. | 525 | .. | 400 | .. | 73.5 | 38 16 51.1 | .. | + 48.9 | 89 24 1.2 | - 20.4 |
| 45 | 323 44 | 11.4 | 6.9 | 0.5 | 5.4 | 33 | .. | 615 | .. | 500 | .. | 73.5 | 36 11 42.7 | .. | + 45.4 | 87 18 49.3 | - 21.3 |
| 46 | 73 34 | 9.2 | 6.3 | 27.0 | 0.0 | 31 | 650 | .. | .. | .. | 570 | 73.5 | 286 23 42.2 | .. | - 3 28.2 | 337 26 35.2 | - 0.4 |
| 47 | 332 16 | 9.5 | 4.4 | 28.5 | 2.0 | 37 | .. | 895 | .. | 815 | .. | 73.5 | 27 40 46.1 | .. | + 32.5 | 78 47 39.8 | - 24.5 |
| 48 | 332 16 | 9.5 | 4.4 | 28.5 | 2.0 | 37 | 815 | .. | .. | .. | 675 | 73.5 | 27 40 44.5 | .. | + 32.5 | 78 47 38.2 | - 24.5 |
| 49 | 218 56 | 12.8 | 9.5 | 5.5 | 6.4 | 28 | 680 | 660 | .. | .. | .. | 73.5 | 140 58 29.5 | .. | - 50.3 | 90 8 42.0 | 0.0 |
| 50 | 320 54 | 10.2 | 5.8 | 0.3 | 4.4 | 32 | .. | .. | .. | .. | 685 | 73.5 | 39 1 29.5 | .. | + 50.3 | 90 8 41.0 | - 1.0 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|------|
| 2 | 30.18 | 28.5 | | " | " | " | " |
| 8 | 30.19 | 27.4 | | " | " | " | " |
| 17 | 30.19 | 26.4 | | " | " | " | " |
| 21 | 30.20 | 26.2 | | " | " | " | " |
| 29 | 29.95 | 24.8 | | " | " | " | " |
| 40 | 29.95 | 23.7 | | " | " | " | " |

For summary of the elements of reduction see page 3.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|---------|---------|--------------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | |
| 1876. | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| Dec. 26 | 1 | B. A. C. 3982 . . . | P. | 41.1 | 43.6 | 45.2 | 51.5 | 53.5 | 55.5 | 1.7 | 3.2 | 5.8 | 39 53.46 | - 0.65 | . | -19.91 | 11 39 32.90 | - 3.68 |
| | 2 | Groom, 4163, S. P. | P. | 58.6 | 49.7 | 44.2 | 22.4 | 15.0 | 8.0 | 45.9 | 40.5 | 31.2 | 49 15.06 | - 5.46 | . | -19.90 | 23 48 49.70 | + 0.01 |
| | 3 | B. A. C. 1052 . . . | P. | 42.9 | 45.5 | 47.0 | 53.2 | 55.4 | 57.5 | 3.6 | 5.0 | 7.6 | 54 55.30 | - 0.64 | . | -19.89 | 11 54 34.77 | - 3.58 |
| | 4 | B. A. C. 4066 ¹ . . . | P. | 6.0 | 8.8 | 10.4 | . | . | . | 28.0 | 29.7 | 32.5 | 58 19.23 | - 0.27 | . | -19.89 | 11 57 59.07 | - 3.72 |
| | 5 | B. A. C. 4066 ² . . . | P. | . | . | 15.0 | 17.3 | 19.6 | 21.7 | 23.9 | . | . | 58 19.51 | - 0.27 | . | -19.89 | 11 57 59.35 | - 3.72 |
| | 6 | 4 Draconis (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 7 | 4 Draconis . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 8 | 7 Virginis . . . | P. | 45.6 | 48.2 | 49.8 | 55.8 | 57.9 | 59.9 | 5.9 | 7.5 | 10.0 | 13 57.84 | - 0.81 | -19.91 | -19.89 | 12 13 37.14 | 0.00 |
| | 9 | 3 Corvi . . . | P. | 3.7 | 6.4 | 8.1 | 14.8 | 17.0 | 19.3 | 25.8 | 27.4 | 30.2 | 28 16.97 | - 1.37 | -19.92 | -19.88 | 12 27 55.72 | 0.00 |
| | 10 | 32 ¹ Camelopardalis . . . | P. | . | . | . | 58.0 | 18.6 | . | 58.2 | . | . | 48 18.55 | +12.18 | . | -19.87 | 12 48 10.86 | - 4.14 |
| | 11 | 32 ² Camelopardalis . . . | P. | . | . | . | 7.2 | 26.0 | 46.0 | 5.5 | . | . | 48 26.25 | +12.17 | . | -19.87 | 12 48 18.55 | + 0.29 |
| | 12 | 12 ² Canum Venat. . . | P. | 20.6 | 24.0 | 26.0 | 33.9 | 36.5 | 39.0 | 47.0 | 49.0 | 52.2 | 50 36.47 | + 0.27 | -19.95 | -19.87 | 12 50 16.87 | + 0.08 |
| | 13 | Polaris, S. P. . . | P. | . | . | . | . | 49.6 | 24.6 | 52.0 | . | . | 14 49.27 | -58.52 | . | -19.85 | 1 13 30.90 | - 3.60 |
| | 14 | 2 Virginis (R.) . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 15 | a Virginis . . . | P. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 16 | a Serpentis . . . | E. | . | . | . | 32.3 | 34.4 | 36.5 | 40.6 | 42.2 | 44.7 | 38 32.38 | - 0.76 | -19.75 | -19.78 | 15 38 11.84 | - 0.01 |
| | 17 | δ Ophiuchi . . . | E. | 1.7 | 4.2 | 5.8 | 11.6 | 14.0 | 16.0 | 22.1 | 23.7 | 26.1 | 8 13.98 | - 1.00 | -19.81 | -19.76 | 16 7 53.22 | + 0.07 |
| | 18 | Venus II, N. . . | E. | 17.3 | 20.0 | 21.6 | 28.3 | 30.5 | 32.6 | 39.0 | 40.6 | 43.5 | 12 30.38 | - 1.38 | . | -19.76 | 16 12 9.24 | - 0.45 |
| | 19 | Venus, S. . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 20 | a ¹ Herculis . . . | E. | 9.0 | 11.5 | 13.2 | 19.6 | 21.6 | 23.7 | 30.0 | 31.7 | 34.4 | 9 21.63 | - 0.61 | -19.71 | -19.73 | 17 9 1.29 | 0.00 |
| 27 | 21 | Sun I, S. . . | E. | 44.5 | 47.0 | 49.0 | 55.7 | 57.9 | 0.0 | 6.6 | 8.4 | 11.3 | 26 57.82 | - 1.50 | . | -19.69 | 18 26 36.63 | . |
| | 22 | Sun II, N. . . | E. | 7.2 | 9.8 | 11.4 | 18.0 | 20.2 | 22.5 | 29.2 | 31.0 | 33.6 | 29 20.32 | - 1.50 | . | -19.69 | 18 28 59.13 | . |
| | 23 | a Cygni . . . | E. | 14.7 | 18.3 | 20.3 | 29.0 | 32.0 | 31.8 | 43.5 | 45.6 | 49.2 | 37 31.93 | + 0.26 | -19.62 | -19.62 | 20 37 12.57 | + 0.02 |
| | 24 | ζ Cygni . . . | E. | . | . | 58.5 | 0.8 | 3.2 | 5.5 | 10.0 | 12.0 | 14.9 | 8 0.79 | - 0.28 | -19.61 | -19.61 | 21 7 40.90 | + 0.01 |
| | 25 | ε Pegasi . . . | E. | 16.0 | 18.5 | 20.0 | 26.3 | 28.4 | 30.5 | 36.6 | 38.2 | 40.7 | 38 28.36 | - 0.79 | -19.57 | -19.59 | 21 38 7.98 | - 0.01 |
| | 26 | o Piscium . . . | E. | 2.6 | 5.0 | 6.6 | 12.9 | 14.9 | 17.0 | 23.0 | 24.7 | 27.3 | 39 14.89 | - 0.73 | -19.51 | -19.52 | 1 38 54.64 | - 0.04 |
| | 27 | β Arietis . . . | E. | 58.4 | 1.0 | 2.8 | 9.4 | 11.5 | 13.6 | 20.2 | 21.9 | 24.6 | 48 11.49 | - 0.45 | -19.55 | -19.52 | 1 47 51.52 | + 0.05 |
| | 28 | B. A. C. 609 . . . | E. | 59.4 | 2.0 | 3.6 | 9.8 | 11.9 | 13.9 | 20.2 | 21.9 | 24.3 | 53 11.89 | - 0.66 | . | -19.52 | 1 52 51.71 | - 3.91 |
| | 29 | a Arietis . . . | E. | 21.8 | 24.5 | 26.4 | 32.9 | 35.2 | 37.5 | 44.0 | 45.7 | 48.4 | 0 35.16 | - 0.38 | -19.54 | -19.51 | 2 0 15.27 | + 0.04 |
| | 30 | Neptune . . . | E. | 8.3 | 10.9 | 12.6 | 18.6 | 20.8 | 22.8 | 29.0 | 30.6 | 33.3 | 4 20.77 | - 0.68 | . | -19.51 | 2 4 0.58 | . |
| | 31 | Lalande 4903 ¹ . . . | E. | 23.0 | 25.7 | 27.4 | . | . | . | 44.0 | 45.7 | 48.4 | 32 35.70 | - 0.59 | . | -19.50 | 2 32 15.61 | - 4.20 |
| | 32 | Lalande 4903 ² . . . | E. | . | . | 32.0 | 34.0 | 36.2 | 38.2 | 40.4 | . | . | 32 36.17 | - 0.59 | . | -19.50 | 2 32 16.08 | - 4.20 |
| | 33 | γ ² Ceti (R.) . . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 34 | γ ² Ceti . . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 35 | a Ceti (R.) . . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 36 | a Ceti . . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 37 | 48 Cephei (R.) . . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 38 | 48 Cephei . . . | E. | . | . | 55.1 | 4.5 | 13.4 | 22.4 | 40.8 | 47.9 | 59.5 | 5 4.02 | + 4.79 | . | -19.49 | 3 4 49.32 | - 0.30 |
| | 39 | a Ceti (R.) . . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 40 | a Persei . . . | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 41 | Moon I, S. . . | E. | 4.8 | 7.5 | 9.4 | 16.4 | 18.6 | 20.8 | 27.8 | 29.6 | 32.6 | 35 18.61 | - 0.35 | . | -19.48 | 3 34 58.78 | +74.55 |
| | 42 | c Pleiadum . . . | E. | 1.0 | 3.9 | 5.6 | 12.3 | 14.6 | 16.7 | 23.4 | 25.0 | 27.9 | 38 14.49 | - 0.35 | . | -19.48 | 3 37 54.66 | - 4.84 |
| | 43 | c Pleiadum . . . | E. | 40.9 | 42.9 | 49.6 | 51.8 | 51.0 | 56.2 | 0.8 | 2.4 | 5.0 | 38 51.75 | - 0.35 | . | -19.48 | 3 38 31.92 | - 4.85 |
| | 44 | ω Draconis, S. P. . . | E. | 34.8 | 28.2 | 23.5 | 6.7 | 1.2 | 55.4 | 37.9 | 34.0 | 27.3 | 38 1.00 | - 4.27 | . | -19.45 | 17 37 37.28 | + 0.45 |
| | 45 | ψ ¹ Draconis, S. P. . . | E. | . | . | 41.9 | 35.3 | 28.6 | 21.8 | 15.2 | . | . | 44 28.52 | - 4.97 | . | -19.44 | 17 44 4.11 | + 0.75 |
| | 46 | ψ ² Draconis, S. P. . . | E. | . | . | 44.0 | 37.0 | 30.0 | 23.6 | 17.0 | . | . | 44 30.28 | - 4.98 | . | -19.44 | 17 44 5.86 | + 5.45 |
| | 47 | a Orionis . . . | E. | 42.7 | 44.3 | 48.4 | 50.5 | 52.6 | 54.6 | 56.7 | 0.7 | 2.3 | 48 52.53 | - 0.76 | -19.36 | -19.44 | 5 48 32.33 | - 0.11 |
| | 48 | δ Ursæ Minoris, S. P. | E. | . | . | 52.5 | 17.0 | 43.5 | 8.5 | . | . | . | 12 17.62 | -22.73 | . | -19.43 | 18 11 35.46 | + 0.10 |
| | 49 | μ Geminorum . . . | E. | 39.5 | 42.2 | 43.9 | 50.6 | 52.7 | 55.0 | 1.5 | 3.0 | 6.0 | 15 52.71 | - 0.39 | -19.36 | -19.43 | 6 15 32.89 | - 0.11 |

2, 41, 44, 45, 46. Bisections at sets B and D.

3, 4, 5, 43. Thread B used.

6, 10, 11. Bisections at set C.

7. Bisections at threads V and VI.

14. Bisections at threads I-III.

15. Bisections at threads VII and where VIII would be.

37. Bisections at threads II and III.

38. Bisections at threads V and VI.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellaneous Corrections. | | |
|---------|------------------|---------------------|------|------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|----------------------------|-------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. | |
| | " " | " " | " " | " " | " " | | | | | | | " " | " " | " " | " " | " " | " " | |
| 1 | 328 16 | 10 11.4 | 6.8 | 29.9 | 6.0 | 34 | .. | 570 | .. | 425 | .. | 73.5 | 31 39 57.1 | .. | + | 38.3 | 82 46 56.8 | -24.3 |
| 2 | 67 16 | 8.2 | 3.0 | 26.5 | 29.2 | 35 | 040 | .. | 980 | .. | 000 | 73.5 | 292 40 0.5 | 18.8 | - 2 | 27.9 | 343 43 53.8 | + 1.0 |
| 3 | 328 22 | 8.9 | 3.6 | 27.4 | 2.1 | 29 | .. | 160 | .. | 020 | .. | 73.5 | 31 35 3.6 | .. | + | 38.2 | 82 42 3.0 | -25.0 |
| 4 | 343 12 | 9.0 | 5.0 | 27.6 | 3.0 | 28 | 400 | .. | .. | .. | 180 | 73.5 | 16 44 52.3 | .. | + | 18.7 | 67 51 32.2 | -30.2 |
| 5 | 343 12 | 9.0 | 5.0 | 27.6 | 3.0 | 28 | .. | 240 | .. | 090 | .. | 73.5 | 16 44 50.2 | .. | + | 18.7 | 67 51 31.1 | -30.2 |
| 6 | 140 32 | 2.5 | 1.0 | 24.5 | 26.0 | 31 | .. | .. | 860 | .. | 840 | 73.5 | 219 23 9.0 | .. | + | 51.0 | 11 42 21.2 | - 3.3 |
| 7 | 39 20 | 7.5 | 0.4 | 25.9 | 29.0 | 35 | .. | .. | .. | 370 | 340 | 73.5 | 320 36 52.3 | .. | - | 51.0 | 11 42 22.5 | - 2.0 |
| 8 | 321 4 | 11.9 | 7.0 | 1.4 | 5.4 | 34 | .. | 070 | .. | 980 | .. | 73.5 | 38 51 50.2 | .. | + | 49.8 | 89 59 1.2 | - 0.3 |
| 9 | 298 22 | 6.6 | 1.6 | 29.0 | 2.4 | 37 | .. | 425 | .. | 270 | .. | 73.5 | 61 34 36.9 | .. | + | 54.8 | 112 42 52.9 | + 0.3 |
| 10 | 45 6 | 10.4 | 4.4 | 29.4 | 0.6 | 34 | .. | 325 | .. | 325 | .. | 73.5 | 314 49 52.1 | .. | - 1 | 2.7 | 5 55 10.6 | -43.3 |
| 11 | 45 6 | 10.4 | 4.4 | 29.4 | 0.6 | 35 | .. | 565 | .. | 540 | .. | 73.5 | 314 50 10.9 | .. | - 1 | 2.7 | 5 55 29.4 | - 2.6 |
| 12 | 0 0 | 6.6 | 2.8 | 26.7 | 29.5 | 30 | .. | .. | .. | 930 | 790 | 73.5 | 359 54 58.0 | 17.0 | - | 0.1 | 51 1 19.1 | + 1.6 |
| 13 | 52 22 | 8.5 | 2.5 | 28.2 | 0.2 | 37 | .. | .. | 175 | 170 | 145 | 73.5 | 307 34 34.0 | .. | - 1 | 21.0 | 358 39 34.2 | - 1.8 |
| 14 | 229 18 | 9.2 | 8.0 | 3.0 | 2.8 | 28 | 480 | 500 | 470 | .. | .. | 73.5 | 130 36 24.0 | .. | - 1 | 12.8 | 100 31 10.0 | + 1.9 |
| 15 | 310 32 | 6.4 | 3.6 | 26.8 | 2.9 | 33 | .. | .. | .. | 095 | 040 | 73.5 | 49 23 32.6 | 16.6 | + | 12.8 | 100 31 6.6 | - 1.5 |
| 16 | 327 52 | 7.8 | 2.7 | 27.0 | 1.0 | 36 | .. | .. | .. | 090 | 080 | 72.0 | 32 4 16.9 | .. | + | 38.9 | 83 11 17.0 | - 2.1 |
| 17 | 317 40 | 2.3 | 26.8 | 23.7 | 28.1 | 32 | .. | .. | .. | 870 | 810 | 72.0 | 42 15 22.7 | .. | + | 56.2 | 93 22 49.1 | - 0.9 |
| 18 | 301 28 | 6.6 | 1.8 | 29.9 | 5.2 | 34 | 300 | .. | .. | .. | 430 | 72.0 | 58 27 50.6 | 22.0 | + | 40.6 | 109 35 52.4 | .. |
| 19 | 301 28 | 6 6 | 1.8 | 29.9 | 5.2 | 35 | .. | 140 | .. | 190 | .. | 72.0 | 58 28 3.0 | .. | + | 40.6 | 109 36 4.8 | .. |
| 20 | 335 34 | 10.5 | 5.6 | 1.2 | 5.4 | 32 | .. | 485 | .. | 395 | .. | 72.0 | 24 21 23.8 | .. | + | 27.8 | 75 28 12.8 | - 2.1 |
| 21 | 297 30 | 5.7 | 1.9 | 28.5 | 5.7 | 36 | 485 | 400 | .. | .. | .. | 72.0 | 62 26 21.0 | .. | + | 56.1 | 113 34 38.3 | .. |
| 22 | 298 2 | 7.6 | 2.8 | 29.4 | 6.6 | 33 | .. | .. | .. | 915 | 800 | 72.0 | 61 53 44.6 | 30.4 | + | 53.4 | 113 1 59.2 | .. |
| 23 | 5 52 | 6.2 | 3.3 | 28.6 | 0.6 | 31 | .. | 865 | .. | 805 | .. | 72.0 | 354 3 11.3 | 33.0 | - | 6 3 | 45 9 20.2 | - 2.2 |
| 24 | 350 46 | 13.5 | 8.8 | 2.0 | 7.5 | 34 | .. | .. | .. | 630 | 565 | 72.0 | 9 10 0.2 | .. | + | 9.8 | 60 16 31.2 | - 3.2 |
| 25 | 330 22 | 10.2 | 6.0 | 2.5 | 6.7 | 36 | .. | 205 | .. | 140 | .. | 72.0 | 29 34 21.6 | 33.0 | + | 34.3 | 80 41 17.1 | - 1.0 |
| 26 | 329 36 | 11.3 | 6.7 | 1.5 | 6.7 | 37 | .. | 170 | .. | 080 | .. | 74.6 | 30 29 38.3 | .. | + | 36.1 | 81 27 35.6 | - 0.5 |
| 27 | 341 14 | 10.6 | 5.7 | 29.0 | 4.3 | 29 | .. | 720 | .. | 090 | .. | 74.6 | 18 40 43.8 | 23.0 | + | 20.9 | 69 47 25.9 | - 0.5 |
| 28 | 332 44 | 8.4 | 4.2 | 29.2 | 3.5 | 31 | .. | 320 | .. | 185 | .. | 74.6 | 27 11 6.4 | .. | + | 31.7 | 78 17 59.3 | +26.0 |
| 29 | 343 56 | 12.9 | 8.8 | 2.3 | 5.6 | 35 | .. | 895 | .. | 825 | .. | 74.6 | 16 0 20.6 | .. | + | 17.7 | 67 6 59.5 | 0.0 |
| 30 | 331 44 | 12.5 | 8.0 | 29 5 | 3.6 | 34 | .. | 405 | .. | 230 | .. | 74.6 | 28 11 55.4 | .. | + | 33.2 | 79 18 49.8 | .. |
| 31 | 335 22 | 9.4 | 7.2 | 28.3 | 0.7 | 32 | 150 | .. | .. | .. | 870 | 74.6 | 24 33 18.2 | .. | + | 28.3 | 75 40 7.7 | +25.6 |
| 32 | 335 22 | 9.4 | 7.2 | 28.3 | 0.7 | 31 | .. | 970 | .. | 850 | .. | 74.6 | 24 33 16.5 | .. | + | 28.3 | 75 40 6.0 | +25.6 |
| 33 | 216 6 | 13.2 | 8.7 | 4.0 | 5.5 | 35 | 395 | 360 | .. | .. | .. | 74.6 | 143 50 12.6 | .. | - | 45.3 | 87 16 53.9 | - 6.1 |
| 34 | 323 46 | 13.1 | 8.3 | 1.8 | 7.8 | 33 | .. | .. | .. | 570 | 560 | 74.6 | 36 9 46.6 | .. | + | 45.3 | 87 16 53.1 | - 0.9 |
| 35 | 215 12 | 11.6 | 7.9 | 3.4 | 1.9 | 33 | 010 | 870 | .. | .. | .. | 74.6 | 144 43 33.6 | .. | - | 43.9 | 86 23 31.5 | + 0.2 |
| 36 | 324 40 | 7.0 | 2.3 | 27.3 | 2.5 | 36 | .. | .. | .. | 410 | 375 | 74.6 | 35 16 24.4 | .. | + | 43.9 | 86 23 29.5 | - 1.8 |
| 37 | 141 34 | 5.7 | 4.2 | 27.6 | 0.7 | 37 | 775 | 675 | .. | .. | .. | 74.6 | 218 22 42.2 | .. | + | 49.2 | 12 42 49.8 | - 2.1 |
| 38 | 38 18 | 14.3 | 7.7 | 3.0 | 3.8 | 31 | .. | .. | .. | 725 | 655 | 74.6 | 321 37 17.8 | .. | - | 49.2 | 12 42 49.8 | - 2.1 |
| 39 | 169 24 | 10.5 | 8.8 | 4.5 | 3.2 | 33 | 820 | 780 | .. | .. | .. | 74.6 | 190 31 46.8 | .. | + | 11.6 | 40 34 22.8 | - 1.8 |
| 40 | 10 28 | 12.9 | 8.3 | 2.7 | 5.8 | 35 | .. | .. | .. | 410 | 360 | 74.6 | 349 28 14.7 | .. | - | 11.6 | 40 34 24.3 | - 0.3 |
| 41 | 344 52 | 11.5 | 7.1 | 0.0 | 5.7 | 31 | 200 | .. | 110 | .. | 920 | 74.6 | 15 3 5.9 | .. | + | 16.7 | 66 9 43.8 | .. |
| 42 | 345 6 | 13.0 | 8.7 | 2.5 | 7.6 | 28 | .. | 190 | .. | 105 | .. | 74.6 | 14 48 23.1 | .. | + | 16.4 | 65 55 0.7 | +24.1 |
| 43 | 345 6 | 13.0 | 8.7 | 2.5 | 7.6 | 41 | .. | .. | .. | 060 | 070 | 74.6 | 11 54 14.2 | .. | + | 16.5 | 66 0 51.9 | +24.0 |
| 44 | 72 10 | 4.7 | 29.0 | 22.7 | 26.1 | 33 | 395 | .. | .. | .. | 215 | 74.6 | 287 45 31.8 | .. | - 3 | 13.4 | 338 48 31.6 | + 1.6 |
| 45 | 68 48 | 12.1 | 7.5 | 0.2 | 0.3 | 37 | 110 | .. | .. | .. | 125 | 74.6 | 291 8 37.1 | .. | - 2 | 40.8 | 342 12 17.5 | - 1.9 |
| 46 | 68 48 | 12.1 | 7.5 | 0.2 | 0.3 | 39 | 110 | .. | .. | .. | 085 | 74.6 | 291 9 7.4 | .. | - 2 | 40.7 | 342 12 47.9 | -13.5 |
| 47 | 328 26 | 10.1 | 5.3 | 29.0 | 2.8 | 34 | .. | .. | .. | 330 | 310 | 74.6 | 31 29 54.7 | .. | + | 38.4 | 82 35 54.3 | - 0.9 |
| 48 | 54 24 | 10.1 | 4.7 | 1.0 | 4.3 | 32 | .. | 530 | .. | 505 | .. | 74.6 | 305 31 26.8 | .. | - 1 | 27.7 | 356 36 20.3 | - 0.1 |
| 49 | 343 38 | 13.0 | 9.0 | 1.6 | 4.0 | 37 | .. | 360 | .. | 260 | .. | 74.6 | 16 18 42.3 | .. | + | 18.4 | 67 25 21.9 | - 0.6 |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| 2 | 29.95 | 22.4 | 18 | 5.6 | + 6.2 | 0.0 | + 0.6 |
| 12 | 29.96 | 20.8 | 19 | 5.6 | - 6.2 | . | - 11.8 |
| 15 | 29.97 | 20.6 | 21 | 8.0 | - 16 19.5 | . | - 16 27.5 |
| 18 | 30.05 | 23.5 | 22 | 7.9 | + 16 19.5 | . | + 16 11.6 |
| 22 | 30.03 | 29.0 | 30 | 0.1 | . | . | 0.1 |
| 23 | 30.33 | 32.5 | 41 | -15 15.9 | - 16 15.7 | . | - 31 31.6 |
| 25 | 30.03 | 33.5 | | | | | |
| 27 | 30.07 | 27.0 | | | | | |

For summary of the elements of reduction see page 3.

OBSERVATIONS WITH THE TRANSIT CIRCLE.

| DATE. | Number. | OBJECT. | Observer. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | CORRECTIONS. | | | Apparent Right Ascension. | Miscellaneous Corrections. |
|------------------|---------|--------------------------------|-----------|--------------------------------|------|------|------|------|------|------|-------|------|------------|--------------|----------------|----------------|---------------------------|----------------------------|
| | | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | Mean wire. | Inst. | Clock appar't. | Clock adopted. | | |
| | | | | | | | | | | | | | m. s. | s. | s. | s. | h. m. s. | s. |
| 1876. Dec. 27 | 1 | B. A. C. 2109 . . . | E. | 45.0 | 48.3 | 50.0 | 57.0 | 59.7 | 2.0 | 9.5 | 11.2 | 14.3 | 23 59.67 | - 1.73 | . . | -19.43 | 6 23 38.51 | - 4.00 |
| | 2 | Geminorum . . . | E. | 45.3 | 48.0 | 49.8 | 56.0 | 58.1 | 0.3 | 6.7 | 8.3 | 10.9 | 30 58.16 | - 0.54 | -19.50 | -19.43 | 6 30 38.19 | + 0.04 |
| | 3 | Cephei . . . | E. | 28.5 | 22.0 | 52.5 | . . | 58.5 | 41.0 | 23.0 | 6.5 | . . | 42 41.57 | +25.84 | . . | -19.42 | 6 42 47.99 | + 0.36 |
| 31 | 4 | B. A. C. 1294 . . . | E. | 17.9 | 21.0 | 23.0 | 30.6 | 33.0 | 35.5 | 43.0 | 15.0 | 48.1 | 6 33.01 | - 1.60 | . . | -18.01 | 4 6 13.34 | - 3.96 |
| | 5 | B. A. C. 1312 . . . | E. | . . | 46.6 | 49.3 | 52.0 | 54.5 | 57.2 | 2.3 | 4.2 | 7.5 | 9 51.97 | - 1.72 | . . | -18.01 | 4 9 32.24 | - 3.94 |
| | 6 | Tauri . . . | E. | 54.8 | 57.5 | 59.1 | 5.4 | 7.6 | 9.8 | 16.0 | 17.7 | 20.4 | 13 7.59 | - 0.47 | -18.00 | -18.00 | 4 12 49.00 | - 0.11 |
| | 7 | Isis . . . | E. | 50.0 | 52.6 | 54.3 | 0.8 | 3.0 | 5.2 | 11.7 | 13.3 | 16.0 | 16 2.99 | - 0.36 | . . | -18.00 | 4 15 44.63 | . . |
| | 8 | Tauri . . . | E. | 33.0 | 35.7 | 37.3 | 43.9 | 46.0 | 48.1 | 54.7 | 56.2 | 59.0 | 21 45.99 | - 0.38 | -18.03 | -18.00 | 4 21 27.61 | + 0.02 |
| | 9 | Vibilia . . . | E. | 21.3 | 24.3 | 25.9 | 32.5 | 34.7 | 36.9 | 43.6 | 45.3 | 47.7 | 23 34.69 | - 0.30 | . . | -18.00 | 4 23 16.39 | . . |
| | 10 | Tauri . . . | E. | 58.8 | 1.7 | 3.2 | 9.6 | 11.7 | 13.9 | 20.2 | 21.8 | 24.6 | 29 11.72 | - 0.45 | -17.96 | -17.99 | 4 28 53.28 | - 0.05 |
| | 11 | Camelopardalis (R.) | E. | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . |
| | 12 | Camelopardalis . . | E. | . . | . . | 59.0 | 4.0 | 9.2 | 14.1 | 19.5 | . . | . . | 42 9.19 | + 2.00 | . . | -17.99 | 4 41 53.20 | + 0.21 |
| | 13 | Orionis (R.) . . . | E. | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . |
| | 14 | Orionis . . . | E. | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . |
| | 15 | Aurigæ (R.) . . . | E. | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . |
| | 16 | Aurigæ . . . | E. | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . |
| | 17 | Tauri (R.) . . . | E. | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . |
| | 18 | Tauri . . . | E. | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . |
| | 19 | Orionis . . . | E. | 27.2 | 29.8 | 31.3 | 37.5 | 39.5 | 41.5 | 43.6 | . . | . . | 29 39.50 | - 0.91 | . . | -17.96 | 5 29 20.63 | - 4.57 |
| | 20 | B. A. C. 1763 . . . | E. | . . | . . | 51.8 | 53.9 | 55.8 | 57.9 | 0.0 | . . | . . | 29 55.89 | - 0.91 | . . | -17.96 | 5 29 37.02 | - 4.57 |
| | 21 | Hilda . . . | E. | 2.5 | 5.2 | 7.2 | 13.4 | 15.3 | 17.7 | 24.0 | 25.8 | 28.7 | 38 15.53 | - 0.43 | . . | -17.95 | 5 37 57.15 | . . |
| | 22 | Ursæ Minoris, S. P | E. | . . | . . | 50.5 | 15.5 | 41.5 | 7.5 | 57.5 | 31.5 | . . | 12 15.73 | -21.93 | . . | -17.93 | 18 11 35.87 | + 0.78 |
| | 23 | Concordia . . . | E. | 55.0 | 57.7 | 59.4 | 5.6 | 7.8 | 10.0 | 16.2 | 18.0 | 20.7 | 26 7.82 | - 0.45 | . . | -17.92 | 6 25 49.45 | . . |
| | 24 | B. A. C. 2207 ¹ . . | E. | . . | 15.4 | 17.1 | . . | . . | . . | 37.9 | 39.8 | 43.4 | 38 27.60 | - 1.76 | . . | -17.91 | 6 38 7.93 | - 3.90 |
| | 25 | B. A. C. 2207 ² . . | E. | . . | . . | 23.1 | 25.5 | 28.2 | 30.9 | 33.5 | . . | . . | 38 28.25 | - 1.76 | . . | -17.91 | 6 38 8.58 | - 3.91 |
| | 26 | Cephei . . . | E. | . . | . . | . . | 0.0 | 43.0 | 25.5 | 7.0 | 30.0 | . . | 42 42.32 | +25.08 | . . | -17.91 | 6 42 49.49 | + 1.12 |
| | 27 | B. A. C. 2446 . . . | E. | 1.0 | 3.9 | 5.7 | 13.0 | 15.4 | 18.0 | 25.0 | 26.9 | 29.7 | 16 15.40 | - 1.55 | . . | -17.89 | 7 15 55.96 | - 4.00 |
| | 28 | B. A. C. 2449 . . . | E. | . . | . . | . . | . . | . . | . . | 49.5 | 51.2 | 54.3 | 16 39.86 | - 1.55 | . . | -17.89 | 7 16 20.42 | - 4.00 |
| | 29 | B. A. C. 2471 . . . | E. | 14.7 | 17.7 | 19.6 | 26.9 | 29.4 | 32.0 | 39.4 | 41.3 | 44.3 | 22 29.48 | - 1.61 | . . | -17.88 | 7 22 9.99 | - 3.95 |
| | 30 | Geminorum . . . | E. | 50.0 | 53.0 | 54.9 | . . | . . | . . | 14.3 | 16.0 | 19.0 | 27 4.53 | - 0.03 | . . | -17.88 | 7 26 46.62 | - 5.96 |
| | 31 | Geminorum . . . | E. | . . | . . | 0.2 | 2.6 | 5.0 | 7.4 | 9.8 | . . | . . | 27 5.01 | - 0.03 | -17.92 | -17.88 | 7 26 47.10 | + 0.28 |
| | 32 | Canis Minoris . . | E. | 59.6 | 2.2 | 3.8 | 9.9 | 12.0 | 14.0 | 20.0 | 21.7 | 24.4 | 33 11.96 | - 0.68 | -17.90 | -17.88 | 7 32 53.40 | - 0.14 |
| | 33 | Geminorum . . . | E. | 53.3 | 56.1 | 58.0 | 4.9 | 7.3 | 9.6 | 16.5 | 18.0 | 21.2 | 33 7.21 | - 0.14 | -17.82 | -17.88 | 7 37 49.19 | - 0.09 |
| | 34 | Moon II, S. . . | E. | 57.2 | 59.9 | 1.7 | 8.0 | 10.7 | 13.0 | 20.0 | 21.7 | 24.6 | 15 10.82 | - 0.29 | . . | -17.86 | 8 14 52.67 | -76.27 |

7, 9, 21, 23, 26. Thread A used.

15, 27. Thread B used.

19, 20. Telescope micrometer reading decreased five revolutions in reduction.

20. Bisections at threads V and VII.

| Number. | Circle Division. | MICROSCOPE MICROMS. | | | | TELESCOPE MICROMETER. | | | | | Zenith-Point Correction. | Apparent Zenith Distance, South. | External Thermom'r. | Refraction. | Apparent North-Polar Distance. | Miscellan'us Corrections. | |
|---------|------------------|---------------------|-------|-------|-------|-----------------------|-----|-----|-----|-----|--------------------------|----------------------------------|---------------------|-------------|--------------------------------|---------------------------|-------|
| | | V. | VI. | VII. | VIII. | Rev. | 1. | 2. | 3. | 4. | | | | | | | 5. |
| | | ° ' " | ° ' " | ° ' " | ° ' " | | | | | | | | | | | | |
| 1 | 288 36 | 13.0 | 9.3 | 4.0 | 8.0 | 37 | .. | 165 | .. | 095 | .. | 74.6 | 71 20 40.9 | .. | + 3 4.1 | 122 30 6.2 | + 5.1 |
| 2 | 337 34 | 11.5 | 5.5 | 1.2 | 4.8 | 38 | .. | 400 | .. | 240 | .. | 74.6 | 22 22 56.6 | .. | + 25.8 | 73 29 43.6 | + 0.1 |
| 3 | 48 16 | 16.5 | 11.5 | 5.8 | 6.7 | 37 | 280 | .. | 320 | .. | 310 | 74.6 | 311 40 45.4 | 16.0 | - 1 10.4 | 2 45 56.2 | - 0.6 |
| 4 | 285 30 | 4.7 | 29.3 | 27.5 | 0.1 | 33 | .. | 200 | .. | 120 | .. | 75.1 | 74 25 32.3 | .. | + 3 41.8 | 125 35 35.3 | + 9.2 |
| 5 | 283 46 | 12.3 | 5.2 | 3.4 | 7.6 | 34 | .. | .. | .. | 470 | 450 | 75.1 | 76 9 59.7 | .. | + 10.1 | 127 20 31.0 | + 8.8 |
| 6 | 336 22 | 7.3 | 3.5 | 27.2 | 0.7 | 32 | .. | 015 | .. | 950 | .. | 75.1 | 23 33 16.4 | .. | + 27.3 | 74 40 4.9 | + 0.2 |
| 7 | 341 0 | 7.3 | 4.0 | 26.8 | 1.0 | 40 | .. | 960 | .. | 900 | .. | 75.1 | 18 55 0.1 | .. | + 21.5 | 70 1 42.8 | - 1.7 |
| 8 | 339 56 | 12.4 | 7.7 | 29.7 | 6.1 | 29 | .. | 570 | .. | 465 | .. | 75.1 | 19 58 43.0 | .. | + 22.8 | 71 5 27.0 | + 0.1 |
| 9 | 343 10 | 9.5 | 4.5 | 26.0 | 2.9 | 34 | .. | .. | .. | 830 | 770 | 75.1 | 16 43 28.2 | .. | + 18.9 | 67 50 8.3 | - 1.7 |
| 10 | 337 18 | 10.2 | 6.5 | 0.6 | 4.3 | 32 | .. | 330 | .. | 245 | .. | 75.1 | 22 37 24.3 | 18.0 | + 26.1 | 73 44 11.6 | - 0.1 |
| 11 | 152 42 | 6.8 | 4.7 | 2.0 | 0.3 | 34 | 720 | 655 | .. | .. | .. | 75.1 | 207 13 56.9 | .. | + 32.3 | 23 51 52.0 | - 0.2 |
| 12 | 27 10 | 3.0 | 29.5 | 24.3 | 26.8 | 35 | .. | .. | .. | 225 | 160 | 75.1 | 332 46 3.8 | .. | - 32.3 | 23 51 52.7 | + 0.5 |
| 13 | 203 36 | 12.0 | 9.8 | 3.0 | 3.0 | 37 | 930 | 870 | .. | .. | .. | 75.1 | 156 20 50.7 | .. | - 27.5 | 74 45 58.0 | - 0.1 |
| 14 | 336 16 | 13.8 | 8.6 | 2.0 | 6.2 | 31 | .. | .. | .. | 075 | 020 | 75.1 | 23 39 8.5 | .. | + 27.5 | 74 45 57.2 | - 0.9 |
| 15 | 172 58 | 14.2 | 10.8 | 7.3 | 10.3 | 27 | 150 | 130 | .. | .. | .. | 75.1 | 186 58 41.6 | .. | + 7.7 | 44 7 31.9 | - 0.9 |
| 16 | 6 54 | 11.1 | 6.0 | 29.5 | 4.1 | 31 | .. | .. | .. | 830 | 810 | 75.1 | 353 1 18.3 | .. | - 7.7 | 44 7 31.8 | - 1.0 |
| 17 | 190 20 | 9.0 | 6.8 | 0.3 | 1.4 | 38 | 090 | 040 | .. | .. | .. | 75.1 | 169 36 50.5 | .. | - 11.5 | 61 29 42.2 | - 1.6 |
| 18 | 349 32 | 10.2 | 4.3 | 29.5 | 1.7 | 31 | .. | .. | .. | 460 | 380 | 75.1 | 10 23 10.6 | .. | + 11.5 | 61 29 43.3 | - 0.5 |
| 19 | 316 6 | 10.2 | 4.3 | 1.7 | 8.3 | 30 | 960 | .. | .. | .. | 780 | 75.1 | 43 47 46.6 | .. | + 1 0.3 | 94 55 8.1 | + 9.1 |
| 20 | 316 6 | 10.2 | 4.3 | 1.7 | 8.3 | 34 | .. | .. | .. | 940 | 820 | 75.1 | 43 48 48.7 | .. | + 1 0.4 | 94 56 10.3 | + 9.1 |
| 21 | 338 0 | 8.6 | 3.6 | 28.4 | 1.3 | 35 | .. | 570 | .. | 470 | .. | 75.1 | 21 53 37.9 | .. | + 25.3 | 73 0 24.4 | .. |
| 22 | 54 24 | 7.8 | 1.8 | 25.5 | 27.6 | 32 | 610 | .. | 630 | .. | 650 | 75.1 | 305 31 24.6 | 15.5 | - 1 28.1 | 356 36 17.7 | - 1.3 |
| 23 | 337 14 | 7.7 | 3.3 | 25.8 | 29.0 | 33 | .. | 590 | .. | 500 | .. | 75.1 | 22 39 6.1 | .. | + 26.3 | 73 45 53.6 | - 2.0 |
| 24 | 282 50 | 8.8 | 3.8 | 29.6 | 3.5 | 33 | .. | .. | .. | 710 | 570 | 75.1 | 77 5 43.9 | .. | + 4 30.0 | 128 16 35.1 | + 3.3 |
| 25 | 282 50 | 8.8 | 3.8 | 29.6 | 3.5 | 33 | .. | .. | .. | 600 | 460 | 75.1 | 77 5 42.2 | .. | + 4 30.0 | 128 16 33.4 | + 3.2 |
| 26 | 48 16 | 11.5 | 3.6 | 1.7 | 2.4 | 37 | 630 | .. | 590 | .. | 540 | 75.1 | 311 10 44.9 | .. | - 1 10.8 | 2 45 55.3 | - 0.2 |
| 27 | 289 20 | 7.5 | 1.8 | 27.5 | 2.6 | 37 | .. | 350 | .. | 330 | .. | 75.1 | 70 39 10.7 | .. | + 2 58.2 | 121 48 30.1 | + 1.0 |
| 28 | 289 20 | 7.5 | 1.8 | 27.5 | 2.6 | 28 | .. | .. | .. | 160 | 120 | 75.1 | 70 31 44.8 | .. | + 2 57.0 | 121 41 3.0 | + 0.9 |
| 29 | 287 12 | 7.3 | 0.3 | 28.5 | 3.5 | 34 | .. | 195 | .. | 080 | .. | 75.1 | 72 43 49.3 | .. | + 3 20.7 | 123 53 31.2 | + 0.7 |
| 30 | 353 12 | 7.9 | 3.5 | 26.8 | 1.2 | 35 | 270 | .. | .. | .. | 200 | 75.1 | 6 44 6.8 | .. | + 7.5 | 57 50 35.5 | - 4.0 |
| 31 | 353 12 | 7.9 | 3.5 | 26.8 | 1.2 | 35 | .. | 130 | .. | 000 | .. | 75.1 | 6 44 3.9 | .. | + 7.5 | 57 50 32.6 | - 1.1 |
| 32 | 326 36 | 9.9 | 5.3 | 28.8 | 3.7 | 36 | .. | 785 | .. | 660 | .. | 75.1 | 33 20 31.2 | .. | + 41.5 | 84 27 33.9 | - 2.3 |
| 33 | 349 22 | 8.0 | 2.5 | 28.0 | 3.8 | 35 | .. | 120 | .. | 040 | .. | 75.1 | 10 34 4.8 | .. | + 11.8 | 61 40 37.8 | - 0.9 |
| 34 | 343 50 | 8.8 | 3.1 | 25.9 | 29.0 | 31 | 800 | 990 | .. | .. | .. | 75.1 | 16 2 46.1 | 14.8 | + 18.2 | 67 9 25.5 | .. |

| No. | Barom. | At. Ther. | No. | Parallax. | Semi-diam. | Defective Illumination. | Sum. |
|-----|--------|-----------|-----|-----------|------------|-------------------------|-----------|
| | in. | ° | | " " | " " | " " | " " |
| 3 | 30.08 | 20.0 | 34 | -16 43.7 | - 16 43.7 | . | - 33 27.4 |
| 10 | 30.19 | 20.5 | | | | | |
| 22 | 30.18 | 19.0 | | | | | |
| 34 | 30.17 | 18.0 | | | | | |

For summary of the elements of reduction see page 3.

OBSERVATIONS

WITH THE

MERIDIAN TRANSIT INSTRUMENT.

1876.

OBSERVATIONS

WITH THE

MERIDIAN TRANSIT INSTRUMENT.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | Mean wire. | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. |
|-------------------------|---------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|-------------------|--------------------|--------------|---------------------------------|-------------------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | | Inst. | Clock. | | |
| 1876. Jan. 10 Y. | Polaris | 1 | .. | .. | .. | .. | .. | .. | 48.0 | 41.0 | 46.0 | 0.0 | 18.0 | m. s. 37 42.60 | m. s. -24 16.94 | s. -27.34 | h. m. s. | s. + 22.86 |
| | β Arietis | 2 | 54.6 | 56.5 | 59.2 | 11.8 | 13.3 | 15.0 | 16.9 | 18.5 | 31.3 | 34.0 | 35.6 | 48 15.15 | 0.09 | 27.40 | | - 0.11 |
| | B. A. C. 627 . . . | 3 | 48.4 | 50.3 | 53.0 | 7.0 | 8.5 | 10.6 | 12.5 | 14.4 | 28.0 | 30.7 | 32.8 | 56 10.56 | 0.10 | 27.40 | 1 55 43.06 | 0.66 |
| | *+38° 59' | 4 | 34.6 | 36.6 | 39.4 | .. | .. | .. | .. | .. | 17.7 | 20.5 | 22.6 | 1 58.57 | 0.10 | 27.41 | 2 1 31.06 | - 0.05 |
| | Groombridge 466. | 5 | 12.2 | 14.5 | 18.6 | .. | .. | .. | 32.9 | 36.9 | 39.7 | 42.3 | 45.5 | 6 7.82 | 24.44 | 27.42 | 2 5 15.96 | + 0.05 |
| | O. Arg. N. 2484 . | 6 | .. | .. | .. | 57.0 | 0.0 | 2.2 | 4.8 | 6.4 | .. | .. | .. | 6 2.08 | 0.15 | 27.42 | 2 5 34.51 | + 0.05 |
| | Weisse 155 . . . | 7 | 16.7 | 18.4 | 20.8 | 33.0 | 34.6 | 36.3 | 38.0 | 39.6 | 51.9 | 54.5 | 56.1 | 12 36.35 | 0.09 | 27.43 | 2 12 8.83 | - 0.33 |
| | B. A. C. 840 . . . | 8 | 13.7 | 15.7 | 19.1 | 34.4 | 36.3 | 38.7 | 40.7 | 42.7 | 57.8 | 1.1 | 3.2 | 37 38.49 | 0.09 | 27.45 | 2 37 10.95 | 1.04 |
| | B. A. C. 900 . . . | 9 | 4.4 | 6.5 | 9.7 | 25.9 | 27.9 | 30.0 | 31.9 | 34.0 | 50.5 | 53.8 | 55.7 | 48 30.03 | 0.10 | 27.47 | 2 48 2.46 | 1.17 |
| | α Ceti | 10 | 56.9 | 58.3 | 0.9 | 12.9 | 14.5 | 16.2 | 17.8 | 19.4 | 31.2 | 33.7 | 35.2 | 56 16.09 | 0.08 | 27.48 | | 0.64 |
| T. | B. A. C. 1005 . . | 11 | 33.8 | 35.7 | 38.6 | 52.4 | 54.3 | 56.0 | 57.7 | 59.5 | 13.7 | 16.4 | 18.2 | 8 56.03 | 0.09 | 27.49 | 3 8 28.45 | 1.05 |
| | δ Geminorum . . . | 12 | 51.8 | 53.5 | 56.3 | 9.1 | 10.6 | 12.5 | 14.0 | 16.2 | 29.2 | 31.7 | 33.4 | 13 12.57 | 0.09 | 27.80 | | 1.64 |
| | Moon I | 13 | 18.7 | 20.3 | .. | 37.5 | 39.1 | 41.3 | 43.0 | 44.5 | .. | 1.6 | 3.3 | 27 41.03 | 0.09 | 27.81 | 7 27 13.13 | . . |
| | Moon II | 14 | 55.3 | 57.1 | 0.1 | 13.8 | 15.5 | 17.5 | 19.2 | 21.2 | 31.9 | 37.8 | 39.5 | 30 17.45 | 0.09 | 27.81 | 7 29 49.55 | . . |
| | β Geminorum . . . | 15 | 51.4 | 53.3 | 56.2 | 9.6 | 11.3 | 13.2 | 15.0 | 16.9 | 30.4 | 33.2 | 35.0 | 38 13.23 | 0.09 | 27.83 | | 1.76 |
| | ϕ Geminorum . . . | 16 | 2.6 | 4.4 | 7.0 | 20.7 | 22.3 | 24.2 | 26.2 | 27.9 | 41.0 | 43.9 | 45.5 | 46 24.15 | 0.09 | 27.84 | | 1.74 |
| Y. 11 | Polaris | 17 | .. | .. | .. | .. | .. | .. | 47.0 | 38.0 | 47.0 | 55.0 | 16.0 | 37 40.60 | 24 14.35 | 28.95 | | + 23.81 |
| | β Arietis | 18 | 56.3 | 58.0 | 0.6 | 13.2 | 14.9 | 16.7 | 18.3 | 20.1 | 32.8 | 35.4 | 37.2 | 48 16.68 | 0.07 | 28.99 | 1 47 47.62 | - 0.10 |
| | B. A. C. 627 . . . | 19 | 49.9 | 51.8 | 54.7 | 8.5 | 10.3 | 12.2 | 14.2 | 15.9 | 29.8 | 32.7 | 34.5 | 56 12.23 | - 0.12 | 29.00 | 1 55 43.11 | - 0.64 |
| | Groombridge 466. | 20 | 42.5 | 45.8 | 48.5 | 51.0 | 55.4 | .. | 34.0 | 38.3 | 40.8 | 43.6 | 49.9 | 5 44.98 | + 0.05 | 29.01 | 2 5 16.02 | + 0.07 |
| | O. Arg. N. 2484 . | 21 | .. | .. | .. | 58.5 | 0.8 | 3.2 | 6.3 | 8.7 | .. | .. | .. | 6 3.50 | - 0.09 | 29.01 | 2 5 34.40 | 0.07 |
| | *+55° 18' | 22 | .. | .. | .. | 21.2 | 23.5 | 26.4 | 29.1 | 32.0 | .. | .. | .. | 11 26.44 | 0.09 | 29.02 | 2 10 57.33 | 0.04 |
| | *+55° 18' | 23 | .. | .. | .. | 1.1 | 4.0 | 6.4 | 9.1 | 12.5 | .. | .. | .. | 12 6.62 | 0.09 | 29.02 | 2 11 37.51 | 0.03 |
| | *+55° 16' | 24 | .. | .. | .. | 29.5 | 32.3 | 35.3 | 37.9 | 40.9 | .. | .. | .. | 12 35.18 | 0.09 | 29.02 | 2 12 6.07 | + 0.02 |
| | δ Andromedæ . . . | 25 | 10.8 | 13.4 | 17.3 | 35.4 | 38.0 | 40.4 | 43.0 | 45.4 | 3.7 | 7.6 | 9.8 | 16 40.44 | 0.06 | 29.02 | 2 16 11.36 | - 0.08 |
| | O. Arg. S. 1547 . | 26 | 4.5 | 6.1 | 8.8 | 22.1 | 23.6 | 25.3 | 27.2 | 28.8 | 42.1 | 44.6 | 46.4 | 20 25.41 | 0.11 | 29.03 | 2 19 56.27 | 0.70 |
| | O. Arg. S. 1554 . | 27 | .. | .. | .. | 0.6 | 3.5 | 5.2 | 16.9 | 19.9 | 21.7 | 23.4 | 25.4 | 21 14.58 | 30.61 | 29.03 | 2 20 14.94 | 0.70 |
| | B. A. C. 840 . . . | 28 | 15.6 | 17.7 | 20.7 | 36.2 | 38.0 | 40.3 | 42.4 | 44.3 | 59.7 | 3.0 | 4.8 | 37 40.25 | 0.14 | 29.05 | 2 37 11.06 | 1.03 |
| | B. A. C. 900 . . . | 29 | 5.9 | 8.1 | 11.7 | 27.7 | 29.5 | 31.9 | 34.2 | 36.3 | 52.3 | 55.5 | 57.5 | 48 31.87 | 0.15 | 29.06 | 2 48 2.66 | 1.15 |
| | α Ceti | 30 | 58.5 | 0.0 | 2.7 | 14.6 | 16.0 | 17.7 | 19.4 | 21.0 | 32.9 | 35.3 | 36.9 | 56 17.73 | 0.08 | 29.07 | 2 55 48.58 | 0.63 |
| | ι Persei | 31 | 8.0 | 10.7 | 14.4 | 32.5 | 34.6 | 37.1 | 39.8 | 42.3 | 0.4 | 4.5 | 6.9 | 0 37.38 | 0.06 | 29.07 | 3 0 8.25 | 0 54 |
| | B. A. C. 1005 . . | 32 | 35.4 | 37.0 | 40.1 | 53.8 | 55.8 | 57.4 | 59.5 | 1.4 | 15.2 | 18.0 | 19.8 | 8 57.58 | 0.12 | 29.08 | 3 8 28.38 | 1.03 |
| | *+5° 26' | 33 | 4.5 | 5.8 | 8.7 | 20.8 | 22.1 | 23.8 | 25.5 | 26.9 | 39.0 | 41.3 | 43.1 | 23 23.77 | 0.08 | 29.10 | 3 22 54.59 | 0.77 |
| | O. Arg. S. 2343 . | 34 | 18.0 | 19.9 | 22.7 | 36.0 | 37.7 | 39.4 | 41.0 | 43.0 | 56.3 | 58.9 | 0.8 | 27 39.43 | 0.11 | 29.11 | 3 27 10.21 | 1.08 |
| | Weisse (2) 776 . . | 35 | 58.0 | 0.4 | 3.8 | 20.7 | 23.0 | 25.1 | 27.4 | 29.6 | 46.5 | 50.2 | 52.2 | 37 25.17 | 0.06 | 29.12 | 3 36 55.99 | 0.87 |
| | Weisse (2) 847 . . | 36 | 38.6 | 41.0 | 44.4 | 50.8 | 53.4 | 55.7 | 58.0 | 0.1 | 17.2 | 20.6 | 22.6 | 39 55.67 | - 0.06 | -29.12 | 3 39 26.49 | - 0.90 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|----------------------|--------------------|-----------------|--------|---|
| 1876. h. s. | | | | |
| Jan. 10, 2.4 - 27.44 | - 0.075 | - 0.01 | - 0.08 | |
| 7.5 - 27.82 | - 0.075 | . . . | . . . | |
| 11, 4.1 - 29.15 | - 0.069 | + 0.05 | - 0.08 | |

Y. stands for Prof. M. Yarnall; T. for Mr. D. P. Todd.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | | |
|-------------------------|--------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|---------------|-------|---------------------------------|-------------------------|---------|------------|--------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | | |
| | | | | | | | | | | | | | | m. s. | m. s. | s. | h. m. s. | s. | | |
| 1876. Jan. 11 Y. | *+35° 2' | 1 | | | | | | | | 46.6 | 49.7 | 51.8 | 53.7 | 55.8 | 55 | 51.52 | — 41.65 | 29.14 | 3 54 40.73 | — 0.95 |
| | O. Arg. S. 2803 | 2 | 2.0 | 4.0 | 6.9 | 19.9 | 21.4 | 23.0 | 24.9 | 26.7 | | | | | 1 | 16.10 | + 6.95 | 29.14 | 4 0 53.91 | 1.16 |
| | Weisse (2) 203 | 3 | 20.4 | 22.2 | 23.9 | 25.6 | 28.2 | | 31.4 | 34.1 | 35.9 | 37.5 | 39.3 | 11 | 59.85 | | — 0.00 | 29.16 | 4 11 30.69 | 0.99 |
| | Weisse (2) 204 | 4 | | | | 57.4 | 58.7 | 0.4 | 1.8 | 3.8 | | | | 12 | 0.42 | | 0.08 | 29.16 | 4 11 31.18 | 0.99 |
| | Lacaille 1463 | 5 | 3.8 | 5.5 | 8.5 | 22.9 | 24.7 | 26.6 | 28.5 | 30.4 | 44.8 | 47.6 | 49.3 | 23 | 26.60 | | 0.13 | 29.17 | 4 22 57.30 | 1.37 |
| | *+27° 0' | 6 | 13.6 | 15.3 | 17.8 | 31.7 | 33.4 | 35.2 | 37.0 | 38.8 | 52.3 | 55.0 | 56.9 | 29 | 35.18 | | 0.06 | 29.18 | 4 29 5.94 | 1.12 |
| | *+38° 11' | 7 | 19.2 | 21.3 | 24.2 | | | | | | 2.8 | 6.0 | 7.9 | 34 | 43.57 | | 0.05 | 29.18 | 4 34 14.34 | 1.26 |
| | *+38° 9' | 8 | | | | 50.8 | 52.6 | 54.8 | 57.0 | 58.8 | | | | 34 | 54.80 | | 0.07 | 29.18 | 4 34 25.55 | 1.26 |
| π | Orionis | 9 | 17.5 | 19.1 | 21.7 | 33.8 | 34.2 | 36.8 | 38.5 | 40.2 | 52.2 | 54.6 | 56.3 | 43 | 36.81 | | 0.08 | 29.19 | 4 43 7.54 | 1.14 |
| 11 | Orionis | 10 | | | | 56.0 | 57.8 | 59.5 | 1.2 | 2.7 | 15.2 | 18.0 | 19.6 | 58 | 6.25 | | 6.78 | 29.21 | 4 57 30.26 | 1.21 |
| | Weisse (2) 29 | 11 | 48.8 | 50.4 | 53.6 | 7.6 | 9.3 | 11.0 | 12.9 | 14.7 | 28.8 | 31.3 | 33.2 | 5 | 11.05 | | 0.06 | 29.22 | 5 4 41.77 | 1.34 |
| | Weisse (2) 29 | 12 | 27.0 | 29.0 | 31.8 | 45.7 | 47.7 | 49.4 | 51.4 | 53.2 | 6.8 | 9.8 | 11.6 | 6 | 49.40 | | 0.06 | 29.22 | 5 6 20.12 | 1.35 |
| | *+30° 16' | 13 | 59.2 | 1.1 | 4.0 | 17.9 | 19.6 | 21.4 | 23.4 | 25.2 | 39.0 | 41.9 | 43.7 | 9 | 21.49 | | 0.06 | 29.22 | 5 8 52.21 | 1.37 |
| | *-25° 21' | 14 | 47.0 | 48.7 | | 6.0 | 7.5 | 9.3 | 11.1 | 13.0 | | 29.2 | 30.9 | 15 | 9.19 | | 0.11 | 29.23 | 5 14 39.85 | 1.41 |
| β | Tauri | 15 | 36.4 | 37.9 | 40.8 | 54.2 | 55.9 | 58.0 | 59.8 | 1.7 | 15.5 | 18.3 | 19.8 | 18 | 58.03 | | 0.06 | 29.24 | 5 18 28.73 | 1.39 |
| δ | Orionis | 16 | 51.7 | 53.3 | 55.9 | 7.7 | 9.2 | 11.0 | 12.7 | 14.2 | 26.0 | 28.5 | 29.9 | 26 | 10.92 | | 0.08 | 29.24 | 5 25 41.60 | 1.29 |
| 125 | Tauri | 17 | 12.3 | 14.2 | 17.1 | 30.2 | 32.0 | 33.8 | 35.5 | 37.3 | 50.8 | 53.4 | 55.1 | 32 | 33.79 | | 0.06 | 29.25 | 5 32 4.48 | 1.42 |
| 14 | a Arietis | 18 | 23.7 | 25.5 | 28.2 | 41.0 | 42.8 | 44.5 | 46.4 | 48.2 | 1.0 | 3.6 | 5.4 | 0 | 44.57 | | 0.08 | 33.27 | 2 0 11.22 | 0.12 |
| ε | Ceti | 19 | 39.9 | 41.6 | 44.2 | 56.0 | 57.7 | 59.3 | 0.9 | 2.6 | 14.6 | 17.0 | 18.6 | 6 | 59.31 | | 0.08 | 33.27 | 2 6 25.96 | 0.27 |
| | Weisse 188 | 20 | 7.3 | 9.2 | 11.7 | | | | | | 13.0 | 45.5 | 47.1 | 14 | 27.30 | | 0.07 | 33.28 | 2 13 53.95 | 0.29 |
| 64 | Andromedæ | 21 | | | | 39.6 | 41.8 | 44.4 | 47.0 | 49.0 | 7.7 | 11.4 | 14.0 | 16 | 54.36 | | 10.07 | 33.28 | 2 16 11.01 | 0.02 |
| | B. A. C. 840 | 22 | 19.8 | 21.9 | 25.3 | 40.4 | 42.6 | 44.7 | 46.8 | 48.9 | 3.8 | 7.4 | 9.3 | 37 | 44.63 | | 0.12 | 33.29 | 2 37 11.22 | 0.97 |
| a | Ceti | 23 | 2.7 | 4.2 | 6.9 | 18.7 | 20.3 | 22.0 | 23.6 | 25.2 | 37.2 | 39.7 | 41.2 | 56 | 21.97 | | 0.08 | 33.30 | 2 55 48.49 | 0.60 |
| t | Persei | 24 | 12.1 | 14.7 | 18.5 | 30.6 | 38.8 | 41.3 | 43.6 | 46.3 | 4.7 | 8.4 | 10.5 | 0 | 41.41 | | 0.09 | 33.31 | 3 0 8.01 | 0.49 |
| | *-18° 5' | 25 | | | | 35.4 | 37.7 | 39.4 | 41.0 | 53.8 | 55.2 | 57.0 | 59.1 | 8 | 48.58 | | 29.29 | 33.31 | 3 7 45.98 | 0.83 |
| | Weisse (2) 461 | 26 | 41.5 | 43.7 | 45.9 | 48.0 | 51.0 | | 6.5 | 9.7 | 11.7 | 13.8 | 16.2 | 24 | 28.80 | | 0.00 | 33.33 | 3 23 55.47 | 0.69 |
| | Weisse (2) 464 | 27 | 11.0 | 13.3 | 16.1 | 31.4 | 33.3 | 35.2 | 37.4 | 39.5 | 53.9 | 57.2 | 59.5 | 24 | 35.25 | | 0.09 | 33.33 | 3 24 1.83 | 0.69 |
| | *+31° 36' | 28 | 29.1 | 31.2 | 34.1 | 47.9 | 49.9 | 51.6 | 53.7 | 55.4 | 9.6 | 12.5 | 14.2 | 27 | 51.75 | | 0.08 | 33.33 | 3 27 18.34 | 0.71 |
| | Lacaille 1196 | 29 | 23.1 | 25.2 | 28.2 | 42.2 | 43.9 | 45.8 | 47.8 | 49.6 | 3.6 | 6.5 | 8.3 | 38 | 45.84 | | 0.11 | 33.35 | 3 38 12.38 | 1.15 |
| | Groombridge 745 | 30 | | | | 43.9 | 50.6 | 57.3 | 3.7 | 10.8 | | | | 45 | 57.26 | | 0.29 | 33.34 | 3 45 23.63 | 2.10 |
| | Groombridge 748 | 31 | 17.8 | 26.1 | 38.6 | 26.0 | 32.3 | 39.2 | 45.7 | 52.2 | 10.4 | 50.4 | 56.8 | 48 | 38.68 | | 0.25 | 33.34 | 3 48 5.09 | 2.17 |
| | Groombridge 751 | 32 | 54.3 | 0.8 | 12.1 | 59.6 | 5.7 | 12.5 | 19.6 | 25.4 | 13.6 | 23.6 | 29.6 | 49 | 12.38 | | 0.25 | 33.34 | 3 48 38.79 | 2.18 |
| | Weisse (2) 1143 | 33 | | | | 10.3 | 12.1 | 14.0 | 15.8 | 18.1 | 32.5 | 35.6 | 37.5 | 55 | 21.99 | | 7.99 | 33.35 | 3 54 40.65 | 0.92 |
| | Weisse (2) 1251 | 34 | | | | 21.0 | 23.0 | 25.2 | 27.3 | 29.3 | | | | 0 | 25.16 | | 0.10 | 33.35 | 3 59 51.71 | 1.00 |
| | Weisse (2) 1269 | 35 | | | | 58.3 | 0.5 | 2.8 | 4.7 | 7.0 | | | | 1 | 2.66 | | 0.10 | 33.35 | 4 0 29.21 | 1.01 |
| | *+44° 28' | 36 | 34.6 | 37.3 | 40.2 | 57.3 | 59.2 | 1.1 | 3.7 | 5.5 | 22.5 | 26.1 | 28.5 | 6 | 1.45 | | 0.09 | 33.35 | 4 5 28.01 | 1.09 |
| | *+44° 28' | 37 | | | | 19.6 | 23.0 | 25.4 | 39.8 | 44.1 | 46.2 | 48.5 | 51.2 | 7 | 37.22 | | 38.98 | 33.35 | 4 6 24.89 | 1.10 |
| | Lalande 7817 | 38 | | | | 57.5 | 59.7 | 2.2 | 4.3 | 6.5 | | | | 7 | 2.04 | | 0.10 | 33.35 | 4 6 28.59 | 1.10 |
| | Weisse (2) 333 | 39 | 26.5 | 28.7 | 32.0 | 46.5 | 18.5 | 50.6 | 52.6 | 54.5 | 9.5 | 12.6 | 14.4 | 17 | 50.58 | | 0.09 | 33.36 | 4 17 17.13 | 1.10 |
| | Lacaille 1463 | 40 | 7.8 | 9.9 | 12.8 | 27.0 | 29.0 | 30.8 | 32.8 | 34.6 | 49.0 | 52.0 | 53.6 | 23 | 30.85 | | 0.11 | 33.37 | 4 22 57.37 | 1.35 |
| | *-32° 43' | 41 | 4.1 | 6.2 | 9.5 | 23.6 | 25.6 | 27.4 | 29.2 | 30.9 | 15.5 | 48.2 | 49.8 | 24 | 27.27 | | 0.11 | 33.37 | 4 23 53.79 | 1.35 |
| | *+27° 0' | 42 | 18.1 | 19.7 | 22.1 | 35.7 | 37.5 | 39.4 | 41.3 | 43.1 | 56.6 | 58.9 | 0.5 | 29 | 39.35 | | 0.08 | 33.37 | 4 29 5.90 | 1.11 |
| | *+38° 11' | 43 | 59.6 | 1.7 | 3.9 | 6.1 | 8.9 | | 25.8 | 29.4 | 31.1 | 33.2 | 35.6 | 34 | 47.53 | | 0.00 | 33.38 | 4 34 14.23 | 1.24 |
| | *+38° 11' | 44 | 34.2 | 36.5 | 39.5 | 54.9 | 56.8 | 58.9 | 1.0 | 3.0 | | | | 34 | 50.60 | | 8.14 | 33.38 | 4 34 25.36 | 1.24 |
| 4 | Aurigæ | 45 | 0.9 | 3.0 | 6.2 | 21.2 | 23.3 | 25.2 | 27.2 | 29.2 | 44.5 | 47.5 | 49.5 | 51 | 25.25 | | 0.09 | 33.39 | 4 50 51.77 | 1.35 |
| 64 | Eridani | 46 | 25.0 | 26.8 | 29.3 | 41.5 | 43.0 | 44.7 | 46.5 | 48.1 | 0.2 | 2.9 | 4.4 | 51 | 44.76 | | 0.09 | 33.39 | 4 54 11.28 | 1.23 |
| 11 | Orionis | 47 | 43.8 | 45.6 | 48.0 | 0.5 | 2.1 | 3.8 | 5.5 | 7.0 | 19.2 | 21.9 | 23.5 | 58 | 3.72 | | 0.08 | 33.39 | 4 57 30.25 | 1.20 |
| | Rumker, N. F. 2553 | 48 | 22.9 | 25.0 | 27.9 | 41.5 | 43.2 | 45.0 | 47.2 | 49.0 | 2.7 | 5.0 | 7.2 | 3 | 45.13 | | 0.08 | 33.39 | 5 3 11.68 | 1.33 |
| | Weisse (2) 49 | 49 | | | | 33.1 | 35.7 | 37.7 | 50.0 | 53.1 | 55.0 | 56.8 | 59.0 | 5 | 47.55 | | 32.22 | 33.40 | 5 4 41.93 | 1.34 |
| | Weisse (2) 111 | 50 | | | | 50.0 | 51.7 | 53.5 | 55.4 | 57.2 | | | | 6 | 53.56 | | — 0.09 | — 33.40 | 5 6 20.07 | — 1.35 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n. | c. |
|--------------|-----------------|--------------|--------|--------|
| 1876. h. s. | | s. | s. | s. |
| Jan. 14, 3.5 | — 33.33 | — 0.041 | + 0.02 | — 0.08 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | |
|---|----------------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|----------|-------------------|--------------|------------|---------------------------------|-------------------------|------|-------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | | |
| 1876. Jan. 14 Y. | <i>o</i> Columbae . . . | 1 | 12.1 | 14.3 | 17.0 | 31.8 | 33.7 | 35.9 | 37.9 | 39.5 | 54.2 | 57.3 | 59.2 | m. s. 13 35.72 | — | 0.11 | —33.40 | 5 13 2.21 | — | 1.53 |
| | *+38° 58' . . . | 2 | 58.2 | 0.6 | 2.8 | 5.0 | 7.9 | .. | 25.1 | 28.6 | 30.6 | 32.8 | 35.3 | 18 46.69 | 0.00 | 33.40 | 5 18 13.29 | — | 1.54 | |
| | <i>ε</i> Orionis . . . | 3 | 10.8 | 12.5 | 15.0 | 27.0 | 28.5 | 30.1 | 31.8 | 33.3 | 45.3 | 47.9 | 49.3 | 30 30.14 | 0.08 | 33.41 | 5 29 56.65 | — | 1.30 | |
| | Weisse (2) 1147 . . . | 4 | 53.0 | 54.9 | 58.1 | 11.8 | 13.5 | 15.5 | 17.5 | 19.2 | 33.2 | 36.0 | 37.9 | 37 15.51 | 0.08 | 33.42 | 5 36 42.01 | — | 1.60 | |
| | Weisse 1034 . . . | 5 | 30.8 | 32.4 | 34.9 | 47.1 | 48.8 | 50.5 | 52.0 | 53.6 | 5.7 | 8.0 | 9.6 | 42 50.33 | — | 0.08 | 33.42 | 5 42 16.83 | — | 1.35 |
| | <i>δ</i> Ursæ Minoris . . . | 6 | .. | .. | .. | 35.0 | 1.0 | 29.0 | 58.0 | 24.0 | .. | .. | .. | 12 29.40 | + | 1.15 | 33.44 | .. | + | 22.85 |
| 20 | <i>α</i> Arietis . . . | 7 | 29.3 | 31.2 | 33.8 | 46.8 | 48.4 | 50.3 | 52.0 | 53.8 | 6.8 | 9.4 | 11.0 | 0 50.25 | — | 0.07 | 38.97 | 2 0 11.21 | — | 0.05 |
| | <i>ξ</i> ¹ Ceti . . . | 8 | 45.7 | 47.3 | 49.8 | 1.7 | 3.3 | 4.9 | 6.6 | 8.1 | 20.3 | 22.8 | 24.4 | 7 4.99 | 0.07 | 38.98 | 2 6 25.94 | + | 0.21 | |
| | Weisse 88 . . . | 9 | 13.4 | 15.4 | 17.7 | 29.4 | 31.3 | 33.5 | 35.0 | 36.8 | 48.8 | 51.4 | 53.0 | 14 33.25 | 0.07 | 38.98 | 2 13 54.20 | — | 0.22 | |
| | 64 Andromedæ . . . | 10 | .. | .. | .. | 13.3 | 17.0 | 19.2 | 36.1 | 40.4 | 42.5 | 45.0 | 47.9 | 17 32.68 | 42.75 | 38.98 | 2 16 10.95 | + | 0.11 | |
| | <i>γ</i> Ceti . . . | 11 | 12.7 | 14.5 | 17.1 | 28.9 | 30.5 | 32.1 | 33.7 | 35.2 | 17.2 | 49.8 | 51.4 | 37 32.10 | 0.08 | 38.98 | 2 36 53.04 | — | 0.44 | |
| | B. A. C. 896 . . . | 12 | .. | .. | .. | 3.9 | 11.5 | 20.4 | 28.5 | 37.0 | .. | .. | .. | 50 20.26 | 0.21 | 38.98 | 2 49 41.07 | + | 0.02 | |
| | <i>ι</i> Persei . . . | 13 | 17.9 | 20.1 | 24.0 | 42.2 | 44.5 | 46.9 | 49.5 | 52.0 | 10.2 | 13.9 | 16.2 | 0 47.04 | 0.06 | 38.98 | 3 0 8.00 | — | 0.38 | |
| | *+38° 28' . . . | 14 | .. | .. | .. | 39.4 | 41.6 | 43.6 | 45.7 | 48.0 | .. | .. | .. | 5 43.66 | — | 0.07 | 38.98 | 3 5 4.61 | 0.45 | |
| | Weisse (2) 58 . . . | 15 | 59.1 | 1.7 | 3.8 | 6.1 | 9.3 | .. | 26.1 | 29.5 | 31.5 | 33.6 | 35.9 | 5 47.66 | + | 0.03 | 38.98 | 3 5 8.71 | 0.45 | |
| | Weisse (2) 67 . . . | 16 | 16.5 | 19.0 | 20.9 | 22.8 | 26.4 | .. | 43.3 | 46.0 | 48.5 | 50.8 | 53.0 | 6 4.78 | 0.03 | 38.98 | 3 5 25.83 | 0.45 | | |
| | *+38° 28' . . . | 17 | .. | .. | .. | .. | .. | .. | 6.0 | 9.7 | 11.6 | 13.5 | 15.9 | 7 11.34 | — | 43.55 | 38.98 | 3 5 48.81 | 0.44 | |
| | Weisse (2) 461 . . . | 18 | 47.1 | 49.4 | 51.7 | 53.7 | 56.8 | .. | 12.0 | 15.5 | 17.3 | 19.4 | 21.7 | 24 34.46 | + | 0.03 | 38.98 | 3 23 55.51 | 0.62 | |
| | Weisse (2) 464 . . . | 19 | 16.8 | 18.8 | 22.0 | 36.9 | 38.9 | 41.0 | 42.8 | 45.0 | 59.9 | 3.1 | 4.7 | 24 40.90 | — | 0.06 | 38.98 | 3 24 1.86 | 0.62 | |
| | O. Arg. S. 2343 . . . | 20 | 28.0 | 29.8 | 32.8 | 45.7 | 47.7 | 49.3 | 51.2 | 52.0 | 6.2 | 8.7 | 10.6 | 27 49.35 | 0.11 | 38.98 | 3 27 10.26 | 0.94 | | |
| | 19 Tauri . . . | 21 | 8.5 | 10.3 | 13.0 | 26.0 | 27.6 | 29.5 | 31.2 | 33.1 | 16.2 | 48.9 | 50.4 | 38 29 52 | 0.06 | 38.98 | 3 37 50.48 | 0.72 | | |
| | 21 Tauri . . . | 22 | .. | .. | .. | 27.5 | 30.5 | 32.1 | 44.0 | 46.9 | 48.6 | 50.5 | 52.6 | 39 41.59 | 30.48 | 38.98 | 3 38 32.13 | 0.73 | | |
| | 22 Tauri . . . | 23 | .. | .. | .. | 16.0 | 17.8 | 19.6 | 21.4 | 23.0 | .. | .. | .. | 39 19.56 | 0.07 | 38.98 | 3 38 40.51 | 0.73 | | |
| | B. A. C. 1163 . . . | 24 | .. | .. | .. | 32.4 | 35.1 | 36.8 | 48.9 | 51.8 | 53.3 | 55.0 | 57.3 | 40 46.32 | 30.47 | 38.98 | 3 39 36.87 | 0.73 | | |
| | A, 20 Pleiadum . . . | 25 | .. | .. | .. | .. | .. | .. | 13.0 | 16.1 | 17.8 | 19.5 | 21.7 | 41 17.62 | 37.39 | 38.98 | 3 40 1.25 | 0.74 | | |
| | Groombridge 745 . . . | 26 | 43.8 | 51.0 | 1.2 | 49.7 | 55.5 | 1.9 | 9.2 | 15.4 | 4.9 | 14.7 | 20.7 | 46 2.55 | 0.13 | 38.98 | 3 45 23.44 | 1.73 | | |
| Groombridge 748 . . . | 27 | .. | .. | .. | 31.8 | 37.7 | 44.4 | 51.2 | 57.3 | .. | .. | .. | 48 44.48 | 0.17 | 38.98 | 3 48 5.33 | 1.83 | | | |
| Groombridge 751 . . . | 28 | 58.8 | 6.2 | 16.4 | 4.7 | 11.1 | 17.6 | 24.2 | 31.3 | 19.7 | 29.1 | 35.3 | 49 17.67 | 0.13 | 38.98 | 3 48 35.56 | 1.84 | | | |
| *+35° 2' . . . | 29 | 11.3 | 13.2 | 16.5 | 30.7 | 32.6 | 34.7 | 36.6 | 38.7 | 53.1 | 56.2 | 58.0 | 54 34.69 | 0.06 | 38.98 | 3 53 55.65 | 0.85 | | | |
| Weisse (2) 1143 . . . | 30 | .. | .. | .. | 15.6 | 17.6 | 19.6 | 21.6 | 23.5 | .. | .. | .. | 55 19.58 | 0.07 | 38.98 | 3 54 40.53 | 0.86 | | | |
| <i>ο</i> ² Eridani . . . | 31 | .. | .. | .. | 10.7 | 12.3 | 14.0 | 15.7 | 17.3 | 29.2 | 31.8 | 33.2 | 10 20.52 | — | 6.63 | 38.98 | 4 9 34.91 | 0.98 | | |
| 55 Persei . . . | 32 | 20.9 | 23.2 | 25.2 | 27.2 | 30.4 | .. | .. | .. | .. | .. | .. | 16 25.38 | + | 41.11 | 38.98 | 4 16 27.51 | 1.02 | | |
| 56 Persei . . . | 33 | 51.9 | 54.2 | 57.1 | 11.4 | 13.3 | 15.3 | 17.3 | 19.2 | 33.3 | 36.4 | 38.2 | 17 15.24 | — | 0.06 | 38.98 | 4 16 36.20 | 1.02 | | |
| Lacaille 1463 . . . | 34 | 13.7 | 15.7 | 18.5 | 32.8 | 34.5 | 36.5 | 38.6 | 40.4 | 54.4 | 57.3 | 59.2 | 23 36.51 | 0.13 | 38.98 | 4 22 57.40 | 1.27 | | | |
| *—32° 43' . . . | 35 | 9.9 | 12.2 | 15.2 | 29.3 | 31.1 | 33.0 | 35.0 | 37.0 | 50.8 | 53.8 | 55.9 | 24 33.02 | 0.13 | 38.98 | 4 23 53.91 | 1.27 | | | |
| *+33° 31' . . . | 36 | 19.0 | 20.7 | 23.7 | 38.1 | 39.8 | 41.7 | 43.5 | 45.4 | 0.0 | 2.8 | 4.5 | 33 41.75 | — | 0.06 | 38.98 | 4 33 2.71 | 1.13 | | |
| *+10° 42' . . . | 37 | 56.2 | 58.0 | 59.8 | 13.3 | 14.6 | 16.0 | 17.4 | 19.2 | .. | .. | .. | 42 9.31 | + | 6.52 | 38.98 | 4 41 36.85 | 0.89 | | |
| *+10° 42' . . . | 38 | .. | .. | .. | .. | .. | .. | 49.1 | 51.8 | 53.4 | 55.1 | 56.7 | 42 53.22 | — | 34.73 | 38.98 | 4 41 39.51 | 0.89 | | |
| *+10° 42' . . . | 39 | .. | .. | .. | .. | .. | .. | 4.2 | 6.7 | 8.2 | 10.1 | 12.0 | 43 8.24 | 34.73 | 38.98 | 4 41 54.53 | 0.89 | | | |
| *+43° 54' . . . | 40 | 45.2 | 47.5 | 50.9 | .. | .. | .. | .. | .. | 33.4 | 36.7 | 39.0 | 47 12.12 | 0.05 | 38.98 | 4 46 33.09 | 1.37 | | | |
| 11 Orionis . . . | 41 | 49.3 | 51.0 | 53.6 | 5.8 | 7.6 | 9.3 | 11.0 | 12.7 | 24.9 | 27.6 | 29.0 | 58 9.26 | — | 0.07 | 38.98 | 4 57 30.21 | 1.18 | | |
| Weisse 56 . . . | 42 | 32.2 | 34.0 | 36.6 | 48.5 | 50.0 | 51.6 | 53.0 | 54.8 | .. | .. | .. | 5 45.09 | + | 6.41 | 38.98 | 5 5 12.52 | 1.19 | | |
| *+30° 21' . . . | 43 | 15.4 | 17.5 | 20.3 | 34.1 | 36.0 | 37.9 | 39.8 | 41.7 | 55.6 | 58.4 | 0.1 | 8 37.89 | — | 0.06 | 38.98 | 5 7 58.85 | 1.33 | | |
| R. A. C. 1641 . . . | 44 | 36.9 | 38.8 | 41.8 | 50.4 | 58.3 | 0.3 | 2.5 | 4.2 | 18.9 | 21.9 | 23.7 | 12 06.34 | — | 0.13 | 38.98 | 5 11 21.23 | 1.47 | | |
| *+39° 3' . . . | 45 | 5.5 | 7.9 | 10.1 | 12.1 | 15.3 | .. | 32.8 | 36.3 | 38.0 | 40.1 | 42.5 | 19 54.06 | + | 0.03 | 38.98 | 5 19 15.11 | 1.53 | | |
| *+39° 4' . . . | 46 | 25.1 | 27.5 | 29.7 | 31.5 | 34.8 | .. | 52.6 | 56.2 | 59.0 | 1.8 | 4.3 | 20 14.25 | + | 0.03 | 38.98 | 5 19 35.30 | 1.53 | | |
| <i>δ</i> ² Orionis (1st *) . . . | 47 | 19.7 | 21.7 | 23.4 | 25.0 | 27.8 | .. | 28.0 | 30.8 | 32.4 | 34.0 | 36.0 | 29 57.88 | — | 0.02 | 38.98 | 5 29 18.88 | 1.28 | | |
| <i>δ</i> ² Orionis (2d *) . . . | 48 | 42.1 | 43.9 | 46.2 | 58.3 | 59.8 | 1.4 | 3.1 | 4.6 | 16.8 | 19.1 | 20.8 | 30 1.46 | — | 0.09 | 38.98 | 5 29 22.39 | 1.28 | | |
| Weisse (2) 1147 . . . | 49 | 36.6 | 39.0 | 41.1 | 42.8 | 45.9 | .. | 56.3 | 59.3 | 1.0 | 3.0 | 5.1 | 37 21.01 | + | 0.02 | 38.98 | 5 36 42.05 | 1.51 | | |
| *+31° 18' . . . | 50 | 58.5 | 0.5 | 3.6 | .. | .. | .. | .. | .. | 39.0 | 41.7 | 53.4 | 37 22.78 | — | 0.05 | —38.98 | 5 36 43.75 | — | 1.51 | |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | " | " |
|--------------------------|-----------------|---------------|--------------|--------------|
| 1876. h. Jan. 20, 4.3 | s. — 39.98 | s. — 0.002 | s. + 0.05 | s. — 0.08 |
| 20, 4.3 | — 38.98 | — 0.002 | + 0.05 | — 0.08 |

OBSERVATIONS WITH THE MERIDIAN TRANSIT INSTRUMENT.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | | | | | |
|-------------------------|----------------------|---------------------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|---------------|-------|---------------------------------|-------------------------|------------|------------|------------|-----------|-------|------|
| | | | I. | II | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | | | | | |
| | | | | | | | | | | | | | | m. s. | m. s. | | | s. | h. m. s. | s. | | | |
| 1876. Jan. 20 Y. | B. A. C. 1881 . . . | 1 | 20.4 | 24.5 | 31.1 | 1.5 | 5.2 | 9.4 | 13.5 | 17.6 | 48.2 | 54.0 | 57.8 | 50 | 9.38 | — | 0.08 | —38.98 | 5 49 30.32 | — | 3.25 | | |
| | *+26° 25' . . . | 2 | 3.3 | 4.7 | 8.0 | 21.4 | 23.0 | 24.9 | 26.6 | 28.4 | 41.8 | 44.4 | 46.2 | 55 | 24.79 | 0.06 | 38.98 | 5 54 45.75 | | 1.53 | | | |
| | Weisse (2) 1795 . . | 3 | 9.4 | 11.2 | 13.9 | 27.2 | 29.0 | 30.9 | 32.7 | 34.4 | 47.8 | 50.5 | 52.2 | 56 | 30.84 | 0.06 | 38.98 | 5 55 51.80 | | 1.54 | | | |
| | *+25° 53' . . . | 4 | 18.4 | 20.4 | 23.0 | 36.6 | 38.1 | 40.0 | 41.8 | 43.6 | 56.6 | 59.4 | 1.2 | 0 | 39.92 | 0.06 | 38.98 | 6 0 0.88 | | 1.55 | | | |
| | Weisse (2) 1980 . . | 5 | .. | .. | .. | 17.3 | 20.1 | 21.8 | 33.8 | 36.8 | 35.5 | 40.4 | 42.4 | 1 | 31.39 | — | 30.93 | 38.98 | 6 0 21.48 | — | 1.55 | | |
| | δ | Ursæ Minoris, S. P. | 6 | .. | .. | .. | 41.0 | 9.0 | 37.0 | 4.0 | 30.0 | .. | .. | .. | 12 | 36.20 | + | 0.57 | 38.98 | .. | + | 22.13 | |
| | | *+24° 18' . . . | 7 | 38.5 | 40.5 | 43.4 | 56.6 | 58.2 | 0.0 | 1.5 | 2.2 | 16.4 | 19.0 | 20.8 | 19 | 59.74 | — | 0.07 | 38.98 | 6 19 20.60 | — | 1.60 | |
| | | B. A. C. 2100 . . . | 8 | .. | .. | .. | 48.3 | 50.4 | 52.2 | 54.0 | 55.6 | 9.0 | 11.6 | 13.5 | 22 | 59.32 | .. | 7.26 | 38.98 | 6 22 13.03 | | 1.50 | |
| | | *-25° 48' . . . | 9 | .. | .. | .. | 38.5 | 41.4 | 43.1 | 55.1 | 57.9 | 59.7 | 1.4 | 3.0 | 23 | 53.52 | 30.94 | 38.98 | 6 22 42.60 | | 1.50 | | |
| | | O. Arg. S. 5198 . . | 10 | .. | .. | .. | 42.2 | 43.9 | 45.6 | 47.6 | 49.4 | .. | .. | .. | 25 | 45.74 | 0.12 | 38.98 | 6 25 6.64 | | 1.50 | | |
| γ | | O. Arg. S. 5199 . . | 11 | .. | .. | .. | 3.3 | 6.0 | 7.9 | 19.9 | 22.6 | 24.4 | 26.2 | 28.2 | 26 | 17.31 | 30.93 | 38.98 | 6 25 7.40 | | 1.50 | | |
| | | Geminorum . . . | 12 | 53.5 | 55.2 | 57.8 | 10.2 | 11.7 | 13.6 | 15.4 | 16.9 | 29.4 | 32.0 | 33.5 | 31 | 13.56 | 0.07 | 38.98 | 6 30 34.51 | | 1.88 | | |
| | | *+36° 14' . . . | 13 | .. | .. | .. | 34.0 | 36.9 | 38.8 | 52.6 | 55.5 | 57.5 | 59.7 | 1.8 | 35 | 49.60 | 34.47 | 38.98 | 6 34 36.15 | | 1.53 | | |
| | | Lacaille 2420 . . . | 14 | 16.5 | 18.3 | 21.1 | 34.7 | 36.1 | 38.2 | 40.0 | 41.8 | 55.3 | 58.1 | 59.9 | 39 | 38.18 | 0.12 | 38.98 | 6 38 59.08 | | 2.50 | | |
| | | O. Arg. N. 7298 . . | 15 | 51.7 | 54.3 | 58.3 | 17.7 | 20.2 | 22.6 | 25.4 | 27.7 | 47.2 | 51.0 | 53.4 | 44 | 22.68 | 0.07 | 38.98 | 6 43 43.63 | | | | |
| | *-24° 15' . . . | 16 | 52.1 | 53.7 | 56.6 | 9.8 | 11.1 | 12.9 | 14.9 | 15.8 | 29.7 | 32.5 | 34.1 | 49 | 13.02 | 0.11 | 38.98 | 6 48 33.93 | | 1.51 | | | |
| | *-24° 48' . . . | 17 | 6.6 | 8.6 | 11.6 | 24.5 | 26.2 | 28.0 | 29.9 | 31.7 | 44.7 | 47.5 | 49.1 | 52 | 28.04 | 0.11 | 38.99 | 6 51 48.93 | | 1.52 | | | |
| | Lacaille 2558 . . . | 18 | 57.8 | 59.7 | 2.6 | 16.1 | 17.8 | 19.7 | 21.3 | 23.2 | 36.8 | 39.5 | 41.3 | 55 | 19.62 | 0.12 | 38.99 | 6 54 40.51 | | 1.54 | | | |
| | *-14° 42' . . . | 19 | 46.4 | 48.8 | 50.6 | 52.2 | 54.8 | .. | 56.9 | 59.8 | 1.2 | 3.0 | 5.0 | 3 | 25.87 | 0.03 | 38.99 | 7 2 46.85 | | 1.48 | | | |
| | *-14° 48' . . . | 20 | 17.5 | 19.3 | 22.0 | 34.2 | 35.8 | 37.6 | 39.1 | 40.8 | 53.4 | 55.5 | 57.3 | 6 | 37.50 | 0.10 | 38.99 | 7 5 58.41 | | 1.49 | | | |
| | Weisse 274 . . . | 21 | 31.4 | 33.0 | 35.8 | 48.0 | 49.6 | 51.4 | 53.3 | 54.6 | 7.0 | 9.4 | 11.0 | 10 | 51.32 | 0.09 | 38.99 | 7 10 12.24 | | 1.49 | | | |
| | Weisse 283 . . . | 22 | .. | .. | .. | 21.5 | 24.0 | 25.5 | 36.9 | 39.6 | 41.2 | 43.0 | 44.8 | 11 | 34.56 | 28.73 | 38.99 | 7 10 26.84 | | 1.62 | | | |
| | Lacaille 2767 (2d *) | 23 | 5.1 | 7.0 | 10.1 | 25.2 | 27.0 | 28.8 | 31.0 | 32.6 | 47.5 | 50.2 | 52.2 | 18 | 28.79 | 0.13 | 38.99 | 7 17 49.67 | | 1.62 | | | |
| | *-35° 33' . . . | 24 | 45.9 | 47.8 | 51.2 | 5.7 | 7.6 | 9.7 | 11.7 | 13.5 | 28.4 | 31.3 | 33.4 | 20 | 9.65 | 0.13 | 38.99 | 7 19 30.53 | | 1.49 | | | |
| | Weisse 924 . . . | 25 | 54.9 | 57.0 | 58.8 | 0.5 | 3.1 | .. | 5.1 | 7.8 | 9.5 | 11.1 | 13.2 | 31 | 34.10 | 0.02 | 38.99 | 7 30 55.09 | | | | | |
| | *-14° 13' . . . | 26 | 15.0 | 16.5 | 19.2 | 31.5 | 33.1 | 34.7 | 36.4 | 38.0 | 50.1 | 52.8 | 54.5 | 31 | 34.71 | 0.09 | 38.99 | 7 30 55.63 | | 1.49 | | | |
| | Lalande 15079 . . | 27 | 30.7 | 32.3 | 34.9 | 47.0 | 48.6 | 50.2 | 52.0 | 53.6 | 5.7 | 8.4 | 9.8 | 38 | 50.29 | 0.09 | 38.99 | 7 38 11.21 | | 1.49 | | | |
| | φ Geminorum . . . | 28 | 13.8 | 15.6 | 18.6 | 31.8 | 33.6 | 35.4 | 37.2 | 39.0 | 52.4 | 55.2 | 57.0 | 46 | 35.42 | 0.06 | 38.99 | 7 45 50.37 | — | 1.88 | | | |
| | 24 | B. A. C. 896 . . . | 29 | .. | .. | .. | 55.5 | 4.0 | 13.0 | 21.6 | 29.9 | .. | .. | .. | 50 | 12.80 | 0.61 | 31.86 | 2 49 40.33 | + | 0.41 | | |
| | | Persei . . . | 30 | 10.8 | 13.0 | 16.9 | 35.2 | 37.6 | 40.1 | 42.5 | 44.8 | 3.3 | 7.0 | 9.5 | 0 | 40.06 | 0.13 | 31.87 | 3 0 8.06 | — | 0.29 | | |
| Arietis . . . | | 31 | 58.6 | 0.2 | 2.9 | 15.8 | .. | 19.2 | .. | .. | 35.1 | 37.8 | .. | 8 | 15.66 | + | 3.19 | 31.87 | 3 7 46.98 | | 0.48 | | |
| *+31° 17' . . . | | 32 | 49.4 | 51.3 | 54.2 | 7.9 | 9.8 | 11.9 | 13.5 | 15.4 | 29.4 | 32.7 | 34.7 | 28 | 11.84 | — | 0.05 | 31.88 | 3 27 39.91 | | 0.59 | | |
| B. A. C. 1101 . . . | | 33 | .. | .. | .. | 45.3 | 48.2 | 50.4 | 3.0 | 6.2 | 8.0 | 9.9 | 11.9 | 29 | 0.36 | — | 32.64 | 31.88 | 3 27 55.84 | | 0.59 | | |
| B. A. C. 1130 . . . | | 34 | 49.3 | 51.0 | 53.8 | 7.3 | 9.2 | 11.0 | 12.6 | 14.5 | 28.0 | 30.9 | 32.8 | 34 | 10.95 | + | 0.15 | 31.88 | 3 33 39.22 | | 0.93 | | |
| 19 Tauri . . . | | 35 | 1.6 | 3.2 | 5.9 | 18.9 | 20.6 | 22.4 | 24.2 | 25.9 | 39.0 | 41.8 | 43.5 | 38 | 22.45 | — | 0.03 | 31.88 | 3 37 50.54 | | 0.68 | | |
| 21 Tauri . . . | | 36 | .. | .. | .. | 0.6 | 2.1 | 3.8 | 5.7 | 7.4 | .. | .. | .. | 39 | 3.92 | 0.02 | 31.88 | 3 38 32.02 | | 0.68 | | | |
| 22 Tauri . . . | | 37 | .. | .. | .. | 8.7 | 10.3 | 12.1 | 14.0 | 15.8 | .. | .. | .. | 39 | 12.18 | 0.02 | 31.88 | 3 38 40.28 | | 0.69 | | | |
| B. A. C. 1163 . . . | | 38 | 47.9 | 49.5 | 52.3 | 5.2 | 7.0 | 8.8 | 10.6 | 12.4 | 25.3 | 28.0 | 29.9 | 40 | 8.81 | 0.03 | 31.88 | 3 39 36.90 | | | | | |
| γ | Weisse (2) 1030 . . | 39 | 50.5 | 53.1 | 55.3 | 10.0 | 11.8 | 13.9 | 15.9 | 17.8 | 32.5 | 35.6 | 37.7 | 49 | 13.92 | — | 0.07 | 31.88 | 3 48 41.97 | | 0.76 | | |
| | *+35° 0' . . . | 40 | .. | .. | .. | 23.6 | 25.6 | 27.7 | .. | .. | .. | .. | .. | 54 | 25.62 | + | 1.91 | 31.88 | 3 53 55.65 | | 0.80 | | |
| | Weisse (2) 1143 . . | 41 | 49.1 | 51.0 | 54.0 | 8.7 | 10.5 | 12.5 | 14.6 | 16.3 | 30.9 | 34.0 | 36.2 | 55 | 12.53 | — | 0.07 | 31.88 | 3 54 40.58 | | 0.88 | | |
| | Weisse (2) 1251 . . | 42 | 58.4 | 0.2 | 3.6 | 19.4 | 21.6 | 23.7 | 25.8 | .. | .. | .. | .. | 0 | 13.24 | + | 10.34 | 31.88 | 3 59 51.70 | | 0.89 | | |
| | Weisse (2) 1269 . . | 43 | .. | .. | .. | .. | .. | .. | .. | .. | 41.4 | 44.7 | 46.9 | 49.0 | 51.4 | 1 | 46.68 | — | 45.51 | 31.88 | 4 0 29.29 | | 0.91 |
| | Tauri . . . | 44 | 57.4 | 59.0 | 1.5 | 13.9 | 15.6 | 17.3 | 19.0 | 20.4 | .. | .. | .. | 13 | 10.51 | + | 6.72 | 31.89 | 4 12 45.34 | | | | |
| | Weisse (2) 333 . . . | 45 | 25.2 | 27.2 | 30.3 | 45.2 | 47.1 | 49.1 | 51.2 | 53.1 | .. | .. | .. | 17 | 41.05 | + | 8.04 | 31.89 | 4 17 17.20 | | 1.00 | | |
| | Weisse (2) 800 . . . | 46 | .. | .. | .. | 43.0 | 45.7 | 48.1 | 1.7 | 5.0 | 6.9 | 8.9 | 11.2 | 25 | 58.81 | — | 34.32 | 31.89 | 4 24 52.60 | | 1.05 | | |
| | Weisse 727 . . . | 47 | 44.0 | 45.6 | 48.0 | 0.0 | 1.5 | 3.2 | 4.9 | 6.4 | 18.4 | 20.7 | 22.4 | 35 | 3.19 | + | 0.04 | 31.89 | 4 34 31.34 | | 1.02 | | |
| | *+10° 42' . . . | 48 | 52.2 | 53.8 | 56.2 | 8.3 | 9.8 | 11.7 | 13.3 | 15.0 | 26.9 | 29.5 | 31.2 | 42 | 11.63 | + | 0.02 | 31.90 | 4 41 39.75 | | 1.06 | | |
| *+10° 42' . . . | 49 | .. | .. | .. | .. | .. | .. | .. | .. | 47.4 | 49.4 | 51.0 | 53.1 | 55.0 | 42 | 51.18 | — | 34.78 | 31.90 | 4 41 44.50 | | 1.06 | |
| *+44° 9' . . . | 50 | 45.6 | 47.6 | 51.5 | 8.1 | 10.0 | 12.4 | 14.5 | 16.8 | 33.4 | 37.0 | 39.0 | 46 | 12.35 | — | 0.11 | —31.90 | 4 45 40.34 | — | 1.33 | | | |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|-------------------|----------------------|---------------|--------------|--------------|
| 1876. Jan. 24. | h. s. 4.9 — 31.90 | s. — 0.017 | s. — 0.18 | s. + 0.05 |

January 21. Image west of 40. Clamp west.
Image west of 25. Clamp east.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. | | |
|-------------------------|---------------------|-------------------|--------------------------------|------|------|------|------|------|------|-------|------|------|----------|---------------|----------|--------|---------------------------------|-------------------------|------------|-------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | | |
| 1876. Jan. 24 Y. | *+38° 17' | 1 | 43.8 | 45.6 | 48.7 | 4.1 | 5.9 | 8.6 | 9.8 | 12.2 | 27.2 | 30.6 | 32.6 | m. s. | m. s. | s. | h. m. s. | s. | | |
| | 11 Orionis | 2 | 42.2 | 43.9 | 46.4 | 58.8 | 0.4 | 2.1 | 3.8 | 5.5 | 17.6 | 20.4 | 22.0 | 53 8.05 | — | 0.08 | 31.90 | 4 52 36.07 | — | 1.30 |
| | Rumker, N. F., 2553 | 3 | 21.6 | 23.3 | 25.9 | 39.9 | 41.8 | 43.6 | 15.6 | 17.4 | 0.9 | 4.0 | 5.9 | 58 2.10 | — | 0.00 | 31.90 | 4 57 30.20 | — | 1.16 |
| | Weisse (2) 49 . . . | 4 | 51.8 | 53.6 | 56.0 | 10.5 | 12.0 | 13.6 | 15.7 | 17.6 | 31.4 | 34.3 | 36.2 | 3 43.63 | — | 0.05 | 31.90 | 5 3 11.68 | — | 1.21 |
| | Weisse (2) 111. . . | 5 | 30.1 | 31.8 | 34.5 | 48.3 | 50.0 | 52.2 | 54.0 | 55.7 | 9.5 | 12.5 | 14.4 | 5 13.91 | — | 0.05 | 31.90 | 5 4 41.96 | — | 1.30 |
| | | | | | | | | | | | | | | 6 52.09 | — | 0.05 | 31.90 | 5 6 20.14 | — | 1.30 |
| | *+30° 24' | 6 | 8.6 | 10.2 | 13.3 | 26.8 | 28.8 | 30.8 | 32.5 | 34.4 | 48.2 | 51.2 | 53.1 | 8 30.72 | — | 0.05 | 31.90 | 5 7 58.77 | — | 1.31 |
| | *+30° 3' | 7 | 58.5 | 1.2 | 3.2 | 5.1 | 8.5 | — | 25.9 | 29.0 | 31.2 | 33.3 | 35.0 | 19 47.09 | — | 0.17 | 31.91 | 5 19 15.01 | — | 1.50 |
| | *+30° 3' | 8 | — | — | — | 2.8 | 4.9 | 7.0 | 9.0 | 10.9 | — | — | — | 20 6.92 | — | 0.07 | 31.91 | 5 19 34.94 | — | 1.50 |
| | a Leporis | 9 | 28.7 | 30.2 | 33.0 | 45.5 | 47.0 | 48.8 | 50.6 | 52.3 | 4.5 | 7.2 | 8.9 | 27 48.79 | + | 0.11 | 31.91 | 5 27 16.99 | — | 1.30 |
| ε Orionis | 10 | 9.4 | 10.9 | 13.4 | 25.0 | 26.8 | 28.6 | 30.3 | 31.7 | 43.7 | 46.0 | 47.7 | 30 28.50 | + | 0.06 | 31.91 | 5 29 56.65 | — | 1.26 | |
| | 125 Tauri | 11 | — | — | — | 53.3 | 56.1 | 57.8 | 10.0 | 12.8 | 14.6 | 16.5 | 18.7 | 33 7.48 | — | 30.98 | 31.91 | 5 32 4.59 | — | 1.40 |
| | *+38° 5' | 12 | — | — | — | 15.5 | 17.2 | 18.0 | 20.8 | 22.5 | — | — | — | 38 18.98 | — | 0.07 | 31.91 | 5 37 47.00 | — | 1.61 |
| | *+38° 5' | 13 | 55.5 | 57.4 | 0.6 | — | — | — | — | — | 38.9 | 41.7 | 44.1 | 38 19.70 | — | 0.09 | 31.91 | 5 37 47.70 | — | 1.61 |
| | B. A. C. 1881. . . | 14 | 13.8 | 17.6 | 23.9 | 54.1 | 58.1 | 2.4 | 6.5 | 10.4 | 40.9 | 47.3 | 51.6 | 50 2.45 | — | 0.30 | 31.92 | 5 49 30.23 | — | 3.20 |
| | *+26° 25' | 15 | 56.3 | 58.0 | 0.7 | 14.2 | 15.7 | 17.5 | 19.4 | 21.2 | 34.4 | 37.4 | 39.2 | 55 17.64 | — | 0.03 | 31.92 | 5 54 45.69 | — | 1.52 |
| | Weisse (2) 1795 . | 16 | 2.3 | 4.0 | 6.7 | — | — | — | — | — | — | — | — | 56 4.33 | + | 19.26 | 31.92 | 5 55 51.67 | — | 1.53 |
| | μ Geminorum . . | 17 | 40.4 | 42.1 | 44.7 | 57.6 | 58.3 | 1.2 | 2.9 | 4.7 | 17.5 | 20.2 | 22.0 | 16 1.05 | — | 0.02 | 31.92 | 6 15 29.11 | — | 1.57 |
| | *+24° 18' | 18 | — | — | — | 49.3 | 51.0 | 52.8 | 54.7 | 56.2 | — | — | — | 19 52.80 | — | 0.02 | 31.92 | 6 19 20.86 | — | 1.60 |
| | B. A. C. 2110. . . | 19 | 32.8 | 34 6 | 37.3 | 51.6 | 53.4 | 55.5 | 57.4 | 58.3 | 13.4 | 16.3 | 18.3 | 24 55.35 | — | 0.07 | 31.93 | 6 24 23.35 | — | 1.76 |
| | *+24° 38' | 20 | 35.7 | 37.2 | 40.0 | 53.2 | 54.8 | 56.6 | 58.4 | 0.1 | 13.3 | 15.8 | 17.7 | 31 56.62 | — | 0.03 | 31.93 | 6 31 24.66 | — | 1.66 |
| | Weisse (2) 909 . . | 21 | — | — | — | 45.3 | 48.0 | 49.6 | 1.8 | 4.8 | 6.5 | 8.4 | 10.4 | 32 59.39 | — | 30.69 | 31.93 | 6 31 56.77 | — | 1.66 |
| | *+36° 14' | 22 | 1.1 | 3.1 | 6.2 | 21.1 | 22.9 | 24.9 | 27.0 | 29.1 | 43.8 | 46.9 | 49.0 | 36 25.01 | — | 0.07 | 31.93 | 6 35 53.01 | — | 1.90 |
| | *+36° 14' | 23 | 39.2 | 41.5 | 43.7 | 45.6 | 48.7 | — | 3.2 | 6.5 | 8.4 | 10.6 | 12.8 | 36 26.02 | — | 0.16 | 31.93 | 6 35 53.93 | — | 1.90 |
| | 51 Cephei | 24 | — | — | — | 42.0 | 45.0 | 50.0 | 24.0 | 56.0 | — | — | — | 42 49.40 | — | 2.58 | 31.93 | — | — | 30.22 |
| | Weisse (2) 702. . | 25 | — | — | — | 29.5 | 32.6 | 34.7 | 48.1 | 51.2 | 53.2 | 55.3 | 57.7 | 31 45.29 | — | 35.09 | 32.03 | 2 36 38.17 | — | 0.08 |
| | γ Ceti | 26 | 5.8 | 7.3 | 9.5 | 21.7 | 23.3 | 24.6 | 26.7 | 28.0 | 40.1 | 42.7 | 44.2 | 37 24.93 | + | 0.01 | 32.01 | 2 36 52.93 | — | 0.38 |
| | *+8° 1' | 27 | 47.1 | 48.6 | 50.8 | 3.1 | 4.7 | 6.3 | 8.2 | 9.6 | 21.5 | 24.1 | 25.7 | 49 6.34 | — | 0.01 | 32.00 | 2 48 34.33 | + | 0.06 |
| | α Ceti | 28 | 1.4 | 2.8 | 5.1 | 17.2 | 18.7 | 20.6 | 22.1 | 23.7 | 35.4 | 38.0 | 39.5 | 56 20.41 | + | 0.01 | 32.00 | 2 55 48.42 | — | 0.48 |
| | ζ Arietis | 29 | 58.7 | 0.2 | 3.0 | 15.7 | 17.3 | 19.0 | 20.8 | 22.4 | 35.2 | 37.8 | 39.6 | 8 19.06 | — | 0.06 | 32.00 | 3 7 47.00 | — | 0.47 |
| | | Weisse (2) 461. . | 30 | 3.7 | 5.6 | 8.8 | 23.7 | 25.7 | 27.7 | 29.9 | 31.6 | 46.9 | 50.2 | 52.0 | 24 27.80 | — | 0.14 | 31.99 | 3 23 55.67 | — |
| *+46° 50' | | 31 | 6.1 | 8.3 | 12.0 | 29.4 | 31.7 | 34.2 | 36.8 | 38.5 | 56.4 | 59.8 | 2.4 | 28 34.17 | — | 0.20 | 31.99 | 3 28 1.98 | — | 0.58 |
| *+46° 50' | | 32 | — | — | — | — | — | — | — | — | 16.1 | 19.7 | 22.0 | 29 19.27 | — | 25.66 | 31.99 | 3 28 21.62 | — | 0.58 |
| γ Camelopardi . . | | 33 | 52.8 | 57.0 | 4.8 | 41.0 | 45.8 | 51.0 | 56.8 | 1.1 | 37.4 | 45.3 | 50.5 | 37 51.23 | — | 0.55 | 31.99 | 3 37 18.69 | — | 0.97 |
| Weisse (2) 1030 . | | 34 | — | — | — | 10.4 | 12.5 | 14.5 | 16.5 | 18.2 | 32.8 | 35.7 | 37.9 | 49 22.31 | — | 8.09 | 31.98 | 3 48 42.24 | — | 0.75 |
| *+35° 35' | | 35 | 45.1 | 47.6 | 50.3 | 4.7 | 6.8 | 9.0 | 10.8 | 12.7 | 27.5 | 30.3 | 32.8 | 50 8.90 | — | 0.13 | 31.98 | 3 49 36.79 | — | 0.76 |
| Weisse (2) 1143 . | | 36 | 48.7 | — | 54.6 | 8.6 | 10.5 | 12.8 | 14.7 | 16.5 | 31.3 | — | 36.4 | 55 12.68 | — | 0.13 | 31.98 | 3 54 40.57 | — | 0.80 |
| *+35° 2' | | 37 | — | — | — | 47.0 | 50.0 | 52.4 | 5.8 | 8.8 | 11.0 | 12.7 | 15.0 | 56 2.84 | — | 34.15 | 31.98 | 3 54 56.71 | — | 0.80 |
| Weisse (2) 1251 . | | 38 | 58.7 | 0.3 | 3.5 | 19.3 | 21.4 | 23.6 | 25.6 | 27.6 | 43.7 | 46.7 | 49.3 | 0 23.61 | — | 0.16 | 31.98 | 3 59 51.47 | — | 0.87 |
| Weisse (2) 1269 . | | 39 | 35.8 | 38.0 | 41.4 | 57.1 | 59.1 | 1.4 | 3.6 | 5.6 | 21.2 | 24.6 | 26.7 | 1 1.32 | — | 0.16 | 31.98 | 4 0 29.18 | — | 0.88 |
| | *+44° 26' | 40 | 34.0 | 36.0 | 39.6 | 56.5 | 58.5 | 0.8 | 3.2 | 5.3 | 22.1 | 25.7 | 27.8 | 7 0.86 | — | 0.18 | 31.98 | 4 6 28.70 | — | 0.95 |
| | *-31° 35' | 41 | — | — | — | 14.1 | 16.8 | 18.9 | 32.1 | 34.9 | 36.7 | 38.5 | 41.0 | 9 29.12 | — | 32.55 | 31.98 | 4 8 24.59 | — | 1.11 |
| | ε Tauri | 42 | 35.5 | 37.0 | 39.5 | 52.2 | 53.9 | 55.7 | 57.6 | 59.2 | 11.7 | 14.2 | 16.2 | 21 55.70 | — | 0.05 | 31.97 | 4 21 23.68 | — | 0.94 |
| | *-29° 59' | 43 | 21.8 | 23.2 | 26.2 | 40.1 | 41.9 | 43.8 | 45.8 | 47.4 | 1.4 | 4.2 | 6.1 | 42 43.81 | + | 0.14 | 31.96 | 4 42 11.99 | — | 1.24 |
| | Weisse 957 | 44 | 44.7 | 46.2 | 48.7 | 1.1 | 2.6 | 4.5 | 6.3 | 7.6 | 19.8 | 22.4 | 24.3 | 46 4.38 | — | 0.03 | 31.96 | 4 45 32.39 | — | 1.07 |
| | 4 Aurigæ | 45 | 59.9 | 1.7 | 4.8 | 19.9 | 21.9 | 24.0 | 26.0 | 27.9 | 43.2 | 46.3 | 48.4 | 51 24.00 | — | 0.14 | 31.96 | 4 50 51.90 | — | 1.26 |
| | 64 Eridani | 46 | 23.6 | 25.2 | 27.6 | 39.8 | 41.4 | 43.2 | 44.9 | 46.4 | 58.7 | 1.3 | 2.9 | 54 43.18 | + | 0.07 | 31.96 | 4 54 11.29 | — | 1.15 |
| | *+44° 33' | 47 | 44.1 | 46.2 | 49.6 | 6.9 | 8.8 | 11.1 | 13.4 | 15.4 | 32.1 | 35.8 | 38.0 | 58 11.04 | — | 0.18 | 31.96 | 4 57 38.90 | — | 1.42 |
| | *+30° 13' | 48 | 6.2 | 7.9 | 10.5 | 23.9 | 26.1 | 28.0 | 30.0 | 31.7 | 45.9 | 48.3 | 50.2 | 4 28.06 | — | 0.10 | 31.96 | 5 3 56.00 | — | 1.27 |
| | *+30° 13' | 49 | — | — | — | 1.4 | 3.4 | 5.4 | 7.2 | 8.9 | — | — | — | 5 5.26 | — | 0.09 | 31.96 | 5 4 33.21 | — | 1.28 |
| *+30° 21' | 50 | 8.6 | 10.5 | 13.3 | 27.0 | 29.0 | 31.0 | 32.9 | 34.7 | 48.3 | 51.4 | 53.2 | 8 30.90 | — | 0.10 | 31.96 | 5 7 58.84 | — | 1.30 | |

CORRECTIONS, &c.

26. Wire 3 of set B early; unsteady.
 27. Very faint.
 44. Bright and unsteady.
 45. Blurred.
 48. Faint.
 50. Following star.

| Date. | Error of clock. | Hourly rate. | " | e |
|--------------------------|-----------------|---------------|--------------|--------------|
| 1876. h. Jan. 25, 3.9 | s. — 31.98 | s. + 0.020 | s. — 0.21 | s. + 0.02 |

OBSERVATIONS WITH THE MERIDIAN TRANSIT INSTRUMENT

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | | | |
|-------------------------|------------------------------|-----------------------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|---------------|----------|---------------------------------|-------------------------|------------|------------|-------|-------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| 1876. Jan 25 T. | | | | | | | | | | | | | m. | s. | m. | s. | s. | h. | m. | s. | s. |
| β | B. A. C. 1641 . . . | 1 | | | | 49.3 | 51.3 | 53.2 | 55.2 | 57.0 | 11.8 | 14.7 | 16.8 | 12 1.16 | — | 7.73 | 31.95 | 5 11 21.48 | — | 1.40 | |
| | o Columbae . . . | 2 | 10.9 | 12.7 | 15.6 | 30.4 | 32.2 | 34.2 | 36.2 | 38.2 | 52.6 | 55.7 | 57.5 | 13 34.20 | + | 0.18 | 31.95 | 5 13 2.43 | | 1.41 | |
| | β Leporis . . . | 3 | 8.8 | 10.4 | 13.0 | 26.0 | 27.4 | 29.3 | 31.0 | 32.7 | 45.3 | 48.1 | 49.8 | 23 29.25 | + | 0.10 | 31.95 | 5 22 57.20 | | 1.29 | |
| | B. A. C. 1751 . . . | 4 | 49.5 | 52.7 | 59.3 | 28.4 | 32.1 | 35.8 | 40.1 | 43.1 | 12.2 | 19.1 | 22.6 | 30 35.93 | — | 0.42 | 31.95 | 5 30 3.56 | | 2.76 | |
| | *+35° 5' . . . | 5 | 55.6 | 57.6 | 0.8 | 15.9 | 18.0 | 19.9 | 21.9 | 23.9 | 38.7 | 42.4 | 44.6 | 38 19.94 | — | 0.15 | 31.95 | 5 37 47.84 | | 1.61 | |
| | δ | Aurigæ . . . | 6 | | | 34.2 | 48.2 | 50.9 | | 56.5 | 59.1 | 19.5 | 23.4 | 26.6 | 50 6.31 | — | 12.93 | 31.94 | 5 49 21.44 | | 2.20 |
| | | B. A. C. 1915 . . . | 7 | | | | 48.3 | 50.0 | 52.2 | 54.2 | 55.7 | | | | 53 52.08 | + | 0.16 | 31.94 | 5 53 20.30 | | 1.48 |
| | | Lalande 12053 . . . | 8 | | 22.1 | 24.7 | 37.3 | 39.1 | 40.6 | 42.8 | 44.3 | 57.0 | 59.8 | | 13 40.86 | — | 0.04 | 31.93 | 6 13 8.89 | | 1.53 |
| | μ | Geminorum . . . | 9 | 40.4 | 42.1 | 44.8 | | | | | | 17.4 | 20.0 | 21.9 | 16 1.10 | — | 0.07 | 31.93 | 6 15 29.10 | | 1.57 |
| | | Lalande 12678 . . . | 10 | 14.7 | 16.7 | 19.9 | 33.7 | 35.3 | 37.4 | 39.5 | 41.2 | | | | 31 29.80 | + | 7.54 | 31.93 | 6 31 5.41 | | 1.78 |
| | 51 | Cephei . . . | 11 | | | | 42.2 | 44.5 | 51.0 | 24.7 | 58.0 | | | | 42 50.80 | — | 3.87 | 31.92 | 6 42 | | 30.15 |
| Y. 26 | γ | Ceti . . . | 12 | 5.8 | 7.4 | 9.8 | 21.7 | 23.2 | 25.0 | 26.5 | 28.3 | 40.1 | 42.6 | 44.2 | 37 24.96 | + | 0.01 | 32.02 | 2 36 52.95 | — | 0.36 |
| | | B. A. C. 896 . . . | 13 | | | | 55.6 | 4.1 | 12.5 | 20.9 | 29.0 | | | | 50 12.42 | — | 0.45 | 32.02 | 2 49 39.95 | + | 0.60 |
| | | B. A. C. 940 . . . | 14 | 20.0 | 21.6 | 24.5 | 37.8 | 39.2 | 41.2 | 43.0 | 44.8 | 58.0 | 0.9 | 2.6 | 54 41.24 | + | 0.07 | 32.02 | 2 54 9.29 | — | 0.67 |
| | | Lalande 5682 . . . | 15 | 48.3 | 50.2 | 53.2 | 8.4 | 10.5 | 12.4 | 14.5 | 16.4 | 31.5 | 34.9 | 36.9 | 59 12.45 | — | 0.07 | 32.02 | 2 58 40.36 | | 0.30 |
| | | Lalande 5834 . . . | 16 | 13.5 | 15.9 | 17.9 | 19.8 | 23.1 | | 39.0 | 42.3 | 44.1 | 46.3 | 48.8 | 4 1.07 | — | 0.15 | 32.02 | 3 3 28.90 | | 0.35 |
| | ζ | *+37° 39' . . . | 17 | 40.6 | 42.8 | 45.6 | 0.7 | 2.8 | 4.8 | 7.0 | 8.8 | 23.8 | 27.0 | 29.3 | 4 4.84 | — | 0.06 | 32.02 | 3 3 32.76 | | 0.35 |
| | | Arietis . . . | 18 | 58.5 | 0.1 | 2.7 | 15.5 | 17.2 | 19.0 | 20.9 | 22.4 | 35.1 | 37.7 | 39.6 | 8 18.97 | — | 0.02 | 32.01 | 3 7 46.94 | | 0.45 |
| | | Persei . . . | 19 | 15.0 | 17.0 | 20.1 | 36.7 | 38.9 | 41.0 | 43.4 | 45.3 | 1.5 | 5.0 | 7.3 | 13 41.05 | — | 0.08 | 32.01 | 3 13 8.96 | | 0.41 |
| | | O. Arg. S. 2237 . . . | 20 | 49.5 | 51.2 | 53.7 | 6.1 | 7.8 | 9.6 | 11.3 | 12.9 | 25.5 | 27.9 | 29.8 | 18 9.57 | + | 0.06 | 32.01 | 3 17 37.62 | | 0.73 |
| | | Rumker 870 . . . | 21 | 55.2 | 56.7 | 59.3 | 12.0 | 13.5 | 15.3 | 17.0 | 18.6 | 31.2 | 33.9 | 35.6 | 23 15.30 | — | 0.02 | 32.01 | 3 22 43.27 | | 0.56 |
| | γ | *+46° 50' . . . | 22 | 6.3 | 8.4 | 12.0 | 29.6 | 31.7 | 34.1 | 36.6 | 38.6 | | | | 28 24.66 | + | 9.38 | 32.01 | 3 28 2.03 | | 0.56 |
| *+46° 50' . . . | | 23 | | | | 49.3 | 51.5 | 53.9 | 56.4 | 58.6 | 15.9 | 19.6 | 22.2 | 29 3.42 | — | 9.55 | 32.01 | 3 28 21.86 | | 0.56 | |
| Camelopardi . . . | | 24 | 52.4 | 57.0 | 4.8 | 41.2 | 46.4 | 51.2 | 56.1 | 0.7 | 37.3 | 45.0 | 49.7 | 37 51.07 | — | 0.26 | 32.01 | 3 37 18.80 | | 0.92 | |
| 27 Tauri . . . | | 25 | 38.8 | 41.0 | 42.7 | 44.3 | 47.3 | | 53.2 | 56.0 | 57.7 | 59.5 | 1.5 | 42 20.20 | — | 0.11 | 32.01 | 3 41 48.08 | | 0.68 | |
| 28 Tauri . . . | | 26 | 0.6 | 2.2 | 4.5 | 18.0 | 19.7 | 21.5 | 23.3 | 24.9 | 37.7 | 40.5 | 42.5 | 42 21.40 | — | 0.03 | 32.01 | 3 41 49.36 | | 0.68 | |
| γ | Eridani . . . | 27 | 27.6 | 29.4 | 31.9 | 44.2 | 45.8 | 47.7 | 49.2 | 50.8 | 3.0 | 5.7 | 7.4 | 52 47.52 | + | 0.05 | 32.01 | 3 52 15.56 | | 0.87 | |
| | A ¹ Tauri . . . | 28 | 34.2 | 35.9 | 38.4 | 51.3 | 53.0 | 54.8 | 56.6 | 58.3 | 10.9 | 13.7 | 15.5 | 57 54.78 | — | 0.02 | 32.01 | 3 57 22.75 | | 0.79 | |
| | A ² Tauri . . . | 29 | | | | 29.3 | 31.0 | 32.8 | 34.5 | 36.3 | | | | 58 32.78 | — | 0.01 | 32.01 | 3 58 0.76 | | 0.79 | |
| | ω ¹ Tauri . . . | 30 | 9.0 | 10.7 | 13.3 | 26.0 | 27.6 | 29.5 | 31.2 | 32.9 | 45.5 | 48.1 | 49.6 | 2 29.43 | — | 0.02 | 32.00 | 4 1 57.41 | | 0.82 | |
| | ω ² Eridani . . . | 31 | 47.5 | 48.9 | 51.5 | 3.6 | 5.0 | 6.8 | 8.4 | 10.0 | 21.9 | 24.6 | 26.2 | 10 6.76 | + | 0.03 | 32.00 | 4 9 34.79 | | 0.92 | |
| | 56 | Persei . . . | 32 | 45.1 | 47.0 | 50.0 | 4.2 | 6.2 | 8.2 | 10.2 | 11.9 | 26.4 | 29.2 | 31.3 | 17 8.15 | — | 0.05 | 32.00 | 4 16 36.10 | | 0.95 |
| | | *+17° 9' . . . | 33 | 57.9 | 59.6 | 2.2 | 14.6 | 16.2 | 17.9 | 19.6 | 21.2 | 33.7 | 36.4 | 38.0 | 19 17.94 | — | 0.01 | 32.00 | 4 18 45.93 | | 0.92 |
| | | B. A. C. 1399 . . . | 34 | | | | 41.7 | 50.2 | 0.2 | 10.2 | 19.6 | | | | 28 0.38 | — | 0.47 | 32.00 | 4 27 27.91 | | 3.77 |
| | | *+33° 31' . . . | 35 | 11.9 | 13.7 | 16.6 | 31.0 | 32.8 | 34.9 | 36.8 | 38.7 | 53.0 | 56.0 | 57.0 | 33 34.85 | — | 0.05 | 32.00 | 4 33 2.80 | | 1.08 |
| | | *+10° 42' . . . | 36 | 33.3 | 35.1 | | 38.5 | 41.1 | | 42.2 | 44.8 | | 48.1 | 50.1 | 42 11.65 | — | 0.08 | 32.00 | 4 41 39.57 | | 1.04 |
| | 4 | *+10° 42' . . . | 37 | | | | 10.8 | 12.3 | 14.1 | 15.7 | 17.2 | | | | 42 14.02 | + | 0.01 | 32.00 | 4 41 42.03 | | 1.04 |
| *+10° 42' . . . | | 38 | 57.0 | 58.5 | 0.9 | | | | | | 31.7 | 34.4 | 36.1 | 42 16.43 | — | 0.01 | 32.00 | 4 41 44.42 | | 1.04 | |
| Weisse 957 . . . | | 39 | | 46.2 | 48.6 | 0.9 | 2.6 | 4.2 | 5.8 | 7.5 | 19.8 | 22.4 | | 46 4.22 | + | 0.01 | 32.00 | 4 45 32.23 | | 1.07 | |
| *+37° 43' . . . | | 40 | 36.1 | 38.4 | 40.6 | 42.5 | 45.8 | | 1.8 | 5.1 | 7.1 | 9.1 | 11.4 | 51 23.79 | + | 0.15 | 32.00 | 4 50 51.64 | | 1.25 | |
| Aurigæ . . . | | 41 | 59.5 | 1.4 | 4.7 | 19.5 | 21.6 | 23.8 | 25.9 | 27.6 | 12.9 | 45.9 | 48.0 | 51 23.71 | — | 0.06 | 32.00 | 4 50 51.65 | | 1.25 | |
| β | Eridani . . . | 42 | | | | 39.7 | 41.4 | 43.2 | 44.7 | 46.2 | 58.6 | 1.4 | 2.8 | 54 49.75 | — | 6.60 | 31.99 | 4 54 11.16 | | 1.14 | |
| | Radcliffe 1377 . . . | 43 | | | | 58.5 | 18.5 | 40.5 | 0.5 | 20.5 | | | | 2 39.70 | — | 1.03 | 31.99 | 5 2 6.68 | | 11.08 | |
| | Leporis . . . | 44 | | | | 25.7 | 27.5 | 29.3 | 31.1 | 32.7 | 45.4 | 48.0 | 49.9 | 23 36.20 | — | 6.87 | 31.99 | 5 22 57.34 | | 1.29 | |
| | *+35° 5' . . . | 45 | 55.5 | | 0.4 | 15.5 | 17.6 | 19.7 | 21.8 | 23.7 | 38.7 | | 44.1 | 38 19.67 | — | 0.07 | 31.99 | 5 37 47.61 | | 1.60 | |
| | Orionis . . . | 46 | 41.7 | 43.2 | 45.5 | 57.6 | 59.2 | 0.9 | 2.5 | 4.1 | 16.0 | 18.6 | 20.2 | 49 0.86 | + | 0.01 | 31.98 | 5 48 28.89 | | 1.34 | |
| a | Weisse 1368 . . . | 47 | 36.8 | 38.2 | 40.0 | 53.2 | 54.7 | 56.4 | 58.2 | 59.7 | 12.0 | 14.7 | 15.8 | 54 56.42 | + | 0.05 | 31.98 | 5 54 24.49 | | 1.35 | |
| | Weisse 1378 . . . | 48 | | | | 31.6 | 33.9 | 35.7 | 40.4 | 48.8 | 51.0 | 53.1 | 55.5 | 55 44.50 | — | 28.65 | 31.98 | 5 54 43.87 | | 1.35 | |
| | Lalande 12053 . . . | 49 | 20.2 | 21.9 | 24.5 | 37.3 | 39.0 | 40.8 | 42.5 | 44.3 | 57.0 | 59.7 | 1.4 | 13 40.78 | — | 0.02 | 31.98 | 6 13 8.78 | | 1.54 | |
| | Lacaille 2232 . . . | 50 | 20.1 | | | 24.9 | 38.6 | 40.5 | 42.4 | 44.2 | 46.1 | 59.7 | | 16 42.33 | + | 0.08 | 31.98 | 6 16 10.43 | — | 1.49 | |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|-----------------------|--------------------|-----------------|--------------|--------------|
| 1876. Jan. 26, 4.4 | s. — 32.00 | s. + 0.012 | s. — 0.11 | s. + 0.02 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | |
|-------------------------|------------------------------|----------------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|-------------------|----------|---------------------------------|-------------------------|------------------------|------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | |
| 1876. Jan. 26 Y. | B. A. C. 2069 . . | 1 | 18.0 | 25.7 | 37.4 | 34.9 | 42.2 | 50.1 | 59.1 | 6.0 | 3.9 | 16.2 | 24.0 | m. s. 21 50.68 | — | 0.42 | — 31.98 | h. m. s. 6 21 18.28 | — 6.68 |
| | γ Geminorum . . | 2 | 46.7 | 48.2 | 50.7 | 3.2 | 4.7 | 6.5 | 8.2 | 9.8 | 22.3 | 25.0 | 26.6 | 31 6.54 | — | 0.01 | 31.97 | 6 30 34.56 | 1.55 |
| | Lalande 12805 . . | 3 | 50.7 | 52.6 | 55.4 | 9.6 | 11.5 | 13.5 | 15.4 | 17.3 | 31.3 | 34.3 | 36.3 | 35 13.45 | — | 0.05 | 31.97 | 6 34 41.43 | 1.81 |
| | 51 Cephei | 4 | .. | .. | .. | 42.0 | 15.0 | 49.0 | 22.0 | 55.0 | .. | .. | .. | 42 48.60 | — | 1.78 | 31.97 | .. | 30.04 |
| 28 | Lacaille 1124 . . | 5 | 46.5 | 48.2 | 50.6 | 4.3 | 5.9 | 7.7 | 9.4 | 11.2 | 24.6 | 27.4 | 29.1 | 27 7.72 | + | 0.07 | 31.22 | 3 26 36.57 | 0.78 |
| | B. A. C. 1111 . . | 6 | 13.9 | 17.5 | 22.8 | 49.0 | 52.4 | 56.2 | 59.7 | 2.8 | 28.8 | 34.3 | 38.1 | 31 55.95 | — | 0.17 | 31.22 | 3 31 24.56 | 0.58 |
| | o Persei | 7 | 41.9 | 43.7 | 46.5 | 0.5 | 2.5 | 4.5 | 6.3 | 8.0 | 22.3 | 25.2 | 27.1 | 37 4.41 | — | 0.05 | 31.21 | 3 36 33.15 | 0.61 |
| | η Tauri | 8 | 17.9 | 19.5 | 22.3 | 35.2 | 36.9 | 38.8 | 40.5 | 42.2 | 55.3 | 58.0 | 59.7 | 40 38.75 | — | 0.03 | 31.21 | .. | 0.65 |
| | B. A. C. 1211 . . | 9 | .. | .. | .. | 34.5 | 43.9 | 53.9 | 3.4 | 12.6 | .. | .. | .. | 49 53.66 | — | 0.47 | 31.21 | 3 49 21.98 | 1.83 |
| | A ¹ Tauri | 10 | 33.4 | 35.0 | 37.5 | 50.4 | 52.2 | 53.9 | 55.6 | 57.4 | 10.0 | 13.0 | 14.7 | 57 53.92 | — | 0.02 | 31.21 | 3 57 22.69 | 0.76 |
| | γ Tauri | 11 | 56.7 | 58.2 | 0.6 | 13.0 | 14.7 | 16.4 | 18.1 | 19.8 | 32.0 | 34.6 | 36.5 | 13 16.42 | — | 0.01 | 31.21 | .. | 0.86 |
| | 31 | a Ceti | 12 | 58.8 | 0.6 | 3.0 | 14.9 | 16.5 | 18.1 | 19.6 | 21.2 | 33.2 | 35.6 | 37.4 | 56 18.08 | + | 0.01 | 29.70 | 2 55 48.39 |
| B. A. C. 978 . . | | 13 | 41.5 | 43.1 | 46.0 | 59.6 | 1.6 | 3.5 | 5.2 | 6.8 | 20.3 | 23.3 | 25.0 | 3 3.26 | — | 0.01 | 29.69 | 3 2 33.58 | 0.66 |
| ζ Arietis | | 14 | 56.2 | 57.9 | 0.3 | 13.2 | 14.9 | 16.6 | 18.4 | 20.0 | 22.7 | 25.3 | 27.2 | 8 16.61 | — | 0.01 | 29.69 | 3 7 46.93 | 0.39 |
| ι Persei | | 15 | 12.5 | 14.6 | 17.9 | 34.2 | 36.3 | 38.5 | 40.7 | 43.0 | 59.1 | 2.5 | 4.6 | 13 38.54 | — | 0.01 | 29.69 | 3 13 8.86 | 0.32 |
| | Lacaille 1102 . . | 16 | 42.3 | 44.0 | 46.7 | 0.3 | 2.2 | 4.0 | 6.0 | 7.8 | 21.4 | 24.1 | 26.1 | 22 4.08 | — | 0.01 | 29.69 | 3 21 34.40 | 0.76 |
| | Lacaille 1114 . . | 17 | 32.0 | 33.7 | 36.3 | 49.4 | 50.1 | 53.0 | 54.7 | 56.2 | 9.1 | 12.1 | 13.7 | 24 52.75 | — | 0.01 | 29.68 | 3 24 23.08 | 0.72 |
| | Lacaille 1134 . . | 18 | 59.7 | 1.5 | 4.4 | 18.5 | 20.4 | 22.1 | 24.1 | 25.9 | 39.7 | 42.6 | 44.7 | 29 22.15 | — | 0.01 | 29.68 | 3 28 52.48 | 0.82 |
| | γ Camelopardi . . | 19 | 49.5 | 54.2 | 1.6 | 38.6 | 43.3 | 48.2 | 53.3 | 57.9 | 34.9 | 42.2 | 47.0 | 37 48.25 | — | 0.03 | 29.68 | 3 37 18.60 | 0.67 |
| | Weisse (2) 882 . . | 20 | 30.4 | 32.5 | 35.8 | 52.9 | 54.9 | 57.3 | 59.3 | 1.5 | 18.5 | 21.9 | 24.3 | 41 57.21 | — | 0.01 | 29.68 | 3 41 27.54 | 0.60 |
| | Rumker 1023 . . | 21 | 34.2 | 35.7 | 38.3 | 50.7 | 52.3 | 54.0 | 55.7 | 57.3 | 9.8 | 12.4 | 14.1 | 47 54.05 | — | 0.01 | 29.68 | 3 47 24.38 | 0.67 |
| | γ Eridani | 22 | 25.4 | 26.8 | 29.5 | 41.7 | 43.4 | 45.1 | 47.0 | 48.5 | 0.6 | 3.2 | 4.9 | 52 45.10 | — | 0.01 | 29.67 | 3 52 15.44 | 0.81 |
| | Lacaille 1326 . . | 23 | 25.1 | 26.9 | 29.8 | 44.5 | 46.4 | 48.3 | 50.3 | 52.3 | 6.8 | 9.8 | 11.8 | 57 43.36 | — | 0.01 | 29.67 | 3 57 18.70 | 1.00 |
| | ω ¹ Tauri | 24 | 6.7 | 8.5 | 11.1 | 23.6 | 25.3 | 27.0 | 28.7 | 30.4 | 43.0 | 45.6 | 47.5 | 2 27.01 | — | 0.01 | 29.67 | 4 1 57.38 | 0.76 |
| | *—31° 35' | 25 | 31.0 | 32.9 | 35.8 | 49.9 | 51.6 | 53.6 | 55.6 | 57.5 | 11.5 | 14.5 | 16.5 | 8 53.67 | — | 0.01 | 29.67 | 4 8 24.01 | 1.01 |
| | Weisse (2) 203 . . | 26 | 40.2 | 41.8 | 44.3 | 56.9 | 58.5 | 0.3 | 1.9 | 3.6 | 16.0 | 18.7 | 20.5 | 12 0.25 | + | 0.01 | 29.67 | 4 11 30.59 | 0.82 |
| | *+6° 32' | 27 | .. | .. | .. | 8.9 | 10.6 | 12.3 | 13.9 | 15.5 | 27.4 | 30.0 | 31.7 | 18 18.79 | — | 6.52 | 29.66 | 4 17 42.63 | 0.86 |
| | Weisse (2) 458 . . | 28 | 45.7 | 47.4 | 50.2 | 3.7 | 5.5 | 7.3 | 9.2 | 11.0 | 24.5 | 27.3 | 29.0 | 23 7.35 | + | 0.01 | 29.66 | 4 22 37.70 | 0.91 |
| | B. A. C. 1404 . . | 29 | .. | .. | .. | 58.2 | 59.9 | 1.9 | 3.9 | 5.4 | 19.5 | 22.3 | 24.4 | 26 9.44 | — | 7.52 | 29.66 | 4 25 32.26 | 1.08 |
| | B. A. C. 1427 . . | 30 | 1.9 | 3.5 | 6.0 | 17.9 | 19.5 | 21.2 | 22.9 | 24.3 | 36.2 | 38.8 | 40.4 | 30 21.15 | + | 0.01 | 29.66 | 4 29 51.50 | 0.94 |
| | Weisse 727 | 31 | 41.7 | 43.3 | 45.6 | 57.6 | 59.1 | 0.7 | 2.4 | 4.0 | 15.8 | 18.4 | 20.1 | 35 0.79 | — | 0.01 | 29.66 | 4 34 31.14 | 0.96 |
| | Lacaille 1611 . . | 32 | 46.2 | 47.8 | 50.9 | 5.5 | 7.3 | 9.5 | 11.6 | 13.4 | 27.8 | 31.0 | 33.1 | 45 9.46 | — | 0.01 | 29.65 | 4 44 39.82 | 1.21 |
| | B. A. C. 1518 . . | 33 | 52.2 | 54.0 | 56.6 | 9.7 | 11.4 | 13.1 | 15.0 | 16.8 | 29.8 | 32.4 | 34.3 | 49 13.21 | — | 0.01 | 29.65 | 4 48 43.57 | 1.07 |
| | *—29° 3' | 34 | 49.3 | 51.0 | 53.8 | 7.4 | 9.2 | 11.1 | 13.0 | 14.6 | 28.5 | 31.4 | 33.2 | 54 11.14 | — | 0.01 | 29.65 | 4 53 41.50 | 1.18 |
| | II Orionis | 35 | 40.0 | 41.5 | 44.0 | 56.5 | 58.1 | 59.9 | 1.6 | 3.2 | 15.4 | 18.0 | 19.7 | 57 59.81 | + | 0.01 | 29.65 | 4 57 30.17 | 1.09 |
| | *—23° 48' | 36 | .. | .. | .. | 45.0 | 46.6 | 48.6 | 50.3 | 52.0 | 4.9 | 7.6 | 9.5 | 0 55.56 | — | 7.06 | 29.64 | 5 0 18.86 | 1.17 |
| | *—25° 37' | 37 | 16.3 | 17.8 | 20.3 | .. | .. | .. | .. | .. | 54.5 | 57.1 | 58.0 | 6 37.33 | — | 0.00 | 29.64 | 5 6 7.69 | 1.20 |
| | B. A. C. 1641 . . | 38 | 27.5 | 29.2 | 32.2 | 46.6 | 48.7 | 50.8 | 52.9 | 54.6 | 9.0 | 12.3 | 14.3 | 11 50.74 | + | 0.01 | 29.64 | 5 11 21.11 | 1.31 |
| | o Columbæ | 39 | 8.2 | 10.2 | 13.0 | 27.6 | 29.5 | 31.6 | 33.7 | 35.5 | 50.0 | 53.2 | 55.1 | 13 31.60 | + | 0.01 | 29.64 | 5 13 1.97 | 1.32 |
| | *+39° 3' | 40 | 55.8 | 58.1 | 0.4 | 2.5 | 5.9 | .. | 23.5 | 26.6 | 28.8 | 31.0 | 33.4 | 19 44.60 | — | 0.08 | 29.64 | 5 19 14.88 | 1.44 |
| | *+39° 3' | 41 | .. | .. | .. | 45.5 | 47.3 | 49.5 | 51.7 | 53.6 | .. | .. | .. | 19 49.52 | + | 0.02 | 29.64 | 5 19 19.90 | 1.44 |
| | *+39° 3' | 42 | .. | .. | .. | 0.2 | 2.1 | 4.2 | 6.3 | 8.4 | .. | .. | .. | 20 4.24 | — | 0.02 | 29.64 | 5 19 34.62 | 1.44 |
| | O. Arg. N. 5930 . . | 43 | 19.3 | 23.6 | 31.1 | 6.5 | 11.0 | 16.4 | 21.0 | 25.5 | 0.4 | 8.4 | 12.8 | 25 16.00 | — | 0.03 | 29.63 | 5 24 46.40 | 3.04 |
| | *+25° 32' | 44 | .. | .. | .. | 43.5 | 45.1 | 47.0 | 48.7 | 50.5 | .. | .. | .. | 30 46.66 | + | 0.02 | 29.63 | 5 30 17.35 | — 1.34 |
| | δ Ursæ Minoris, S. P. | 45 | .. | .. | .. | 35.0 | 1.0 | 28.0 | 57.0 | 23.5 | .. | .. | .. | 12 28.70 | — | 0.22 | 29.61 | .. | + 20.38 |
| | B. A. C. 2069 . . | 46 | 15.2 | 22.5 | 34.0 | 31.5 | 39.3 | 47.0 | 55.0 | 2.2 | 0.2 | 12.6 | 20.2 | 21 47.25 | + | 0.05 | 29.61 | 6 21 17.69 | — 6.51 |
| | *—31° 9' | 47 | 24.7 | 26.3 | 29.1 | 43.2 | 45.1 | 46.9 | 48.8 | 50.7 | 4.7 | 7.5 | 9.3 | 27 46.94 | — | 0.01 | 29.61 | 6 27 17.34 | 1.48 |
| | γ Geminorum . . | 48 | 41.3 | 45.8 | 48.3 | 0.7 | 2.3 | 4.0 | 5.8 | 7.5 | 19.7 | 22.5 | 24.1 | 31 4.09 | — | 0.01 | 29.61 | 6 30 34.49 | 1.55 |
| | O. Arg. S. 5522 . . | 49 | 58.4 | 59.8 | 2.5 | 15.0 | 17.7 | 19.8 | 21.7 | 23.4 | 36.9 | 39.6 | 41.5 | 37 19.75 | + | 0.01 | — 29.60 | 6 36 50.16 | — 1.47 |

CORRECTIONS, &c.

37. Very faint.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------------------|--------------------|-----------------|--------------|--------------|
| 1876. h. Jan. 28, 4.0 | s. — 31.21 | s. + 0.012 | s. — 0.11 | s. + 0.02 |
| 31, 4.8 | — 29.65 | + 0.025 | 0.00 | + 0.01 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. | | |
|-------------------------|---------------------------------|---------|--------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|-----------|--------|---------------------------------|-------------------------|-------|--------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | | |
| | | | | | | | | | | | | m. | s. | m. | s. | s. | h. | m. | s. | s. |
| 1876. Jan. 31 Y. | 51 Cephei | 1 | | | | 36.0 | 7.0 | 43.0 | 18.0 | 49.5 | | | 42 42.70 | + | 0.27 | -29.60 | | - | 29.13 | |
| | *-26° 5' | 2 | 6.9 | 8.6 | 11.0 | 24.3 | 26.0 | 27.7 | 29.8 | 31.7 | 44.8 | 47.6 | 49.3 | 54 | 0.01 | 29.60 | 6 53 | 58.38 | 1.50 | |
| | B. A. C. 2326 | 3 | | | | 9.0 | 21.0 | 33.0 | 47.0 | 59.0 | | | 5 33.80 | | 0.16 | 29.59 | 7 5 | 4.37 | 12.13 | |
| | δ Geminorum | 4 | 53.6 | 55.4 | 58.1 | 11.1 | 12.6 | 14.4 | 16.2 | 17.9 | 30.6 | 33.2 | 35.1 | 13 | 0.01 | 29.59 | 7 12 | 44.80 | 1.77 | |
| | *-24° 40' | 5 | 24.5 | 26.3 | 28.9 | 42.0 | 43.9 | 45.7 | 47.3 | 48.9 | 2.3 | 5.0 | 6.8 | 17 | 0.01 | 29.59 | 7 17 | 16.02 | 1.52 | |
| | Weisse (2) 613. | 6 | 14.6 | 16.7 | 19.8 | 36.1 | 37.9 | 40.0 | 42.2 | 44.4 | 0.3 | 3.7 | 5.8 | 23 | 0.01 | 29.59 | 7 23 | 10.57 | 2.29 | |
| Feb. 2 T. | Weisse 1105 | 7 | 51.2 | 52.6 | 55.1 | | | | | 25.1 | 27.9 | 29.6 | 52 10.25 | - | 0.02 | 28.81 | 4 51 | 41.42 | 1.02 | |
| | 11 Orionis. | 8 | 55.6 | 57.3 | 59.1 | 0.9 | 2.5 | | 30.3 | 32.8 | 34.6 | 36.3 | 38.3 | 58 16.75 | - | 17.77 | 28.81 | 4 57 | 30.17 | 1.07 |
| | Weisse 1379 | 9 | 49.1 | 50.6 | 53.1 | 5.2 | 6.6 | 8.4 | 10.1 | 11.7 | 23.9 | 26.6 | 28.2 | 2 8.50 | + | 0.05 | 28.81 | 5 1 | 39.74 | 1.09 |
| | B. A. C. 1619 | 10 | 24.5 | 31.8 | 43.6 | 40.1 | 47.8 | 55.6 | 3 3 | 10.6 | 7.5 | 19.4 | 27.7 | 10 55.63 | - | 1.11 | 28.82 | 5 10 | 25.70 | 4.08 |
| | *+38° 58' | 11 | | | | 1.5 | 4.9 | 7.2 | 21.0 | 24.0 | 26.1 | 28.5 | 31.0 | 19 18.02 | | 36.01 | 28.83 | 5 18 | 13.18 | 1.40 |
| | Schjellerup 1787 | 12 | 34.0 | 35.7 | 38.0 | 49.8 | 51.4 | 53.1 | 55.7 | 56.2 | 7.6 | 10.3 | 12.2 | 21 53.00 | | 0.00 | 28.83 | 5 21 | 24.17 | 1.16 |
| | Lalande 10666. | 13 | | | | 6.4 | 9.6 | 11.7 | | | | 33.2 | 35.5 | 35 19.28 | | 32.15 | 28.85 | 5 34 | 18.28 | 1.52 |
| | *+38° 11' | 14 | | | | 22.2 | 25.5 | 27.4 | 41.8 | 45.0 | 46.7 | 49.0 | 51.5 | 36 38.64 | | 35.61 | 28.85 | 5 35 | 34.18 | 1.53 |
| | *-20° 46' | 15 | | | | 17.9 | 49.4 | 51.0 | 53.1 | 54.8 | 7.4 | 10.0 | 11.6 | 39 58.15 | - | 6.83 | 28.85 | 5 39 | 22.47 | 1.26 |
| | Lacaille 1993 | 16 | 3.0 | 4.8 | 7.8 | | 24.4 | 26.6 | 28.5 | | 45.2 | 48.3 | 50.3 | 43 26.54 | + | 0.17 | 28.85 | 5 42 | 57.86 | 1.39 |
| | *+72° 36' | 17 | | | | 3.5 | 9.4 | 14.7 | 20.5 | 26.4 | | | | 49 14.90 | - | 0.62 | 28.85 | 5 48 | 45.43 | 3.85 |
| | O. Arg. N. 6356 | 18 | 26.1 | 31.2 | 39.7 | 18.5 | 23.7 | 29.0 | 35.0 | 39.9 | 19.8 | 27.7 | 33.0 | 51 29.42 | - | 0.65 | 28.85 | 5 50 | 59.92 | 3.87 |
| | Lacaille 2105 | 19 | 45.4 | 47.5 | 49.5 | 51.3 | 54.3 | | 2.3 | 4.8 | 6.8 | 8.7 | 10.8 | 57 28.14 | + | 0.04 | 28.86 | 5 56 | 59.32 | 1.36 |
| | Lacaille 2107 | 20 | 19.5 | 21.3 | 23.9 | 37.9 | 39.7 | 41.6 | 43.4 | 45.0 | 58.2 | 1.0 | 3.1 | 57 41.33 | + | 0.12 | 28.86 | 5 57 | 12.59 | 1.36 |
| | *+31° 27' | 21 | | | | 24.4 | 31.6 | 33.8 | 46.6 | 49.1 | 51.1 | 52.9 | 55.1 | 3 43.08 | - | 32.43 | 28.87 | 6 2 | 41.78 | 1.59 |
| | *-27° 33' | 22 | | | | 31.1 | 34.0 | 35.9 | 48.3 | 50.7 | 52.7 | 54.8 | 56.9 | 6 45.55 | | 31.29 | 28.87 | 6 5 | 45.39 | 1.38 |
| | Lalande 12053 | 23 | 17.2 | 18.8 | 21.4 | 34.3 | 35.8 | 37.7 | 39.5 | 41.2 | 53.9 | 56.0 | 58.3 | 13 37.04 | | 0.09 | 28.87 | 6 13 | 8.68 | 1.51 |
| | μ Geminorum | 24 | | | | 54.4 | 56.5 | 58.3 | 59.0 | 1.6 | | | | 15 58.14 | - | 0.09 | 28.88 | 6 15 | 29.17 | 1.53 |
| | *-31° 6' | 25 | 23.5 | 25.3 | 27.9 | 42.1 | 43.9 | 45.9 | 47.8 | 49.5 | | | | 27 38.24 | + | 7.71 | 28.89 | 6 27 | 17.06 | 1.46 |
| | γ Geminorum | 26 | 43.4 | 45.0 | 47.5 | 0.3 | 1.7 | 3.5 | 5.2 | 6.7 | 19.2 | 21.7 | 23.6 | 31 3.44 | - | 0.17 | 28.90 | 6 30 | 34.47 | 1.54 |
| | *+36° 14' | 27 | | | | | | | 20.1 | 23.0 | 25.2 | 27.2 | 29.5 | 35 25.00 | | 42.58 | 28.90 | 6 34 | 13.52 | 1.87 |
| | *+36° 14' | 28 | 0.9 | 2.8 | 5.2 | 7.3 | 8.9 | | 42.8 | 46.0 | 47.8 | 49.8 | 52.1 | 35 26.36 | | 21.37 | 28.90 | 6 34 | 36.09 | 1.87 |
| | Lalande 12849 | 29 | 58.5 | 0.2 | 3.2 | 18.7 | 20.4 | 22.3 | 24.4 | 26.1 | 41.0 | 44.0 | 45.9 | 36 22.25 | | 0.18 | 28.90 | 6 35 | 53.17 | 1.88 |
| | 51 Cephei | 30 | | | | 39.8 | 12.4 | 48.6 | 22.5 | 56.0 | | | | 42 47.86 | - | 4.86 | 28.91 | | 28.75 | |
| | *-30° 45' | 31 | 22.5 | 24.4 | 27.7 | 41.9 | 43.6 | 45.5 | 47.2 | 49.3 | 3.0 | 6.0 | 8.1 | 52 45.38 | + | 0.14 | 23.92 | 6 52 | 16.60 | 1.51 |
| | *-30° 45' | 32 | | | | 15.4 | 17.2 | 19.1 | 21.2 | 23.3 | | | | 53 19.18 | | 0.15 | 28.92 | | 1.51 | |
| | *-30° 45' | 33 | 30.5 | 32.5 | 35.3 | 48.9 | 50.9 | 52.9 | 51.7 | 50.5 | 10.5 | 13.3 | 15.1 | 53 52.83 | + | 0.14 | 28.92 | 6 53 | 24.05 | 1.51 |
| | Weisse (2) 1747 | 34 | 59.7 | 1.2 | 3.6 | 17.2 | 18.6 | 20.6 | 22.4 | 24.0 | 36.7 | 39.3 | 41.3 | 59 20.42 | - | 0.10 | 28.92 | 6 58 | 51.40 | 1.73 |
| | *+22° 53' | 35 | 5.6 | 7.2 | 9.5 | 22.7 | | 26.2 | | 29.2 | 42.5 | 45.5 | 47.0 | 0 26.16 | | 0.10 | 28.92 | 6 59 | 57.14 | 1.73 |
| | *-0° 16' | 36 | 15.4 | 16.6 | 19.0 | 31.0 | 32.4 | 33.7 | 35.2 | 36.5 | 48.8 | 51.2 | 53.0 | 5 33.89 | | 0.00 | 28.93 | 7 5 | 4.96 | 1.52 |
| | *+38° 35' | 37 | 56.9 | 59.3 | 1.3 | 3.5 | 6.9 | | 24.2 | 27.0 | 29.1 | 31.3 | 32.6 | 9 45.21 | - | 0.28 | 28.93 | 7 9 | 16.00 | 2.12 |
| | *+38° 35' | 38 | 41.4 | 43.3 | 46.5 | 1.7 | 3.7 | 5.8 | 7.9 | 9.8 | | | | 9 57.51 | + | 8.10 | 28.93 | 7 9 | 36.68 | 2.12 |
| | δ Geminorum | 39 | 53.1 | 54.7 | 57.5 | 10.3 | 12.1 | 13.8 | 15.5 | 17.2 | 30.0 | 32.8 | 34.7 | 13 13.79 | - | 0.10 | 28.94 | 7 12 | 44.75 | 1.77 |
| Y. 4 | Weisse 456 | 40 | 33.2 | 24.9 | 37.3 | 49.2 | 51.0 | 52.6 | 54.0 | 55.6 | 7.8 | 10.2 | 12.0 | 26 52.53 | | 0.04 | 28.47 | 3 26 | 24.02 | 0.59 |
| | 10 Tauri | 41 | 42.6 | 44.3 | 46.8 | 58.8 | 0.2 | 1.8 | 3.6 | 5.0 | 17.0 | 19.5 | 21.0 | 31 1.87 | | 0.06 | 28.47 | 3 30 | 33.34 | 0.57 |
| | Lalande 6820 | 42 | 35.4 | 37.5 | 40.4 | 55.2 | 57.2 | 59.0 | 1.0 | 3.4 | 18.1 | 21.1 | 23.0 | 36 59.21 | | 0.17 | 28.46 | 3 36 | 30.58 | 0.49 |
| | η Tauri | 43 | 15.1 | 16.8 | 19.6 | 32.5 | 34.2 | 36.0 | 37.8 | 39.5 | 52.5 | 55.2 | 56.8 | 40 36.00 | | 0.12 | 28.46 | 3 40 | 71.42 | 0.55 |
| | *-19° 7' | 44 | 49.7 | 51.3 | 53.8 | 6.5 | 8.1 | 9.8 | 11.6 | 13.1 | 25.9 | 28.6 | 30.2 | 45 9.87 | | 0.02 | 28.46 | 3 44 | 41.39 | 0.74 |
| | τ [*] Eridani. | 45 | | | | 12.3 | 14.9 | 16.5 | 28.6 | 31.5 | 33.1 | 34.9 | 37.0 | 49 26.10 | | 30.62 | 28.46 | 3 48 | 27.02 | 0.79 |
| | γ Eridani. | 46 | 24.1 | 25.8 | 28.5 | 40.7 | 42.2 | 44.1 | 45.7 | 47.4 | 59.5 | 2.0 | 3.5 | 52 43.95 | | 0.03 | 28.46 | 3 52 | 15.46 | 0.75 |
| | c Persei | 47 | 40.8 | 43.4 | 46.8 | 4.4 | 6.7 | 9.2 | 11.5 | 13.8 | 31.7 | 35.3 | 37.5 | 0 9.19 | | 0.23 | 28.45 | 3 59 | 40.51 | 0.72 |
| | B. A. C. 1282 | 48 | 31.7 | 34.0 | 37.8 | 56.4 | 58.3 | 1.0 | 3.8 | 5.9 | 24.0 | 27.8 | 30.3 | 5 1.00 | | 0.24 | 28.45 | 4 4 | 32.31 | 0.78 |
| | B. A. C. 1300 | 49 | 45.8 | 49.6 | 55.4 | 23.7 | 27.3 | 30.8 | 35.0 | 38.7 | 6.8 | 12.8 | 15.8 | 9 31.06 | - | 0.42 | 28.45 | 4 9 | 2.19 | 1.04 |
| | *-25° 40' | 50 | 18.8 | 20.5 | 23.3 | 36.6 | 38.2 | 39.9 | 41.8 | 43.6 | 56.8 | 59.7 | 1.2 | 18 40.04 | | 0.00 | -28.44 | 4 18 | 11.60 | - 0.94 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|------------------------|-------------------------------------|--------------------------|------------------------|--------------------|
| 1876. Feb. 2, 4. | h. s. 6.2 - 28.88 5.8 - 28.40 | s. - 0.056 + 0.029 | s. - 0.24 - 0.13 | s. 0.00 0.06 |

8. Very unsteady.

11. Not good; faint and blurred.

15. Faint.

21. Several stars in the field.

25. Only star in the field.

31. Brighter.

35. Northern one of two stars of about the same right ascension.

36. Three stars; observed the faintest.

37. Preceding and fainter.

38. Following and brighter.

February 3. Image west of II. Clamp east.

Image west of 21. Clamp west.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | |
|-------------------------|----------------------------|-----------------|--------------------------------|------|------|------|------|------|------|-------|------|------|----------|---------------|----------|---------------------------------|-------------------------|------------|------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | |
| 1876. Feb. 4 Y. | Lalande 8431 . . . | 1 | 6.3 | 8.1 | 10.7 | 23.0 | 24.4 | 26.0 | 27.7 | 29.2 | 41.5 | 44.0 | 45.5 | m. s. | m. s. | s. | h. m. s. | s. | |
| | B. A. C. 1399 . . . | 2 | .. | .. | .. | 36.7 | 46.9 | 56.6 | 5.2 | 14.7 | .. | .. | .. | 22 26.04 | — | 0.04 | 4 21 57.56 | — 0.88 | |
| | *+15° 46' . . . | 3 | .. | .. | .. | 29.5 | 31.2 | 32.8 | 34.7 | 36.4 | .. | .. | .. | 27 56.02 | — | 1.20 | 4 27 26.38 | 2.92 | |
| | σ ² Tauri . . . | 4 | 20.2 | 22.3 | 24.7 | .. | .. | .. | .. | .. | 56.0 | 58.7 | 0.2 | 31 32.92 | — | 0.11 | 4 31 4.37 | 0.89 | |
| | B. A. C. 1450 . . . | 5 | 5.6 | 7.5 | 10.2 | 23.5 | 24.9 | 26.8 | 28.6 | 30.5 | 43.5 | 46.4 | 48.0 | 32 40.35 | — | 0.09 | 4 32 11.82 | 0.90 | |
| | | | | | | | | | | | | | | 35 26.86 | — | 0.00 | 4 34 58.42 | 1.01 | |
| | B. A. C. 1518 . . . | 6 | 51.0 | 52.7 | 55.4 | 8.6 | 10.3 | 11.9 | 13.8 | 15.6 | 28.8 | 31.4 | 33.1 | 40 12.05 | — | 0.13 | 4 48 43.49 | 1.02 | |
| | *+60° 14' . . . | 7 | .. | .. | .. | 42.4 | 45.3 | 48.5 | 52.3 | 55.4 | .. | .. | .. | 52 48.78 | — | 0.37 | 4 52 19.98 | 1.64 | |
| | *+45° 6' . . . | 8 | 31.9 | 34.2 | 37.9 | 54.5 | 56.8 | 59.5 | 1.8 | 4.0 | 20.5 | 24.1 | 26.0 | 58 59.20 | — | 0.22 | 4 58 30.55 | 1.29 | |
| | Rumker N. F. 2553 | 9 | 17.8 | 19.7 | 22.3 | 36.3 | 37.9 | 39.8 | 41.7 | 43.7 | 57.5 | 0.3 | 2.0 | 3 39.91 | — | 0.14 | 5 3 11.35 | 1.16 | |
| *+30° 21' . . . | 10 | 4.7 | 6.6 | 9.7 | 23.5 | 25.3 | 26.9 | 28.9 | 30.7 | 44.6 | 47.5 | 49.3 | 8 27.06 | — | 0.14 | 5 7 58.50 | 1.20 | | |
| a | *-25° 21' . . . | 11 | 34.9 | 37.0 | 39.8 | 52.8 | 54.6 | 56.4 | 58.2 | 59.9 | 13.0 | 15.9 | 17.6 | 14 56.37 | — | 0.00 | 5 14 27.95 | 1.17 | |
| | *+39° 3' . . . | 12 | 38.4 | 41.6 | 43.8 | 59.0 | .. | 2.8 | .. | 7.3 | 22.8 | 25.6 | 27.0 | 20 3.08 | — | 0.18 | 5 19 34.49 | 1.39 | |
| | Orionis . . . | 13 | 38.0 | 39.9 | 42.0 | 54.1 | 55.4 | 57.2 | 58.9 | 0.4 | 12.6 | 14.9 | 16.6 | 48 57.27 | — | 0.08 | 5 48 28.79 | 1.28 | |
| | *-31° 59' . . . | 14 | .. | .. | .. | 37.4 | 39.3 | 41.0 | 43.0 | 44.9 | .. | .. | .. | 52 41.12 | — | 0.00 | 5 52 12.72 | 1.36 | |
| | B. A. C. 1915 . . . | 15 | 25.6 | 27.6 | 30.6 | 44.5 | 46.2 | 48.2 | 50.3 | 52.1 | 5.9 | 9.0 | 10.9 | 53 48.26 | + | 0.01 | 5 53 19.87 | 1.36 | |
| | O. Arg. S. 4625 (1st*) | 16 | 42.1 | 43.7 | 46.5 | 0.1 | 1.9 | 3.7 | 5.7 | 7.6 | 21.2 | 24.0 | 25.9 | 1 3.85 | — | 0.00 | 6 0 35.46 | 1.36 | |
| | κ Columbae . . . | 17 | 14.8 | 16.7 | 19.7 | 34.5 | 36.2 | 38.4 | 40.3 | 42.2 | 56.8 | 59.7 | 1.7 | 12 38.27 | + | 0.02 | 6 12 9.90 | 1.44 | |
| | Weisse 416 . . . | 18 | 11.6 | 13.2 | 15.7 | 28.4 | 29.8 | 31.4 | 33.0 | 34.6 | 47.2 | 49.6 | 51.2 | 16 31.43 | — | 0.03 | 6 16 3.01 | 1.35 | |
| | B. A. C. 2069 . . . | 19 | .. | .. | .. | 31.8 | 38.9 | 47.0 | 55.5 | 3.0 | .. | .. | .. | 21 47.24 | — | 0.00 | 6 21 17.90 | 6.33 | |
| | *-31° 9' . . . | 20 | 23.2 | 25.4 | 28.2 | 42.0 | 43.8 | 45.7 | 47.6 | 49.3 | 3.4 | 6.4 | 8.0 | 27 45.73 | + | 0.01 | 6 27 17.36 | 1.44 | |
| *-23° 20' . . . | 21 | 29.9 | 31.7 | 34.5 | 47.2 | 48.9 | 50.7 | 52.4 | 54.2 | 6.9 | 10.2 | 11.6 | 37 50.75 | — | 0.01 | 6 37 22.36 | 1.43 | | |
| 51 | Cephei . . . | 22 | .. | .. | .. | 40.0 | 10.0 | 45.0 | 20.0 | 51.0 | .. | .. | .. | 42 45.20 | — | 3.61 | .. | 28.45 | |
| | *-31° 32' . . . | 23 | 16.2 | 18.1 | 21.0 | 35.0 | 37.0 | 38.7 | 40.8 | 43.0 | 56.5 | 59.3 | 1.3 | 50 38.81 | + | 0.01 | 6 50 10.45 | 1.50 | |
| | ε Canis Majoris . . . | 24 | 53.4 | 55.2 | 57.9 | 11.3 | 13.1 | 15.0 | 17.0 | 18.9 | 32.5 | 35.0 | 36.9 | 54 15.11 | — | 0.00 | 6 53 46.74 | 1.48 | |
| | Weisse (2) 1747 . . . | 25 | 59.2 | 0.6 | 3.3 | 16.3 | 18.2 | 19.9 | 21.7 | 23.4 | 36.2 | 39.0 | 40.7 | 59 19.86 | — | 0.12 | 6 58 51.37 | 1.73 | |
| | δ Canis Majoris . . . | 26 | 29.5 | 31.2 | 33.7 | 47.4 | 49.1 | 50.8 | 52.7 | 54.3 | 7.8 | 10.6 | 12.1 | 3 50.84 | — | 0.00 | 7 3 22.48 | 1.49 | |
| | δ Geminorum . . . | 27 | 52.5 | 54.2 | 57.0 | 9.8 | 11.5 | 13.4 | 15.0 | 16.7 | 29.5 | 32.5 | 34.1 | 13 13.29 | — | 0.12 | 7 12 44.81 | 1.77 | |
| | 5 T. | β Orionis . . . | 28 | 4.8 | 6.5 | 9.0 | 1.0 | 2.6 | 4.4 | 5.8 | 7.6 | 19.6 | 22.0 | 23.5 | 9 4.26 | — | 0.04 | 5 8 35.83 | 1.08 |
| | | δ Orionis . . . | 29 | 50.7 | 52.6 | 55.0 | .. | 8.4 | 10.0 | 11.7 | .. | 25.2 | 27.4 | 28.7 | 26 9.97 | — | 0.06 | 5 25 41.53 | 1.15 |
| | | *+38° 11' . . . | 30 | 14.9 | 17.2 | 19.2 | 21.2 | 24.4 | .. | 40.4 | 44.1 | 46.0 | 48.3 | 50.4 | 36 2.61 | — | 0.11 | 5 35 34.12 | 1.50 |
| | | *+38° 11' . . . | 31 | 49.2 | 51.6 | 54.3 | 9.6 | 11.9 | .. | 16.2 | 17.8 | 33.1 | 36.6 | 38.1 | 36 13.84 | — | 0.20 | 5 35 45.26 | 1.50 |
| *+20° 8' . . . | | 32 | 9.9 | 12.1 | 13.9 | 15.8 | 18.4 | .. | 22.5 | 25.1 | 26.9 | 29.3 | 30.8 | 59 50.47 | — | 0.04 | 5 59 22.06 | 1.42 | |
| *-26° 42' . . . | | 33 | 32.6 | 35.3 | 37.0 | 38.9 | 41.0 | .. | 48.8 | 51.6 | 53.5 | 55.4 | .. | 7 10.46 | + | 4.79 | 6 6 46.88 | 1.35 | |
| *-26° 42' . . . | | 34 | 57.5 | 59.3 | 1.9 | 15.4 | 17.2 | 19.1 | 21.0 | 22.8 | 36.0 | 38.7 | 40.4 | 7 19.03 | — | 0.01 | 6 6 50.67 | 1.35 | |
| Lalande 12053 . . . | | 35 | 16.7 | 18.3 | 20.7 | 33.6 | 35.3 | 37.1 | 39.0 | 40.8 | 53.2 | 56.1 | 57.8 | 13 37.15 | — | 0.12 | 6 13 8.66 | 1.49 | |
| *+21° 13' . . . | | 36 | .. | .. | .. | 11.5 | 13.5 | 15.6 | 17.2 | 19.0 | .. | .. | .. | 14 15.36 | — | 0.13 | 6 13 46.86 | 1.49 | |
| O. Arg. N. 6864 . . . | | 37 | 10.2 | 16.5 | 28.5 | 18.2 | 25.9 | 32.1 | 39.0 | 46.5 | 35.8 | 48.1 | 54.6 | 21 32.31 | — | 0.88 | 6 21 3.06 | 5.58 | |
| γ | *-31° 9' . . . | 38 | 23.0 | 25.1 | 27.9 | 42.0 | 43.8 | 45.8 | 47.8 | 49.5 | 3.7 | 6.3 | 7.8 | 27 45.70 | + | 0.02 | 6 27 17.36 | 1.43 | |
| | Geminorum . . . | 39 | 42.7 | 44.6 | 47.3 | 59.8 | 1.0 | 3.1 | 4.7 | 6.3 | 18.7 | 21.4 | 22.8 | 31 2.95 | — | 0.11 | 6 31 34.48 | 1.53 | |
| | 42 Camelopardi . . . | 40 | 56.0 | 1.0 | 5.6 | 9.6 | 16.2 | .. | 27.5 | 31.6 | 35.8 | 40.0 | 43.7 | 36 50.70 | + | 44.54 | 6 37 6.88 | 3.80 | |
| | *-31° 31' . . . | 41 | .. | .. | .. | 52.7 | 54.8 | 56.7 | 58.6 | 0.4 | .. | .. | .. | 40 56.64 | — | 0.01 | 6 40 28.29 | 1.47 | |
| | *-31° 31' . . . | 42 | 29.9 | 32.1 | 34.2 | 35.8 | 39.0 | .. | 49.9 | 52.8 | 54.5 | 56.4 | 58.7 | 41 14.33 | — | 0.10 | 6 40 46.07 | 1.47 | |
| | *-28° 35' . . . | 43 | .. | .. | .. | 18.2 | 19.9 | 21.8 | 23.8 | 25.5 | .. | .. | .. | 44 21.84 | — | 0.00 | 6 43 53.48 | 1.45 | |
| | O. Arg. S. 5745 . . . | 44 | 42.2 | 44.0 | 47.0 | 0.2 | 2.3 | 4.2 | 6.0 | 7.7 | 21.4 | 24.0 | 25.7 | 45 4.06 | + | 0.01 | 6 44 35.71 | 1.46 | |
| | O. Arg. S. 5809 . . . | 45 | .. | .. | .. | .. | .. | .. | .. | .. | 41.0 | 43.8 | 45.3 | 47 45.28 | — | 38.02 | 6 46 38.90 | 1.45 | |
| | O. Arg. S. 5814 . . . | 46 | .. | .. | .. | 36.2 | 38.7 | 40.3 | 52.0 | 55.2 | 57.0 | 58.9 | 1.0 | 47 49.91 | — | 30.99 | 6 46 50.56 | 1.45 | |
| | ε Canis Majoris . . . | 47 | 53.0 | 54.3 | 57.8 | 11.3 | 13.0 | 15.0 | 17.0 | 18.8 | 32.3 | 35.4 | 36.8 | 54 14.97 | + | 0.01 | 6 53 46.63 | 1.48 | |
| 44 | Geminorum . . . | 48 | 59.7 | 1.6 | 4.3 | 17.2 | 18.9 | 20.6 | 22.3 | 24.1 | 37.1 | 39.6 | 41.2 | 58 20.60 | — | 0.13 | 6 57 52.12 | 4.71 | |
| | *+22° 53' . . . | 49 | .. | .. | .. | 46.7 | 48.6 | 50.6 | 52.3 | 53.8 | 6.7 | 9.5 | 11.0 | 58 57.40 | — | 7.16 | 6 58 21.89 | 1.72 | |
| | *-14° 42' . . . | 50 | 19.2 | 21.1 | 23.0 | 24.8 | 26.3 | .. | 53.3 | 56.5 | 58.3 | 0.1 | 1.7 | 3 40.43 | — | 17.63 | 7 2 54.45 | 1.46 | |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|-------------------------|-----------------|---------------|--------------|--------------|
| 1876. h. Feb. 5, 6.6 | s. — 28.36 | s. + 0.018 | s. — 0.15 | s. — 0.06 |

7. Followed by a larger star.

8. Only star.

9. No other in field.

12. Poor observation.

33. Preceding, fainter and northern.

50. Faint.

| Date and observer. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | |
|------------------------------|------------------------------|-------------------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|--------------|----------|---------------------------|----------------------|------------|------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | |
| | | | m. | s. | m. | s. | s. | h. | m. | s. | s. | | | | | | | | |
| 1876. Feb. 5 T. | *+38° 35' . . . | 1 | 55.8 | 58.3 | 0.3 | 2.6 | 5.9 | .. | 45.5 | 49.0 | 50.7 | 52.5 | 55.1 | 9 25.57 | — | 0.11 | —28.35 | 7 8 57.11 | — 2.11 |
| | Piazzi VII, 67 . . | 2 | 37.7 | 42.3 | 49.2 | 21.8 | 26.6 | 30.8 | 35.8 | 39.4 | 42.7 | 49.2 | 23.6 | 18 30.83 | 0.55 | 28.35 | 7 18 1.93 | 4.53 | |
| | *+40° 42' . . . | 3 | 28.7 | 30.7 | 33.8 | 49.6 | 51.7 | 54.0 | 56.2 | 58.3 | 14.1 | 17.4 | 19.2 | 22 53.97 | 0.21 | 28.35 | 7 22 25.41 | 2.25 | |
| | *+41° 43' . . . | 4 | 22.5 | 25.4 | 28.4 | 44.9 | 46.8 | 48.8 | 51.0 | 52.8 | 9.0 | 12.2 | 14.2 | 26 48.73 | 0.22 | 28.35 | 7 26 20.16 | 2.30 | |
| | *+21° 44' . . . | 5 | 2.1 | 4.0 | 6.8 | 19.5 | 21.1 | 22.8 | 24.7 | 26.4 | 39.1 | 41.7 | 43.1 | 30 22.85 | 0.13 | 28.34 | 7 29 64.38 | 1.82 | |
| φ | *-34° 31' . . . | 6 | 24.0 | 25.9 | 27.8 | 29.8 | 31.6 | .. | 4.6 | 7.7 | 9.5 | 11.8 | 13.9 | 35 48.66 | 20.64 | 28.34 | 7 34 59.68 | 1.58 | |
| | Weisse 1232 . . . | 7 | 39.7 | 41.7 | 44.2 | 56.5 | 57.7 | 59.4 | 0.2 | 2.7 | 14.8 | 17.6 | 18.9 | 41 59.40 | 0.03 | 28.34 | 7 41 31.03 | 1.54 | |
| | Geminorum . . . | 8 | 53.4 | 55.2 | 58.0 | 21.2 | 23.0 | 25.0 | 26.8 | 28.5 | 52.1 | 54.7 | 56.4 | 46 24.94 | — | 0.14 | 28.34 | 7 45 56.46 | 1.96 |
| | *-30° 33' . . . | 9 | 27.7 | 29.8 | 32.7 | 46.4 | 48.1 | 50.0 | 52.1 | 53.9 | 7.7 | 10.8 | 12.4 | 50 50.15 | + | 0.02 | 28.34 | 7 50 21.83 | 1.56 |
| | B. A. C. 2655 . . | 10 | .. | .. | .. | 10.0 | 11.7 | 13.7 | 15.7 | 17.3 | .. | .. | .. | 53 13.68 | + | 0.01 | 28.34 | 7 52 45.35 | 1.57 |
| | *-29° 59' . . . | 11 | .. | .. | .. | 10.3 | 12.1 | 14.0 | 15.9 | 17.8 | .. | .. | .. | 54 14.02 | + | 0.01 | 28.34 | 7 53 45.69 | 1.56 |
| | *-29° 59' . . . | 12 | .. | .. | .. | 29.0 | 31.2 | 33.3 | 35.7 | 37.1 | .. | .. | .. | 54 33.26 | + | 0.01 | 28.34 | 7 54 4.93 | 1.55 |
| | *-25° 35' . . . | 13 | 40.5 | 42.2 | 44.9 | 58.3 | 0.0 | 1.7 | 3.6 | 5.2 | 18.7 | 21.5 | 23.0 | 59 1.78 | + | 0.00 | 28.34 | 7 58 33.44 | 1.55 |
| | 15 Argus . . . | 14 | 24.5 | 26.2 | 29.3 | 42.4 | 44.1 | 45.8 | 47.5 | 49.3 | 2.6 | 5.1 | 6.9 | 2 45.79 | + | 0.00 | 28.33 | 8 2 17.46 | 1.55 |
| | 8 Y. | Lacaille 1196 . . | 15 | 16.8 | 18.7 | 21.6 | 35.6 | 37.3 | 39.2 | 41.2 | 43.0 | 37.1 | 0.0 | 1.6 | 38 39.28 | — | 0.12 | 27.27 | 3 38 11.89 |
| η Tauri . . . | | 16 | .. | .. | .. | 51.1 | 54.0 | 55.6 | 7.4 | 10.4 | 11.9 | 13.8 | 15.8 | 41 5.00 | — | 30.35 | 27.27 | 3 40 7.38 | 0.48 |
| Radcliffe 1084 . | | 17 | 46.7 | 48.9 | 52.3 | 7.9 | 9.0 | 12.0 | 14.3 | 16.4 | 32.2 | 35.3 | 37.3 | 44 12.11 | 0.01 | 27.27 | 3 43 44.83 | 0.47 | |
| τ ⁸ Eridani . . . | | 18 | 33.0 | 34.8 | 37.4 | 50.6 | 52.4 | 54.1 | 55.9 | 57.8 | 10.7 | 13.5 | 15.2 | 48 54.13 | 0.11 | 27.26 | 3 48 26.76 | 0.72 | |
| γ Eridani . . . | | 19 | 22.9 | 24.6 | 27.2 | 39.4 | 41.0 | 42.6 | 44.4 | 46.0 | 58.3 | 0.8 | 2.5 | 52 42.70 | 0.08 | 27.26 | 3 52 15.36 | 0.69 | |
| Lacaille 1329 . . | | 20 | 29.8 | 31.6 | 34.4 | 47.7 | 49.4 | 51.3 | 53.0 | 54.8 | 8.2 | 10.9 | 12.5 | 58 51.24 | — | 0.11 | 27.24 | 3 58 23.89 | 0.78 |
| B. A. C. 1282 . . | | 21 | 30.5 | 32.7 | 36.5 | 54.8 | 57.1 | 59.5 | 2.2 | 4.5 | 22.7 | 26.4 | 28.7 | 4 59.60 | 0.00 | 27.24 | 4 4 32.36 | 0.69 | |
| B. A. C. 1300 . . | | 22 | 44.3 | 48.3 | 53.9 | 22.0 | 25.5 | 29.4 | 33.4 | 37.1 | 5.0 | 10.0 | 14.3 | 9 29.46 | + | 0.03 | 27.23 | 4 9 2.26 | 0.89 |
| 58 Tauri . . . | | 23 | 42.5 | 44.3 | 46.8 | 59.0 | 0.7 | 2.4 | 4.1 | 5.7 | 18.0 | 20.7 | 22.2 | 14 2.40 | — | 0.04 | 27.22 | 4 13 35.14 | 0.73 |
| *-25° 40' . . . | | 24 | 17.3 | 19.0 | 22.0 | 35.4 | 36.8 | 38.8 | 40.6 | 42.3 | 55.6 | 58.4 | 0.0 | 18 38.75 | — | 0.10 | 27.22 | 4 18 11.43 | 0.87 |
| β | B. A. C. 1399 . . | 25 | .. | .. | .. | 34.6 | 44.0 | 53.9 | 3.7 | 13.6 | .. | .. | .. | 27 53.96 | + | 0.05 | 27.20 | 4 27 26.81 | 2.50 |
| | Lacaille 1540 . . | 26 | 56.6 | 58.4 | 1.2 | 14.5 | 16.1 | 18.0 | 19.8 | 21.6 | 34.8 | 37.6 | 39.3 | 34 17.99 | — | 0.11 | 27.19 | 4 33 50.69 | 0.95 |
| | *-25° 54' . . . | 27 | 38.8 | 40.8 | 43.4 | 56.7 | 58.5 | 0.0 | 1.7 | 3.7 | 17.0 | 19.8 | 21.3 | 36 0.15 | — | 0.11 | 27.19 | 4 35 32.85 | 0.95 |
| | Lalande 9106 . . | 28 | 59.2 | 1.2 | 4.8 | 21.4 | 23.7 | 25.8 | 28.0 | 30.2 | 46.8 | 50.0 | 52.2 | 46 25.75 | — | 0.01 | 27.18 | 4 45 58.56 | 1.09 |
| | *+60° 14' . . . | 29 | 8.4 | 11.7 | 16.9 | 40.9 | 44.0 | 47.2 | 50.8 | 53.8 | 17.8 | 22.6 | 25.7 | 52 47.25 | + | 0.02 | 27.17 | 4 52 20.10 | 1.50 |
| | *+45° 0' . . . | 30 | .. | .. | .. | 41.7 | 43.9 | 46.2 | 48.6 | 50.7 | .. | .. | .. | 56 46.22 | — | 0.02 | 27.16 | 4 56 19.04 | 1.21 |
| | *+45° 6' . . . | 31 | 30.3 | 32.3 | 36.3 | 53.1 | 55.3 | 57.5 | 0.0 | 2.2 | 19.0 | 22.6 | 24.6 | 58 57.56 | 0.01 | 27.16 | 4 58 30.39 | 1.24 | |
| | β Tauri . . . | 32 | 33.8 | 35.7 | 38.5 | 52.0 | 53.7 | 55.6 | 57.5 | 59.1 | 12.8 | 15.6 | 17.5 | 18 55.62 | 0.03 | 27.13 | 5 18 28.46 | 1.21 | |
| | δ Orionis . . . | 33 | .. | .. | .. | 5.4 | 7.0 | 8.6 | 10.2 | 11.8 | .. | .. | .. | 26 8.60 | 0.07 | 27.12 | 5 25 41.41 | 1.11 | |
| | 10 | η Tauri . . . | 34 | 12.2 | 14.1 | 16.8 | .. | 31.5 | 33.4 | 35.1 | .. | 49.9 | 52.6 | 54.2 | 40 33.32 | — | 0.03 | 25.92 | 3 40 7.37 |
| Radcliffe 1084 . | | 35 | 45.5 | 47.7 | 50.9 | 6.7 | 8.6 | 10.8 | 13.0 | 15.1 | 30.7 | 34.0 | 35.9 | 44 10.81 | — | 0.01 | 25.92 | 3 43 44.88 | 0.43 |
| Lalande 7238 . . | | 36 | 12.8 | 14.6 | 17.4 | 30.1 | 31.8 | 33.5 | 35.4 | 36.9 | .. | .. | .. | 49 26.56 | + | 6.99 | 25.91 | 3 49 7.64 | 0.52 |
| 33 Tauri . . . | | 37 | 48.3 | 50.1 | 52.8 | 5.7 | 7.3 | 9.2 | 11.1 | 12.6 | 25.7 | 28.4 | 30.1 | 50 9.21 | — | 0.03 | 25.91 | 3 49 43.27 | 0.53 |
| γ Eridani . . . | | 38 | 21.4 | 23.2 | 25.8 | 38.0 | 39.6 | 41.3 | 42.9 | 44.6 | 56.9 | 59.4 | 1.0 | 52 41.28 | — | 0.08 | 25.90 | 3 52 15.30 | 0.65 |
| Lacaille 1329 . . | | 39 | 28.6 | 30.0 | 33.1 | 46.6 | 48.1 | 50.0 | 51.8 | 53.7 | 6.8 | 9.8 | 11.3 | 58 49.98 | 0.11 | 25.90 | 3 58 23.97 | 0.74 | |
| B. A. C. 1272 . . | | 40 | .. | .. | .. | 35.7 | 38.4 | 39.9 | 51.4 | 54.1 | 55.7 | 57.5 | 59.4 | 1 49.01 | 29.06 | 25.89 | 4 0 54.06 | 0.62 | |
| Rumker 1110 . . | | 41 | 31.1 | 33.0 | 35.6 | 48.0 | 50.6 | 51.3 | 53.0 | 54.6 | 7.2 | 9.9 | 11.4 | 5 51.43 | 0.04 | 25.89 | 4 5 25.50 | 0.65 | |
| B. A. C. 1300 . . | | 42 | 42.5 | 46.5 | 52.5 | 20.4 | 24.0 | 28.0 | 31.8 | 35.5 | 3.7 | 9.5 | 12.8 | 9 27.93 | 0.03 | 25.89 | 4 9 2.07 | 0.81 | |
| h Tauri . . . | | 43 | .. | .. | .. | 22.1 | 23.8 | 24.4 | 27.2 | 28.9 | 41.1 | 43.7 | 45.1 | 13 32.04 | 6.71 | 25.88 | 4 12 59.45 | 0.70 | |
| θ ¹ | *+6° 32' . . . | 44 | .. | .. | .. | 53.3 | 54.9 | 56.6 | 58.1 | 59.8 | .. | .. | .. | 16 56.54 | 0.06 | 25.88 | 4 16 30.60 | 0.73 | |
| | *+6° 32' . . . | 45 | 49.2 | 50.8 | 53.3 | 5.3 | 6.9 | 8.5 | 10.2 | 11.8 | 23.8 | 26.3 | 27.8 | 18 8.54 | 0.05 | 25.88 | 4 17 42.61 | 0.73 | |
| | Tauri . . . | 46 | 36.2 | 38.0 | 40.6 | 52.9 | 54.5 | 56.3 | 58.0 | 59.6 | 11.9 | 14.5 | 16.2 | 21 56.25 | 0.04 | 25.88 | 4 21 30.33 | 0.75 | |
| | Lacaille 1483 . . | 47 | 23.7 | 25.5 | 28.2 | 41.2 | 42.9 | 44.8 | 46.5 | 48.3 | 1.3 | 3.9 | 5.6 | 25 44.72 | 0.10 | 25.87 | 4 25 18.75 | 0.86 | |
| | τ ⁶ Eridani . . . | 48 | 43.3 | 45.1 | 48.0 | 1.9 | 3.8 | 5.6 | 7.5 | 9.0 | 23.1 | 26.0 | 27.7 | 29 5.54 | 0.12 | 25.87 | 4 28 39.55 | 0.91 | |
| | Lacaille 1540 . . | 49 | 55.2 | 57.2 | 0.0 | 13.2 | 14.8 | 16.6 | 18.4 | 20.3 | 33.3 | 36.3 | 37.9 | 34 16.68 | — | 0.11 | —25.86 | 4 33 50.71 | — 0.91 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|-------------|-----------------|--------------|--------|--------|
| 1876. h. | s. | s. | s. | s. |
| Feb. 8, 4.6 | — 27.19 | + 0.090 | + 0.08 | — 0.06 |
| 10 5.7 | — 25.78 | + 0.068 | + 0.08 | — 0.06 |

10. A bright star; probably not the one.
 11. Quite faint.
 12. Not good.
 28. Another star in the field.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. |
|-------------------------|--------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|---------------|-------|--------------|----------|---------------------------------|-------------------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | |
| 1876. Feb. 10 Y. | *-25° 53' . . . | 1 | 37.3 | 38.9 | 41.9 | 55.3 | 56.7 | 58.7 | 0.3 | 2.1 | 15.6 | 18.3 | 20.0 | m. s. | m. s. | s. | h. m. s. | s. | |
| | *+10° 45' . . . | 2 | 32.0 | 33.7 | 36.2 | 48.3 | 49.8 | 51.5 | 53.1 | 54.8 | 7.0 | 9.4 | 11.1 | 35 58.65 | - | 0.11 | -25.85 | 4 35 32.60 | - 0.92 |
| | *+10° 42' . . . | 3 | .. | .. | .. | 20.7 | 23.1 | 24.7 | 35.8 | 38.3 | 40.1 | 41.9 | 43.7 | 41 51.54 | - | 0.05 | 25.85 | 4 41 25.64 | 0.87 |
| | *+10° 41' . . . | 4 | .. | .. | .. | .. | .. | .. | 50.9 | 53.7 | 55.0 | 56.7 | 58.6 | 42 33.54 | - | 28.30 | 25.85 | 4 41 39.39 | 0.87 |
| | *+14° 9' . . . | 5 | 39.2 | 41.4 | 44.6 | 1.3 | 3.4 | 5.7 | 8.1 | 10.3 | 26.8 | 30.1 | 32.2 | 42 54.98 | - | 34.70 | 25.85 | 4 41 54.43 | 0.87 |
| | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 46 5.74 | - | 0.01 | 25.85 | 4 45 39.88 | 1.06 |
| | *+38° 17' . . . | 6 | 37.0 | 39.0 | 42.4 | 57.5 | 59.5 | 1.5 | 3.8 | 5.8 | 21.0 | 24.1 | 26.0 | 53 1.60 | - | 0.01 | 25.83 | 4 52 35.76 | 1.06 |
| | *+45° 19' . . . | 7 | 8.9 | 11.8 | 15.8 | 32.6 | 34.6 | 37.1 | 39.5 | 41.5 | 58.2 | 1.0 | 4.3 | 57 36.93 | - | 0.01 | 25.83 | 4 57 11.09 | 1.19 |
| | Radcliffe 1377. . | 8 | .. | .. | .. | 47.5 | 7.5 | 29.0 | 50.2 | 10.5 | .. | .. | .. | 2 28.94 | + | 0.13 | 25.83 | 5 2 3.24 | 8.05 |
| | Lacaille 1641. . | 9 | 23.3 | 25.4 | 28.5 | 43.0 | 44.9 | 47.0 | 48.9 | 50.7 | 5.3 | 8.4 | 10.2 | 11 46.87 | + | 0.13 | 25.82 | 5 11 20.92 | 1.13 |
| | o Columbae . . . | 10 | 4.3 | 6.1 | 9.2 | 23.9 | 25.8 | 27.6 | 29.7 | 31.7 | 46.3 | 49.3 | 51.2 | 13 27.74 | - | 0.13 | 25.81 | 5 13 1.80 | 1.14 |
| | Schjellerup 1787 . | 11 | 30.6 | 32.4 | 35.0 | 46.8 | 48.4 | 49.9 | 51.8 | 53.2 | 5.2 | 7.7 | 9.2 | 21 50.02 | - | 0.06 | 25.80 | 5 21 24.16 | 1.07 |
| | ε Orionis . . . | 12 | .. | .. | .. | 19.1 | 20.6 | 22.3 | 24.1 | 25.5 | .. | .. | .. | 30 22.32 | - | 0.07 | 25.79 | 5 29 56.46 | 1.11 |
| | *+38° 11' . . . | 13 | 11.4 | 14.0 | 16.1 | 18.2 | 21.0 | .. | .. | .. | .. | .. | .. | 35 16.14 | + | 43.50 | 25.79 | 5 35 33.85 | 1.43 |
| | *+38° 11' . . . | 14 | 46.4 | 48.6 | 51.9 | 7.0 | 8.8 | 10.9 | 13.1 | 15.0 | 30.3 | 33.5 | 35.5 | 36 11.00 | - | 0.01 | 25.79 | 5 35 45.20 | 1.43 |
| | O. Arg. S. 4263. . | 15 | .. | .. | .. | 44.8 | 46.4 | 48.2 | 50.0 | 51.7 | .. | .. | .. | 39 48.22 | - | 0.10 | 25.78 | 5 39 22.34 | 1.16 |
| δ | Aurigæ . . . | 16 | 13.7 | 16.7 | 21.0 | 41.2 | 44.2 | 47.0 | 49.8 | 52.4 | 12.8 | 17.1 | 19.6 | 49 46.86 | + | 0.01 | 25.77 | 5 49 21.10 | 1.98 |
| | B. A. C. 1915 . . | 17 | 23.0 | 24.7 | 28.1 | 41.9 | 43.7 | 45.7 | 47.6 | 49.5 | 3.6 | 6.4 | 8.3 | 53 45.68 | - | 0.12 | 25.77 | 5 53 19.79 | 1.27 |
| | δ Ursæ Minoris . | 18 | 6.0 | 31.0 | 12.0 | 32.0 | 0.0 | 28.0 | 55.0 | 22.0 | 41.0 | 24.0 | 52.0 | 12 27.55 | - | 0.37 | 25.75 | .. | 41.95 |
| | *+32° 41' . . . | 19 | 1.2 | 3.4 | 5.9 | 19.0 | 20.7 | 22.6 | 24.5 | 26.0 | 39.2 | 42.0 | 43.6 | 35 22.55 | - | 0.02 | 25.72 | 6 34 56.81 | 1.75 |
| | *-23° 14' . . . | 20 | 44.1 | 46.0 | 49.0 | 3.3 | 4.9 | 7.0 | 9.0 | 11.9 | 25.0 | 27.8 | 29.8 | 38 7.07 | - | 0.10 | 25.72 | 6 37 41.25 | 1.37 |
| | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | *-31° 31' . . . | 21 | .. | .. | .. | 44.5 | 46.1 | 47.9 | 49.6 | 51.2 | .. | .. | .. | 40 47.86 | - | 0.13 | 25.71 | 6 40 22.02 | 1.41 |
| | *-25° 36' . . . | 22 | 31.2 | 33.0 | 35.9 | 49.8 | 51.6 | 53.7 | 55.6 | 57.3 | 11.5 | 14.4 | 16.2 | 43 53.65 | - | 0.11 | 25.71 | 6 43 27.83 | 1.40 |
| | *-25° 33' . . . | 23 | 57.2 | 58.0 | 1.7 | 15.6 | 17.2 | 19.0 | 21.0 | 22.8 | 36.4 | 39.3 | 41.0 | 47 19.10 | - | 0.11 | 25.71 | 6 46 53.28 | 1.41 |
| | *-28° 40' . . . | 24 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 48 39.90 | - | 38.92 | 25.71 | 6 47 35.27 | 1.41 |
| | *-26° 26' . . . | 25 | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | 50 54.36 | - | 38.14 | 25.70 | 6 49 50.52 | 1.41 |
| ε | Canis Majoris . | 26 | 50.4 | 52.4 | 55.4 | 8.9 | 10.5 | 12.4 | 14.2 | 16.1 | 29.7 | 32.6 | 34.1 | 54 12.43 | - | 0.11 | 25.70 | 6 53 46.62 | 1.43 |
| | δ Canis Majoris . | 27 | 26.6 | 28.5 | 31.4 | 44.5 | 46.2 | 48.3 | 50.1 | 51.7 | 5.2 | 8.0 | 9.7 | 3 48.20 | - | 0.11 | 25.69 | 7 3 22.40 | 1.45 |
| | *+42° 8' . . . | 28 | 14.4 | 16.4 | 19.8 | 35.8 | 38.0 | 40.2 | 42.5 | 44.6 | 0.6 | 3.0 | 0.1 | 7 40.21 | - | 0.01 | 25.68 | 7 7 14.52 | 2.19 |
| | Weisse 274 . . . | 29 | 18.2 | 19.8 | 22.4 | 34.8 | 36.2 | 38.0 | 39.6 | 41.1 | 53.7 | 56.3 | 57.8 | 10 37.99 | - | 0.08 | 25.68 | 7 10 12.23 | 1.45 |
| | Weisse 283 . . . | 30 | .. | .. | .. | 8.2 | 10.9 | 12.3 | 13.6 | 15.3 | 28.0 | 29.7 | 31.6 | 11 21.32 | - | 28.72 | 25.68 | 7 10 26.92 | 1.45 |
| δ | Geminorum . . . | 31 | .. | .. | .. | 26.9 | 29.6 | 31.2 | 43.0 | 45.8 | 47.5 | 49.3 | 51.3 | 13 40.58 | - | 39.01 | 25.68 | 7 12 44.89 | 1.75 |
| | *-24° 45' . . . | 32 | 20.5 | 22.3 | 24.9 | 38.2 | 39.9 | 41.6 | 43.3 | 45.2 | 58.3 | 0.9 | 2.5 | 17 41.60 | - | 0.10 | 25.67 | 7 17 15.83 | 1.47 |
| | *-24° 42' . . . | 33 | 26.7 | 28.5 | 31.2 | 44.3 | 46.0 | 47.8 | 49.5 | 51.3 | 4.6 | 7.3 | 9.0 | 18 47.84 | - | 0.10 | 25.67 | 7 17 22.07 | 1.47 |
| 12 T. ε | Orionis . . . | 34 | 1.8 | 3.5 | 5.9 | 17.9 | 19.4 | 21.1 | 22.7 | 24.3 | 36.3 | 38.7 | 40.1 | 30 21.06 | - | 0.06 | 24.65 | 5 29 56.35 | 1.08 |
| | a Columbae . . . | 35 | 12.3 | 14.3 | 17.2 | 31.7 | 33.4 | 35.5 | 37.5 | 39.4 | 53.9 | 56.8 | 58.1 | 35 35.51 | - | 0.03 | 24.65 | 5 35 10.83 | 1.18 |
| | B. A. C. 1860 . . | 36 | 47.8 | 49.6 | 52.3 | 5.3 | 6.9 | 8.6 | 10.5 | 12.3 | 25.2 | 27.8 | 29.4 | 45 8.70 | - | 0.03 | 24.66 | 5 44 44.01 | 1.16 |
| | *+ 7° 19' . . . | 37 | 7.4 | 9.0 | 11.6 | 21.6 | 25.1 | 26.7 | 28.5 | 29.8 | 42.1 | 44.5 | 46.0 | 50 26.57 | - | 0.07 | 24.66 | 5 50 1.84 | 1.21 |
| | *+36° 32' . . . | 38 | 2.4 | 4.5 | 7.5 | 23.0 | 24.8 | 26.7 | 28.8 | 30.6 | 46.0 | 48.6 | 50.2 | 53 26.65 | - | 0.13 | 24.66 | 5 53 1.86 | 1.51 |
| | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. | .. |
| | *+20° 8' . . . | 39 | .. | .. | .. | 43.2 | 45.0 | 46.7 | 48.5 | 50.1 | 40.6 | .. | .. | 59 46.70 | - | 0.10 | 24.66 | 5 59 21.94 | 1.35 |
| | *+20° 8' . . . | 40 | 4.1 | 5.0 | 8.5 | 21.2 | .. | 21.6 | .. | 27.9 | .. | 43.2 | 44.8 | 0 24.53 | - | 0.03 | 24.66 | 5 59 59.78 | 1.35 |
| | *+31° 10' . . . | 41 | 12.7 | 14.6 | 17.6 | 32.0 | 33.5 | 35.4 | 37.4 | 39.3 | 53.1 | 56.0 | 57.7 | 3 35.39 | - | 0.12 | 24.66 | 6 3 10.61 | 1.50 |
| | *+31° 10' . . . | 42 | .. | .. | .. | 3.7 | 5.3 | 7.4 | 9.3 | 11.3 | .. | .. | .. | 4 7.40 | - | 0.13 | 24.66 | 6 3 42.61 | 1.51 |
| | *- 5° 14' . . . | 43 | 59.6 | 1.2 | 3.7 | 15.8 | 17.3 | 18.8 | 20.5 | 21.9 | 34.2 | 36.4 | 38.1 | 9 18.86 | - | 0.05 | 24.66 | 6 8 54.15 | 1.25 |
| μ | Geminorum . . . | 44 | 32.9 | 34.7 | 37.6 | 50.3 | 51.9 | 53.8 | 55.5 | 57.2 | 10.3 | 12.9 | 14.4 | 15 53.77 | - | 0.10 | 24.66 | 6 15 29.01 | 1.46 |
| | Lacaille 2271 . . | 45 | 57.2 | 59.2 | 2.1 | 15.9 | 17.6 | 19.5 | 21.4 | 23.2 | 36.9 | 39.7 | 41.4 | 21 19.46 | - | 0.02 | 24.67 | 6 20 54.77 | 1.32 |
| | *-31° 4' . . . | 46 | 36.0 | .. | 40.8 | 54.9 | 56.5 | 58.4 | 0.3 | 2.0 | 16.2 | .. | 20.7 | 25 58.42 | - | 0.02 | 24.67 | 6 25 33.73 | 1.34 |
| | *+32° 4' . . . | 47 | 12.4 | 14.5 | 18.0 | 31.5 | 33.4 | 35.3 | 37.2 | 39.1 | 53.0 | 55.9 | 57.8 | 30 35.28 | - | 0.12 | 24.67 | 6 30 10.49 | 1.69 |
| | 51 Cephei . . . | 48 | .. | .. | .. | 33.0 | 5.0 | 38.0 | 13.5 | 46.0 | .. | .. | .. | 42 39.10 | - | 3.10 | 24.67 | .. | 26.78 |
| | *-31° 32' . . . | 49 | 12.5 | 14.3 | 17.2 | 31.2 | 33.0 | 34.9 | 36.9 | 38.7 | 52.7 | 55.7 | 57.5 | 50 34.96 | - | 0.02 | 24.67 | 6 50 10.27 | 1.41 |
| | *-23° 41' . . . | 50 | 31.0 | 32.6 | 35.3 | 48.6 | 50.3 | 52.0 | 53.9 | 55.5 | 8.6 | 11.2 | 12.8 | 55 51.98 | - | 0.03 | -24.67 | 6 55 27.28 | - 1.40 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------------------|--------------------|-----------------|--------------|--------------|
| 1876. h. Feb. 12, 6.7 | s. — 24.67 | s. — 0.014 | s. — 0.08 | s. — 0.06 |

5. Several stars in the field.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876 o. | | | | |
|------------------------------------|-----------------------|---------|--------------------------------|-------|-------|-------|------|------|------|-------|-------|-------|-------|---------------|-------|--------|---------------------------------|-------------------------|------------|------------|------|------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | | | | |
| | | | m. | s. | m. | s. | m. | s. | m. | s. | m. | s. | m. | s. | m. | s. | | | h. | m. | s. | s. |
| 1876. Feb. 12 T. | —14° 40' . . . | 1 | 37.5 | 39.3 | . . | 54.2 | 55.8 | 57.7 | 59.4 | 0.9 | . . | 15 | 6 | 17.4 | 59 | 57.53 | — | 0.03 | —24.67 | 6 59 32.83 | — | 1.41 |
| | —14° 41' . . . | 2 | 32.2 | 34.3 | 36.2 | 37.6 | 40.3 | . . | 42.6 | 45.4 | 47.2 | 48.8 | 50.6 | 3 | 11.52 | + | 0.04 | 24.67 | 7 2 46.89 | | 1.42 | |
| | —14° 42' . . . | 3 | 59.0 | 1.0 | 3.6 | 15.5 | 17.2 | 19.0 | 20.7 | 22.1 | 34.7 | 36 | 6 | 38.1 | 3 | 13.86 | — | 0.04 | 24.67 | 7 2 54.15 | | 1.42 |
| | *—14° 27' . . . | 4 | 24.8 | 26.3 | 29.1 | 41.3 | 43.0 | 44.8 | 46.5 | 47.9 | 0.1 | 2.8 | 4.5 | 7 | 44.65 | | 0.04 | 24.68 | 7 7 19.93 | | 1.43 | |
| | Weisse 290 . . . | 5 | 41.4 | 43.1 | 45.4 | 58.1 | 59.5 | 1.2 | 2.7 | 4.4 | 17.0 | 19.3 | 21.0 | 11 | 1.19 | | 0.04 | 24.68 | 7 10 36.47 | | 1.43 | |
| | δ Geminorum . . . | 6 | 48.7 | 50.6 | 53.2 | 6.2 | 8.7 | 9.4 | 11.2 | 13.0 | 25.9 | 28.5 | 30.1 | 13 | 9.59 | | 0.10 | 24.68 | 7 12 44.81 | | 1.74 | |
| | *—35° 35' . . . | 7 | 56.2 | 58.2 | 1.2 | 16.2 | 18.2 | 20.2 | 22.1 | 24.1 | 38.7 | 41.9 | 43.7 | 19 | 20.06 | | 0.02 | 24.68 | 7 18 55.36 | | 1.50 | |
| | Lalande 14499 . . . | 8 | 8.8 | 10.9 | 14.1 | 28.5 | 30.4 | 32.6 | 34.8 | 36.8 | 51.9 | 55.1 | 56.9 | 22 | 32.80 | | 0.14 | 24.68 | 7 22 7.98 | | 2.11 | |
| | Weisse (2) 728 . . . | 9 | 15.7 | 47.9 | 51.1 | 6.9 | 9.0 | 11.1 | 13.1 | 15.2 | 31.3 | 34.5 | 36.2 | 27 | 11.09 | | 0.15 | 24.68 | 7 26 46.26 | | 2.25 | |
| | *+21° 40' . . . | 10 | 58.3 | 0.2 | 3.1 | 15.6 | 17.4 | . . | 21.0 | 22.6 | 35.4 | 38.2 | 39.5 | 30 | 19.13 | | 0.10 | 24.68 | 7 29 54.35 | | 1.80 | |
| | *—14° 21' . . . | 11 | 48.0 | 49.6 | 52.2 | 4.3 | 5.7 | 7.6 | 9.3 | 10.9 | 23.0 | 25.6 | 27.2 | 42 | 7.58 | | 0.04 | 24.68 | 7 41 42.86 | | 1.51 | |
| | φ Geminorum . . . | 12 | 59.4 | 1.2 | 4.3 | 47.5 | 49.3 | . . | 23.1 | 24.9 | 38.2 | 41.1 | 42.5 | 46 | 21.15 | | 0.11 | 24.68 | 7 46 56.36 | | 1.96 | |
| | *—30° 2' . . . | 13 | 59.3 | 1.3 | 4.2 | 15.0 | . . | 21.4 | . . | 25.2 | 39.1 | 42.0 | 43.7 | 52 | 21.58 | | 0.02 | 24.69 | 7 51 56.87 | | 1.53 | |
| | Lacaille 3127 . . . | 14 | 25.0 | 26.6 | 29.6 | 42.5 | 44.4 | 46.3 | 48.2 | 50.0 | 2.9 | 5.8 | 7.4 | 59 | 46.25 | | 0.03 | 24.69 | 7 59 21.53 | | 1.53 | |
| | 15 Argus . . . | 15 | . . . | . . . | . . . | 38.4 | 40.4 | 42.3 | 44.1 | 45.6 | . . . | . . . | . . . | 2 | 42.16 | | 0.04 | 24.69 | 8 2 17.43 | | 1.54 | |
| Y. | 16) Eridani . . . | 16 | 18.3 | 19.9 | 22.4 | 34.9 | 36.4 | 8.2 | 39.0 | 41.7 | 53.9 | 56.2 | 57.9 | 52 | 38.15 | | 0.00 | 22.85 | 3 52 15.30 | | 0.56 | |
| | B. A. C. 1272 . . . | 17 | 56.8 | 58.6 | 1.2 | 13.8 | 15.1 | 16.9 | 18.6 | 20.3 | 32.8 | 35.3 | 37.0 | 1 | 16.95 | | 0.14 | 22.85 | 4 0 53.96 | | 0.53 | |
| | Rumker 1110 . . . | 18 | 28.1 | 29.8 | 32.5 | 44.9 | 46.4 | 48.3 | 49.9 | 51.6 | 4.1 | 6.6 | 8.2 | 5 | 48.22 | | 0.14 | 22.84 | 4 5 25.24 | | 0.56 | |
| | O. Arg. S. 2939 . . . | 19 | 34.0 | . . . | 38.7 | . . . | 53.2 | 54.9 | 56.8 | . . | 11.4 | . . . | 15.7 | 10 | 54.96 | + | 0.03 | 22.84 | 4 10 32.15 | | 0.68 | |
| |) Tauri . . . | 20 | 47.9 | 49.7 | 52.2 | 4.5 | 6.0 | 7.7 | 9.6 | 11.1 | 23.6 | 26.1 | 27.6 | 13 | 7.82 | — | 0.13 | 22.84 | 4 12 44.85 | | 0.61 | |
| | *+17° 9' . . . | 21 | 48.5 | 50.3 | 52.8 | 5.4 | 6.8 | 8.6 | 10.2 | 11.9 | 24.4 | 27.0 | 28.5 | 19 | 8.58 | | 0.14 | 22.83 | 4 18 45.61 | | 0.64 | |
| | 11 Orionis . . . | 22 | 33.0 | 34.8 | 37.3 | 49.5 | 51.0 | 52.7 | 54.6 | 56.2 | 8.8 | 11.1 | 12.8 | 57 | 52.89 | — | 0.13 | 22.80 | 4 57 29.96 | | 0.89 | |
| | *—23° 48' . . . | 23 | 20.4 | 22.4 | 25.1 | 38.1 | 39.8 | 41.4 | 43.0 | 44.8 | 58.0 | 0.5 | 2.2 | 0 | 41.43 | + | 0.04 | 22.80 | 5 0 18.67 | | 0.91 | |
| | *+30° 15' . . . | 24 | 34.4 | 36.3 | 39.2 | 52.8 | 54.7 | 56.6 | 59.0 | 0.6 | 14.2 | 17.1 | 18.8 | 10 | 56.70 | — | 0.21 | 22.79 | 5 10 33.70 | | 1.05 | |
| | B. A. C. 1661 . . . | 25 | 58.9 | 40.6 | 43.0 | 55.1 | 56.6 | 58.2 | 59.9 | 1.6 | 13.4 | 15.9 | 17.5 | 15 | 58.2 | | 0.08 | 22.79 | 5 15 35.38 | | 0.97 | |
| | m Orionis . . . | 26 | . . . | . . . | . . . | 39.6 | 41.2 | 43.0 | 44.6 | 46.0 | . . . | . . . | . . . | 16 | 42.88 | | 0.09 | 22.79 | 5 16 20.00 | | 0.98 | |
| | Santini 345 . . . | 27 | . . . | . . . | . . . | 59.0 | 1.6 | 3.2 | 14.0 | 16.6 | 18.1 | 19.8 | 21.8 | 17 | 11.76 | — | 27.89 | 22.79 | 5 16 21.08 | | 0.98 | |
| | Lacaille 1855 . . . | 28 | 36.6 | 38.7 | 41.5 | 55.7 | 57.5 | 59.5 | 1.5 | 3.4 | 17.6 | 20.5 | 22.1 | 22 | 59.51 | + | 0.09 | 22.78 | 5 22 36.82 | | 1.04 | |
| | *+38° 7' . . . | 29 | . . . | . . . | . . . | 6.5 | 8.7 | 10.2 | 12.3 | 14.0 | 29.6 | 32.7 | 34.7 | 38 | 18.59 | — | 8.52 | 22.77 | 5 37 47.30 | | 1.35 | |
| | *+38° 4' . . . | 30 | . . . | . . . | . . . | 23.5 | 25.7 | 27.6 | 29.6 | 31.5 | 47.2 | 50.2 | 52.0 | 39 | 35.91 | — | 8.51 | 22.77 | 5 39 4.63 | | 1.36 | |
| B. A. C. 1867 . . . | 31 | 45.7 | 47.4 | 50.1 | 3.3 | 4.7 | 6.0 | 8.3 | 9.9 | 23.0 | 25.8 | 27.5 | 45 | 6.57 | + | 0.04 | 22.76 | 5 44 43.85 | | 1.10 | | |
| *+72° 26' . . . | 32 | 18.9 | 22.7 | 32.6 | 11.8 | 16.1 | 22.7 | 28.5 | 33.4 | 12.7 | 20.4 | 25.8 | 51 | 22.33 | — | 0.99 | 22.76 | 5 50 58.58 | | 3.27 | | |
| Weisse 1368 . . . | 33 | . . . | . . . | . . . | 44.0 | 45.6 | 47.4 | 49.0 | 50.7 | 2.9 | 5.0 | 6.9 | 54 | 53.94 | — | 6.68 | 22.76 | 5 54 24.50 | | 1.13 | | |
| O. Arg. S. 4625 ¹ . . . | 34 | 36.1 | 37.9 | 40.6 | 54.5 | 56.3 | 58.1 | 0.0 | 1.7 | 15.4 | 18.1 | 19.9 | 0 | 58.05 | + | 0.07 | 22.75 | 6 0 35.37 | | 1.18 | | |
| O. Arg. S. 4625 ² . . . | 35 | 15.1 | 17.3 | 19.2 | 21.0 | 23.6 | . . | 32.3 | 35.5 | 3.1 | 39.0 | 41.0 | 0 | 58.11 | + | 0.15 | 22.75 | 6 0 35.51 | | 1.18 | | |
| B. A. C. 1994 . . . | 36 | 54.4 | 56.0 | 58.5 | 10.5 | 12.0 | 13.7 | 15.4 | 17.0 | 29.0 | 31.4 | 32.8 | 6 | 13.70 | — | 0.03 | 22.75 | 6 5 50.92 | | 1.19 | | |
| Lalande 12053 . . . | 37 | 10.6 | 12.6 | 15.2 | 28.1 | 29.7 | 31.4 | 33.1 | 34.7 | 47.6 | 50.3 | 51.9 | 13 | 31.38 | | 0.16 | 22.74 | 6 13 8.48 | | 1.39 | | |
| μ Geminorum . . . | 38 | 31.2 | 32.9 | 35.5 | 48.4 | 50.1 | 51.8 | 53.7 | 55.4 | 8.3 | 11.0 | 12.5 | 15 | 51.89 | | 0.17 | 22.74 | 6 15 28.98 | | 1.42 | | |
| 51 Cephei . . . | 39 | . . . | . . . | . . . | 34.0 | 6.0 | 41.0 | 14.0 | 46.0 | . . . | . . . | . . . | 42 | 40.20 | — | 7.29 | 22.72 | . . . | | 25.55 | | |
| *—31° 32' . . . | 40 | 14.0 | 16.5 | 19.3 | 33.0 | 34.6 | 36.3 | 38.3 | 40.4 | 54.5 | 57.3 | 58.9 | 49 | 36.65 | + | 0.05 | 22.71 | 6 49 14.02 | | 1.35 | | |
| *—30° 26' . . . | 41 | . . . | . . . | . . . | 49.2 | 51.1 | 53.3 | 55.4 | 57.2 | . . . | . . . | . . . | 56 | 53.24 | | 0.07 | 22.71 | 6 56 30.60 | | 1.37 | | |
| δ Canis Majoris . . . | 42 | 23.5 | 25.5 | 28.4 | 41.5 | 42.9 | 45.0 | 46.8 | 48.6 | 1.9 | 4.8 | 6.5 | 3 | 45.04 | + | 0.05 | 22.70 | 7 3 22.39 | | 1.38 | | |
| *—14° 48' . . . | 43 | . . . | . . . | . . . | 36.6 | 39.2 | 40.8 | 52.1 | 55.0 | 56.6 | 58.3 | 0.3 | 6 | 49.86 | — | 28.71 | 22.70 | 7 5 58.45 | | 1.39 | | |
| *+38° 35' . . . | 44 | 35.1 | 37.2 | 40.5 | 55.9 | 57.6 | 59.7 | 1.8 | 3.8 | 19.1 | 22.2 | 24.0 | 9 | 50.72 | | 0.28 | 22.70 | 7 9 36.74 | | 2.05 | | |
| δ Geminorum . . . | 45 | 46.9 | 48.6 | 51.4 | 4.2 | 5.8 | 7.7 | 9.5 | 11.0 | 24.0 | 26.6 | 28.3 | 13 | 7.64 | | 0.17 | 22.69 | 7 12 44.78 | | 1.72 | | |
| 17 | μ Persei . . . | 46 | 43.0 | 45.5 | 49.4 | 7.1 | 9.3 | 11.9 | 14.4 | 16.7 | 34.9 | 38 | 44.0 | 7 | 11.94 | | 0.28 | 23.28 | 4 5 48.38 | | 0.50 | |
| | Weisse (2) 137 . . . | 47 | 29.3 | 32.0 | 35.2 | 52.0 | 54.0 | 56.1 | 58.6 | 0.6 | 17.6 | 21.0 | 23.0 | 9 | 56.31 | | 0.25 | 23.28 | 4 9 32.78 | | 0.54 | |
| |) Tauri . . . | 48 | 48.2 | 49.9 | 52.8 | 4.9 | 6.5 | 8.3 | 9.9 | 11.6 | 21.0 | 26.6 | 28.0 | 13 | 8.25 | — | 0.11 | 23.28 | 4 12 44.86 | | 0.59 | |
| | *—20° 31' . . . | 49 | 15.0 | 16.5 | 19.3 | 32.1 | 33.5 | 35.3 | 37.2 | 38.9 | 51.5 | 54.1 | 55.7 | 18 | 35.37 | | 0.00 | 23.28 | 4 18 12.09 | | 0.69 | |
| | 16 Eridani . . . | 50 | 40.4 | 42.2 | 45.3 | 59.2 | 0.8 | 2.8 | 4.6 | 6.4 | 20.4 | 23.1 | 24.7 | 29 | 2.72 | + | 0.03 | 23.28 | 4 28 39.47 | — | 0.77 | |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------|--------------------|-----------------|--------|--------|
| 1876. h. | s. | s. | s. | s. |
| Feb. 16, 5.6 | — 22.77 | + 0.047 | — 0.25 | — 0.06 |
| 17, 6.2 | — 23.25 | + 0.015 | — 0.17 | — 0.06 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. | |
|-------------------------|---------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|----------|---------------|-------|--------|---------------------------------|-------------------------|--------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | |
| 1876. Feb. 17 Y. | Lacaille 1540 . . . | 1 | 32.5 | 54.2 | 57.0 | 10.4 | 12.0 | 13.8 | 15.7 | 17.4 | 30.7 | 33.4 | 35.1 | m. s. | m. s. | s. | h. m. s. | s. | |
| | *-25° 58' . . . | 2 | 34.5 | 30.4 | 39.0 | 52.2 | 54.2 | 55.9 | 57.8 | 59.5 | .. | .. | .. | 34 13.84 | + | 0.02 | -23.27 | 4 33 50.59 | - 0.78 |
| | *-29° 58' . . . | 3 | 12.7 | 14.5 | 17.4 | 30.7 | 32.6 | 31.3 | 30.3 | 38.2 | 51.8 | 54.9 | 56.7 | 35 48.69 | .. | 7.22 | 23.27 | 4 35 32.64 | 0.79 |
| | 4 Aurigæ . . . | 4 | 50.4 | 52.4 | 55.4 | 10.8 | 12.6 | 14.7 | 16.8 | 18.7 | 33.8 | 37.0 | 38.7 | 42 34.55 | + | 0.03 | 23.27 | 4 42 11.31 | 0.83 |
| | *+37° 43' . . . | 5 | 27.0 | 29.2 | 31.5 | 33.4 | 36.8 | .. | 52.6 | 56.0 | 57.8 | 59.8 | 2.2 | 51 14.66 | - | 0.21 | 23.27 | 4 50 51.18 | 0.92 |
| | | | | | | | | | | | | | | 51 14.63 | - | 0.12 | 23.27 | 4 50 51.24 | 0.92 |
| | Lacaille 1787 . . . | 6 | 20.0 | 21.7 | 24.7 | 38.6 | 40.2 | 42.4 | 44.3 | 46.2 | 0.1 | 2.9 | 4.7 | 12 42.35 | + | 0.03 | 23.26 | 5 12 19.12 | 0.97 |
| | β Tauri . . . | 7 | 20.9 | 31.7 | 34.5 | 48.1 | 50.0 | 51.7 | 53.7 | 55.5 | 9.0 | 11.8 | 13.4 | 18 51.75 | - | 0.16 | 23.26 | 5 18 28.33 | 1.08 |
| | O. Arg. N. 5930 . | 8 | 12.6 | 17.5 | 25.0 | 0.1 | 4.5 | 9.8 | 14.6 | 19.0 | 54.5 | 1.6 | 6.1 | 25 9.52 | .. | 0.65 | 23.26 | 5 24 45.61 | 2.34 |
| | *-20° 47' . . . | 9 | 42.7 | 45.2 | 46.7 | 58.7 | 1.6 | 3.0 | 4.7 | 6.6 | .. | .. | .. | 38 56.15 | - | 29.69 | 23.26 | 5 38 3.20 | 1.05 |
| 1876. Feb. 18 T. | B. A. C. 1860 . . . | 10 | 46.3 | 48.1 | 50.7 | 3.4 | 5.2 | 7.0 | 8.7 | 10.5 | 23.5 | 26.2 | 27.8 | 45 7.04 | + | 0.01 | 23.26 | 5 44 43.79 | 1.08 |
| | *+72° 36' . . . | 11 | 56.3 | 1.6 | 10.1 | 50.2 | 55.5 | 0.6 | 5.0 | 11.6 | 51.2 | 59.8 | 4.5 | 52 0.66 | - | 0.74 | 23.25 | 5 51 36.67 | 3.27 |
| | *+20° 8' . . . | 12 | 25.0 | 27.0 | 29.4 | 41.9 | 43.5 | 45.2 | 46.8 | 48.7 | 1.5 | 4.0 | 5.7 | 59 45.34 | .. | 0.13 | 23.25 | 5 59 21.96 | 1.29 |
| | *+31° 10' . . . | 13 | 11.4 | 12.9 | 16.3 | 30.2 | 31.8 | 33.6 | 35.9 | 37.9 | 51.7 | 54.6 | 56.3 | 3 33.87 | - | 0.17 | 23.25 | 6 3 10.45 | 1.44 |
| | *-27° 33' . . . | 14 | .. | .. | .. | 4.9 | 6.6 | 8.3 | 10.3 | 12.2 | .. | .. | .. | 6 8.46 | + | 0.01 | 23.25 | 6 5 45.22 | 1.18 |
| | μ Geminorum . . . | 15 | 31.5 | .. | 36.0 | 48.9 | 50.6 | 52.4 | 54.2 | 55.9 | 8.9 | .. | 13.1 | 15 52.39 | - | 0.14 | 23.25 | 6 15 29.00 | 1.41 |
| | 48 Aurigæ . . . | 16 | 38.5 | 40.8 | 43.5 | 57.1 | 58.9 | 1.0 | 2.8 | 4.7 | 18.5 | 21.2 | 23.0 | 21 0.88 | .. | 0.17 | 23.25 | 6 20 37.46 | 1.55 |
| | B. A. C. 2110 . . . | 17 | 23.7 | 25.7 | 28.7 | 42.9 | 44.7 | 46.8 | 48.6 | 50.5 | 4.8 | 7.6 | 9.3 | 24 46.66 | .. | 0.18 | 23.25 | 6 24 23.23 | 1.60 |
| | *+16° 54' . . . | 18 | .. | .. | .. | 7.7 | 9.3 | 11.0 | 12.7 | 14.4 | .. | .. | .. | 28 11.02 | .. | 0.12 | 23.25 | 6 27 47.65 | 1.42 |
| | 23 Geminorum . . | 19 | 56.0 | 57.7 | 0.3 | 12.7 | 14.4 | 16.2 | 17.9 | 19.5 | 31.9 | 34.5 | 36.1 | 29 16.11 | .. | 0.11 | 23.24 | 6 25 52.75 | 1.42 |
| 1876. Feb. 18 Y. | *+32° 45' . . . | 20 | 43.9 | 46.3 | 49.0 | 3.3 | 5.1 | 7.0 | 9.0 | 10.8 | 25.0 | 28.0 | 29.8 | 31 7.02 | .. | 0.18 | 23.24 | 6 33 43.60 | 1.67 |
| | Lalande 12805 . . | 21 | 41.7 | 43.7 | 46.6 | 0.8 | 2.6 | 4.5 | 6.7 | 8.5 | 22.6 | 25.5 | 27.2 | 35 4.58 | .. | 0.18 | 23.24 | 6 34 41.16 | 1.68 |
| | 51 Cephei . . . | 22 | .. | .. | .. | 32.0 | 3.0 | 38.0 | 12.0 | 45.0 | .. | .. | .. | 42 38.00 | .. | 4.76 | 23.24 | .. | 25.28 |
| | *-26° 5' . . . | 23 | .. | .. | .. | 38.0 | 41.0 | 42.7 | 54.5 | 57.7 | 59.5 | 1.3 | 3.4 | 54 52.26 | .. | 30.88 | 23.24 | 6 53 58.14 | 1.34 |
| | *-14° 42' . . . | 24 | .. | .. | .. | 6.8 | 8.1 | 9.7 | 11.5 | 13.2 | .. | .. | .. | 3 9.86 | .. | 0.03 | 23.24 | 7 2 46.59 | 1.37 |
| | δ Geminorum . . . | 25 | 47.2 | 49.0 | 51.8 | 4.5 | 6.5 | 8.2 | 9.9 | 11.6 | 24.5 | 27.1 | 28.8 | 13 8.10 | .. | 0.14 | 23.24 | 7 12 44.72 | 1.71 |
| | *+21° 40' . . . | 26 | 57.0 | 58.8 | 1.5 | 13.4 | 15.9 | 17.8 | 19.4 | 21.1 | 34.0 | 36.8 | 38.4 | 30 17.65 | .. | 0.13 | 23.23 | 7 29 54.29 | 1.78 |
| | *-14° 21' . . . | 27 | 56.1 | 57.7 | 0.3 | 12.5 | 14.0 | 15.7 | 17.4 | 18.9 | 31.3 | 33.6 | 35.4 | 35 15.72 | .. | 0.02 | 23.23 | 7 34 52.47 | 1.46 |
| | *+38° 9' . . . | 28 | 47.5 | 49.3 | 52.4 | .. | .. | .. | .. | .. | 30.9 | 34.3 | 36.1 | 43 11.75 | .. | 0.20 | 23.23 | 7 42 48.32 | 2.22 |
| | φ Geminorum . . . | 29 | 58.2 | 0.0 | 2.9 | .. | 17.9 | 19.7 | 21.6 | .. | 37.0 | 39.5 | 41.2 | 46 19.78 | - | 0.15 | 23.23 | 7 45 56.40 | 1.95 |
| 1876. Feb. 18 Y. | O. Arg. S. 7669 . | 30 | 33.9 | 35.8 | 38.8 | 52.5 | 54.2 | 56.1 | 58.0 | 59.8 | 13.6 | 16.5 | 18.3 | 50 56.14 | + | 0.03 | 23.23 | 7 50 32.94 | 1.49 |
| | *-30° 2' . . . | 31 | 57.8 | 59.5 | 2.4 | .. | .. | .. | .. | .. | 37.5 | 39.8 | 41.8 | 52 19.80 | + | 0.04 | 23.23 | 7 51 56.61 | 1.49 |
| | B. A. C. 2655 . . . | 32 | .. | .. | .. | 4.4 | 6.5 | 8.4 | 10.3 | 12.1 | 25.8 | 28.7 | 30.6 | 53 15.85 | - | 7.45 | 23.23 | 7 52 45.17 | 1.49 |
| | O. Arg. N. 8586 . | 33 | 18.6 | 22.2 | 27.1 | .. | .. | .. | .. | .. | 28.5 | 34.0 | 36.8 | 58 57.87 | - | 0.41 | 23.22 | 7 58 31.24 | 3.60 |
| | Lacaille 3201 . . | 34 | 36.9 | 39.1 | 42.4 | 58.3 | 0.5 | 2.6 | 4.6 | 6.9 | 22.8 | 26.1 | 28.0 | 8 2.56 | + | 0.07 | 23.22 | 8 7 39.41 | 1.57 |
| | Weisse 230 . . . | 35 | 2.9 | 4.4 | 6.7 | 19.0 | 20.5 | 22.2 | 23.7 | 25.6 | 37.5 | 40.0 | 41.5 | 11 22.18 | - | 0.09 | 23.22 | 8 10 58.87 | 1.74 |
| | *+9° 32' . . . | 36 | .. | .. | .. | 49.8 | 51.4 | 52.0 | 54.6 | 56.2 | .. | .. | .. | 11 52.98 | .. | 0.10 | 23.22 | 8 11 29.66 | 1.74 |
| | Weisse 262 . . . | 37 | .. | .. | .. | 2.1 | 3.5 | 5.0 | 6.7 | 8.2 | .. | .. | .. | 12 5.10 | .. | 0.10 | 23.22 | 8 11 41.78 | 1.74 |
| | *+9° 33' . . . | 38 | .. | .. | .. | 27.1 | 29.5 | 31.2 | .. | .. | .. | .. | .. | 12 29.27 | .. | 17.59 | 23.22 | 8 11 48.46 | 1.74 |
| | *-20° 56' . . . | 39 | 54.1 | 56.0 | 59.0 | .. | .. | .. | .. | .. | 33.8 | 36.6 | 38.3 | 51 16.30 | .. | 0.13 | 24.23 | 5 50 51.94 | 1.11 |
| 1876. Feb. 18 T. | *-31° 56' . . . | 40 | 50.2 | 51.9 | 54.9 | 9.0 | 10.7 | 12.6 | 14.5 | 16.4 | 30.5 | 33.2 | 35.0 | 54 12.63 | - | 0.15 | 24.23 | 5 53 48.25 | 1.13 |
| | *+31° 27' . . . | 41 | 52.1 | 54.2 | 57.1 | 10.8 | 12.9 | 14.8 | 16.8 | 18.6 | 32.5 | 35.4 | 37.2 | 3 14.70 | + | 0.01 | 24.23 | 6 2 50.54 | 1.42 |
| | *-26° 42' . . . | 42 | 9.9 | .. | 14.5 | 27.8 | 29.5 | 31.2 | 33.2 | 35.0 | 48.4 | .. | 52.7 | 7 31.37 | - | 0.13 | 24.23 | 6 7 7.01 | 1.17 |
| | κ Columbae . . . | 43 | 10.2 | .. | 15.4 | 30.1 | 32.0 | 34.0 | 36.0 | 37.9 | 52.6 | .. | 57.3 | 12 33.94 | .. | 0.17 | 24.22 | 6 12 9.55 | 1.21 |
| | *-29° 33' . . . | 44 | .. | 37.0 | 40.0 | 53.5 | 55.3 | 57.3 | 59.0 | 1.0 | 14.4 | 17.4 | .. | 15 57.21 | .. | 0.16 | 24.22 | 6 15 32.83 | 1.20 |
| | Lacaille 2232 . . . | 45 | .. | .. | .. | 30.9 | 32.6 | 34.4 | 36.2 | 38.0 | .. | .. | .. | 16 34.42 | .. | 0.15 | 24.22 | 6 16 10.05 | 1.20 |
| | Weisse 782 . . . | 46 | 54.5 | 56.3 | 58.8 | 10.9 | 12.8 | 14.4 | 16.2 | 17.7 | 30.1 | 32.5 | 34.0 | 27 14.38 | .. | 0.10 | 24.22 | 6 26 50.06 | 1.24 |
| | γ Geminorum . . . | 47 | 38.6 | 40.4 | 42.8 | 55.2 | 56.8 | 58.4 | 0.2 | 1.9 | 14.5 | 17.0 | 18.5 | 30 58.57 | - | 0.02 | 24.22 | 6 30 34.33 | 1.42 |
| | 51 Cephei . . . | 48 | .. | .. | .. | 28.0 | 0.0 | 32.5 | 6.0 | 39.0 | .. | .. | .. | 42 33.10 | + | 0.82 | 24.22 | .. | 25.22 |
| | *-38° 49' . . . | 49 | .. | .. | .. | .. | .. | .. | .. | .. | 51.2 | 54.6 | 56.5 | 49 56.40 | - | 43.68 | 24.22 | 6 48 48.50 | 1.36 |
| *-30° 45' . . . | 50 | .. | .. | .. | 37.1 | 38.8 | 40.7 | 42.6 | 44.4 | .. | .. | .. | 52 40.72 | - | 0.16 | -24.21 | 6 52 16.35 | - 1.33 | |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------------------|--------------------|-----------------|--------------|--------------|
| 1876. h. Feb. 18, 7.2 | s. - 24.21 | s. + 0.015 | s. + 0.13 | s. - 0.06 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. | | | |
|-------------------------|-------------------------------|---------------------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|---------------|---------|--------|---------------------------------|-------------------------|------------|------------|-------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| 1876. Feb. 18 T. | *-30° 43' | 1 | 52.1 | 54.0 | 57.0 | 10.7 | 12.4 | 14.3 | 16.1 | 17.8 | 32.1 | 34.8 | 36.5 | 53 | 14.35 | — | 0.15 | -24.21 | 6 52 49.99 | — | 1.33 |
| δ | Piazz's VI, 328. | 2 | 7.8 | 10.0 | 11.9 | 24.8 | 26.3 | 27.7 | 29.4 | 31.2 | 43.6 | 45.9 | 47.3 | 59 | 27.81 | — | 0.10 | 24.21 | 6 59 3.50 | | 1.35 |
| | Canis Majoris | 3 | 25.2 | ... | ... | 43.2 | 44.8 | 46.7 | 48.5 | 50.4 | ... | ... | ... | 7.9 | 3 46.67 | — | 0.11 | 24.21 | 7 3 22.35 | | 1.35 |
| | Geminorum | 4 | 48.2 | 49.8 | 52.7 | 5.5 | 7.1 | 8.9 | 10.6 | 12.4 | 25.3 | 27.8 | 29.5 | 13 | 8.89 | — | 0.01 | 24.21 | 7 12 44.67 | | 1.71 |
| | *-14 24' | 5 | 34.7 | 36.3 | 39.0 | 51.5 | 52.9 | 54.7 | 56.4 | 58.0 | 10.2 | 12.9 | 14.4 | 15 | 54.64 | — | 0.09 | 24.21 | 7 15 30.34 | | 1.40 |
| | *-31° 31' | 6 | 58.7 | 0.7 | 3.5 | 17.8 | 19.5 | 21.4 | 23.5 | 25.3 | 39.0 | 42.0 | 43.9 | 20 | 21.39 | — | 0.15 | 24.21 | 7 19 57.03 | | 1.41 |
| α ² | *-14° 46' | 7 | 36.7 | 38.4 | 40.9 | 53.4 | 54.9 | 56.6 | 58.3 | 59.9 | 12.4 | 14.8 | 16.5 | 23 | 56.62 | — | 0.10 | 24.21 | 7 23 32.31 | | 1.42 |
| | Geminorum | 8 | 44.5 | 46.5 | 49.3 | 3.5 | 5.2 | 7.4 | 9.2 | 11.1 | 25.4 | 28.2 | 29.9 | 27 | 7.29 | + | 0.01 | 24.21 | 7 26 43.09 | | 1.97 |
| | *-34° 31' | 9 | 43.9 | ... | 48.9 | 3.3 | 5.0 | 7.2 | 9.2 | 10.9 | 25.7 | ... | 30.2 | 35 | 7.14 | — | 0.16 | 24.20 | 7 34 42.78 | | 1.46 |
| | *+38 20' | 10 | 28.3 | 30.4 | ... | 48.9 | 50.8 | 52.9 | 54.9 | 56.9 | ... | 15.2 | 17.2 | 41 | 52.83 | + | 0.04 | 24.20 | 7 41 28.67 | | 2.21 |
| | φ | Geminorum | 11 | 58.8 | 0.8 | 3.5 | 16.9 | 18.8 | ... | 22.4 | 24.2 | 37.7 | 40.4 | 42.1 | 46 | 20.56 | — | 0.00 | 24.20 | 7 45 56.36 | |
| Y. | Lacaille 3086 | 12 | 48.4 | 50.5 | 54.2 | 10.2 | ... | 14.5 | ... | 18.9 | 35.0 | 38.2 | 40.2 | 53 | 14.46 | — | 0.20 | 24.20 | 7 52 50.06 | | 1.54 |
| | *+60° 41' | 13 | 47.2 | 50.3 | 55.2 | ... | ... | ... | ... | ... | 57.1 | 2.2 | 4.9 | 58 | 26.15 | + | 0.13 | 24 20 | 7 58 2.08 | | 3.65 |
| | *+1° 17' | 14 | 6.6 | 8.1 | 10.5 | 12.4 | 24.0 | 25.5 | 27.4 | 28.8 | 40.7 | 43.3 | 45.0 | 42 | 25.66 | — | 0.03 | 25.23 | 4 42 0.46 | | 0.70 |
| | Weisse 925 | 15 | 11.0 | 12.6 | 15.0 | 27.1 | 28.5 | 30.2 | 31.9 | 33.4 | 45.3 | 47.8 | 49.4 | 44 | 30.20 | — | 0.03 | 25.23 | 4 44 5.00 | | 0.71 |
| | *+45° 19' | 16 | 8.6 | 10.6 | 14.5 | 31.6 | 33.4 | 36.2 | 38.3 | 40.8 | 57.4 | 1.1 | 3.4 | 57 | 36.00 | — | 0.06 | 25.23 | 4 57 10.83 | | 0.94 |
| β | *-25° 33' | 17 | 11.7 | 13.4 | 16.5 | 28.9 | 30.5 | 32.6 | 34.7 | 36.4 | ... | ... | ... | 6 | 25.59 | — | 7.20 | 25.23 | 5 6 7.56 | | 0.83 |
| | Tauri | 18 | 31.7 | 33.4 | 36.3 | 49.8 | 51.5 | 53.5 | 55.3 | 57.0 | 10.6 | 13.5 | 15.4 | 18 | 53.45 | — | 0.04 | 25.23 | 5 18 28.26 | | 1.00 |
| | Groombridge 980. | 19 | 58.1 | 0.1 | 3.3 | 18.4 | 20.4 | 22.5 | 24.6 | 26.5 | 41.7 | 44.9 | 47.0 | 23 | 22.50 | — | 0.05 | 25.23 | 5 22 57.32 | | 1.12 |
| | Orionis. | 20 | 2.2 | 3.8 | 6.3 | 18.1 | 19.8 | 21.4 | 23.1 | 24.5 | 36.5 | 39.0 | 40.7 | 30 | 21.40 | — | 0.03 | 25.22 | 5 20 56.21 | | 0.95 |
| | Orionis. | 21 | 34.6 | 36.2 | 38.7 | 50.6 | 52.2 | 54.0 | 55.6 | 57.0 | 9.0 | 11.5 | 13.1 | 48 | 53.86 | — | 0.03 | 25.22 | 5 48 28.67 | | 1.08 |
| α | Weisse 1368 (1st *) | 22 | 29.8 | 31.2 | 33.5 | 46.1 | 47.7 | 49.5 | 51.0 | 52.6 | 5.0 | 7.5 | 9.2 | 54 | 49.37 | + | 0.03 | 25.22 | 5 54 24.18 | | 1.05 |
| | Weisse 1378 | 23 | ... | ... | ... | 23.8 | 26.7 | 28.5 | 30.0 | 32.9 | 44.6 | ... | ... | 55 | 34.42 | — | 25.56 | 25.22 | 5 54 43.64 | | 1.05 |
| | *+20° 8' | 24 | 26.6 | 28.2 | 30.9 | 43.5 | 45.1 | 46.9 | 48.6 | 50.2 | 3.0 | 5.7 | 7.5 | 59 | 46.93 | + | 0.04 | 25.22 | 5 59 21.75 | | 1.22 |
| | *+20° 11' | 25 | ... | ... | ... | ... | ... | ... | ... | ... | 21.6 | 23.9 | 25.8 | 0 | 23.77 | — | 18.36 | 25.22 | 5 59 40.19 | | 1.22 |
| | *+31° 27' | 26 | 50.6 | 58.6 | 0.8 | 2.6 | 5.5 | ... | ... | ... | ... | ... | ... | 4 | 0.82 | + | 39.97 | 25.22 | 6 4 15.57 | | 1.38 |
| 54 | *+31° 27' | 27 | ... | ... | ... | 46.3 | 48.0 | 50.0 | 52.0 | 53.8 | ... | ... | ... | 4 | 50.02 | — | 0.06 | 25.22 | 6 4 24.86 | | 1.38 |
| | B. A. C. 2014 | 28 | 18.6 | 20.5 | 23.6 | 38.1 | 40.0 | 41.8 | 44.0 | 45.8 | 0.4 | 3.5 | 5.6 | 9 | 41.99 | — | 0.05 | 25.22 | 6 9 16.82 | | 1.47 |
| | B. A. C. 2021 | 29 | 39.1 | 41.0 | 43.9 | 58.7 | 0.5 | 2.6 | 4.6 | 6.5 | 21.0 | 24.2 | 26.2 | 11 | 2.57 | — | 0.05 | 25.22 | 6 10 37.40 | | 1.48 |
| | *-29° 33' | 30 | 36.2 | 37.6 | 40.7 | 54.4 | 56.1 | 58.1 | 0.0 | 1.6 | 15.3 | 18.2 | 20.0 | 15 | 58.02 | — | 0.02 | 25.22 | 6 15 32.82 | | 1.13 |
| | O. Arg. N. 6864 | 31 | ... | ... | ... | 14.3 | 21.0 | 27.9 | 34.8 | 41.2 | ... | ... | ... | 21 | 27.84 | — | 0.25 | 25.21 | 6 21 2.88 | | 4.66 |
| 51 | Groombridge 1183 | 32 | 51.8 | 53.8 | 56.9 | 12.0 | 13.8 | 16.1 | 18.2 | 20.2 | 33.5 | 38.5 | 40.5 | 26 | 16.10 | — | 0.05 | 25.21 | 6 25 50.94 | | 1.65 |
| | Aurigæ. | 33 | 48.9 | 50.6 | 53.4 | 7.0 | 8.7 | 10.6 | 12.5 | 14.4 | 27.8 | 30.6 | 32.5 | 32 | 10.64 | — | 0.05 | 25.21 | 6 31 45.48 | | 1.52 |
| | Cephei | 34 | ... | ... | ... | 27.0 | 58.5 | 33.5 | 7.0 | 38.0 | ... | ... | ... | 42 | 32.80 | — | 1.01 | 25.21 | ... | | 23.95 |
| | *-24° 48' | 35 | 52.9 | 54.4 | 57.2 | 10.6 | 12.0 | 13.8 | 15.5 | 17.3 | 30.7 | 33.5 | 35.2 | 52 | 13.92 | + | 0.02 | 25.21 | 6 51 48.73 | | 1.26 |
| | *-23° 41' | 36 | ... | ... | ... | 8.7 | 11.6 | 13.2 | 24.8 | 27.9 | 29.7 | 31.8 | 33.9 | 56 | 22.70 | — | 30.39 | 25.21 | 6 55 27.10 | | 1.28 |
| 22 | Monocerotis | 37 | 39.4 | 40.9 | 43.4 | 55.4 | 56.7 | 58.5 | 0.1 | 1.6 | 13.6 | 16.1 | 17.8 | 5 | 58.50 | + | 0.03 | 25.21 | 7 5 33.32 | | 1.40 |
| | δ Geminorum | 38 | 49.3 | 50.9 | 53.6 | 6.3 | 8.0 | 9.9 | 11.7 | 13.4 | 26.1 | 28.8 | 30.6 | 13 | 9.87 | + | 0.04 | 25.21 | 7 12 44.70 | | 1.67 |
| | Weisse 500 | 39 | 21.5 | 23.4 | 25.2 | 26.8 | 29.5 | ... | 31.6 | 34.2 | 36.0 | 37.6 | 39.5 | 18 | 0.53 | — | 0.04 | 25.21 | 7 17 35.28 | | 1.37 |
| | *-14° 38' | 40 | 41.3 | 43.0 | 45.3 | 58.1 | 59.5 | 1.2 | 2.9 | 4.5 | 16.9 | 19.3 | 21.2 | 18 | 1.20 | + | 0.03 | 25.20 | 7 17 36.03 | | 1.37 |
| | *-23° 27' | 41 | 35.4 | 37.2 | 39.2 | 41.0 | 44.1 | ... | 49.4 | 51.6 | 53.7 | 55.0 | 57.9 | 43 | 06.51 | — | 0.06 | 25.20 | 7 42 41.25 | | 1.42 |
| 15 | *+0° 28' | 42 | ... | ... | ... | 27.6 | 29.4 | 31.0 | 32.7 | 34.5 | ... | ... | ... | 40 | 31.04 | + | 0.04 | 25.20 | 7 46 5.88 | | 1.55 |
| | *+0° 28' | 43 | 24.7 | 26.0 | 28.6 | 40.2 | 41.8 | 43.6 | 45.2 | 47.0 | 58.2 | 0.7 | 2.5 | 47 | 43.50 | — | 0.03 | 25.20 | 7 47 18.33 | | 1.55 |
| | *-25° 38' | 44 | 37.4 | 39.0 | 41.7 | 55.0 | 56.7 | 58.7 | 0.3 | 1.9 | 15.4 | 17.8 | 19.9 | 58 | 58.53 | — | 0.02 | 25.20 | 7 58 33.35 | | 1.46 |
| | Argus | 45 | 21.5 | 23.2 | 25.7 | 38.9 | 40.7 | 42.5 | 44.3 | 46.0 | 59.0 | 1.8 | 3.5 | 2 | 42.46 | — | 0.02 | 25.20 | 8 2 17.28 | | 1.47 |
| | Lacaille 3201 | 46 | 39.1 | 41.0 | 44.2 | 0.2 | 2.5 | 4.8 | 6.8 | 9.0 | 24.9 | 28.0 | 30.3 | 8 | 4.62 | — | 0.02 | 25.20 | 8 7 39.44 | | 1.52 |
| δ | Weisse 230 | 47 | 4.6 | 6.0 | 8.6 | 20.7 | 22.2 | 23.9 | 25.6 | 27.0 | 39.3 | 41.8 | 43.5 | 11 | 23.93 | — | 0.03 | 25.20 | 8 10 58.76 | | 1.72 |
| | *+9° 33' | 48 | ... | ... | ... | 3.7 | 5.1 | 7.0 | 8.5 | 10.2 | ... | ... | ... | 12 | 6.93 | + | 0.04 | 25.19 | 8 11 41.75 | | 1.72 |
| | *+9° 33' | 49 | ... | ... | ... | 28.7 | 31.3 | 32.8 | 44.2 | 46.8 | 48.3 | 49.9 | 51.7 | 12 | 41.71 | — | 28.21 | -25.19 | 8 11 48.31 | — | 1.73 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------------|------------------|---------------|--------------|--------------|
| 1876. Feb. 22, 6.8 | h. s. — 25.21 | s. + 0.011 | s. + 0.02 | s. + 0.03 |

February 20. Image west of 40. Clamp west.
Image west of 30. Clamp east.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. |
|-------------------------|-----------------------|---------|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------------------|-----------------|---------------|---------------------------------|-------------------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | |
| 1876. Feb. 22 Y. | Lalande 16367 . . . | 1 | 37.5 | 39.1 | 42.0 | 55.5 | 57.0 | 59.0 | 0.9 | 2.6 | 16.0 | 18.9 | 20.9 | m. s. 15 59.04 | m. s. + 0.04 | s. - 25.19 | h. m. s. 8 15 33.89 | s. - 2.05 |
| | B. A. C. 2824 . . . | 2 | 11.3 | 16.4 | 22.4 | 57.2 | 1.3 | 6.3 | 11.1 | 15.6 | 49.8 | 57.3 | 1.8 | 21 6 41 | 0.14 | 25.19 | 8 20 41.36 | 5.27 |
| | 35 Cancr . . . | 3 | 18.6 | 20.1 | 22.8 | 35.5 | 37.0 | 38.9 | 41.7 | 42.2 | 55.0 | 57.6 | 59.3 | 28 38.97 | 0.03 | 25.19 | 8 28 13.81 | 1.94 |
| | *-2° 35' . . . | 4 | 59.2 | 0.7 | 3.1 | 15.1 | 16.6 | 18.4 | 20.0 | 21.6 | 33.5 | 35.8 | 37.6 | 33 18.33 | 0.03 | 25.19 | 8 32 53.17 | 1.65 |
| | Weisse (2) 856 . . . | 5 | 22.7 | 24.6 | 28.1 | 44.4 | 46.5 | 48.7 | 51.1 | 53.1 | 9.5 | 12.9 | 15.1 | 35 48.79 | 0.06 | 25.19 | 8 35 23.66 | 2.64 |
| | ε Hydræ . . . | 6 | 20.3 | 21.8 | 24.4 | 36.3 | 37.8 | 39.6 | 41.1 | 42.8 | 54.6 | 57.3 | 58.9 | 40 39.54 | 0.02 | 25.19 | 8 40 14.37 | 1.76 |
| | B. A. C. 3005 . . . | 7 | 55.0 | 57.0 | 59.8 | 13.2 | 15.2 | 17.1 | 18.9 | 20.6 | . . . | . . . | . . . | 45 9.60 | 7.44 | 25.19 | 8 44 51.85 | 1.55 |
| | Weisse 1282 . . . | 8 | 44.5 | 45.9 | 48.4 | 0.8 | 2.4 | 3.9 | 6.0 | 7.5 | . . . | . . . | . . . | 50 57.42 | 6.68 | 25.19 | 8 50 38.91 | 1.60 |
| | O. Arg. S. 9210 . . . | 9 | 41.0 | 42.7 | 45.6 | 59.4 | 1.3 | 3.0 | 5.0 | 6.7 | 20.9 | 23.5 | 25.6 | 54 3.15 | 0.02 | 25.19 | 8 53 37.98 | 1.56 |
| | *+53° 45' . . . | 10 | 23.0 | 25.8 | 29.9 | 50.1 | 52.9 | 55.8 | 58.2 | 1.0 | 21.3 | 25.1 | 28.2 | 57 55.57 | + 0.08 | 25.19 | 8 57 30.46 | 3.38 |
| | *+21° 30' . . . | 11 | . . . | . . . | . . . | 1.6 | 3.4 | 5.2 | 7.0 | 8.6 | 21.5 | 24.2 | 25.8 | 1 12.16 | - 6.92 | 25.19 | 9 0 40.05 | 2.06 |
| Mar. 2 | β Tauri . . . | 12 | . . . | . . . | . . . | 12.0 | 15.0 | 16.7 | 20.2 | 32.1 | 33.9 | 35.7 | 37.9 | 19 26.56 | 31.67 | 26.75 | 5 18 28.14 | 0.85 |
| | Weisse 603 . . . | 13 | 30.2 | 32.0 | 33.6 | 35.2 | 37.7 | . . . | 38.0 | 40.5 | 42.1 | 43.9 | 45.8 | 26 7.90 | - 0.05 | 26.75 | 5 25 41.10 | 0.79 |
| | δ Orionis . . . | 14 | 48.8 | 50.4 | 52.8 | 4.6 | 6.1 | 7.8 | 9.5 | 11.0 | 23.0 | 25.5 | 27.2 | 26 7.88 | + 0.02 | 26.75 | 5 25 41.15 | 0.79 |
| | α Leporis . . . | 15 | . . . | . . . | . . . | 58.9 | 1.6 | 3.4 | 14.8 | 17.6 | 19.0 | 20.9 | 22.9 | 28 12.39 | - 29.25 | 26.74 | 5 27 16.40 | 0.76 |
| | ε Orionis . . . | 16 | 3.8 | 5.2 | 7.8 | 19.7 | 21.2 | 22.9 | 24.6 | 26.1 | 37.9 | 40.5 | 42.2 | 30 22.90 | + 0.02 | 26.74 | 5 29 56.18 | 0.81 |
| | *+38° 7' . . . | 17 | 7.0 | 8.8 | 11.8 | 27.2 | 28.7 | 31.0 | 33.1 | 35.1 | 50.5 | 53.6 | 55.5 | 39 31.12 | 0.02 | 26.74 | 5 39 4.40 | 1.09 |
| | B. A. C. 1860 . . . | 18 | 49.4 | 51.0 | 53.7 | 7.0 | 8.5 | 10.4 | 12.0 | 13.8 | 26.8 | 29.4 | 31.3 | 45 10.30 | - 0.02 | 26.73 | 5 44 43.59 | 0.84 |
| | O. Arg. S. 4453 . . . | 19 | 51.0 | 52.7 | 55.3 | 9.4 | 11.0 | 12.9 | 14.7 | 16.6 | 30.0 | 33.0 | 34.9 | 51 12.86 | 0.02 | 26.73 | 5 50 46.15 | 0.85 |
| | *+31° 10' . . . | 20 | 14.8 | 16.6 | 19.6 | 33.6 | 35.0 | 36.9 | 38.7 | 40.6 | 54.7 | 57.4 | 59.5 | 3 37.04 | + 0.02 | 26.72 | 6 3 10.34 | 1.22 |
| | *-26° 40' . . . | 21 | . . . | . . . | . . . | . . . | . . . | . . . | 50.2 | 53.0 | 55.0 | 56.9 | 58.8 | 7 54.78 | - 38.25 | 26.72 | 6 6 49.81 | 0.94 |
| | Lacaille 2211 . . . | 22 | 23.2 | 24.9 | 27.8 | 41.0 | 42.6 | 44.7 | 46.6 | 48.4 | 1.6 | 4.5 | 6.3 | 12 41.69 | + 0.02 | 26.71 | 6 12 18.00 | 0.95 |
| | Lacaille 2226 . . . | 23 | 33.5 | 35.0 | 37.7 | 50.9 | 52.6 | 54.4 | 56.0 | 57.8 | . . . | . . . | . . . | 15 47.24 | 7.09 | 26.71 | 6 15 27.62 | 0.97 |
| | Lacaille 2271 . . . | 24 | 59.2 | 0.9 | 3.7 | 17.6 | 19.2 | 21.2 | 23.0 | 24.9 | 38.5 | 41.5 | 43.3 | 21 21.18 | + 0.02 | 26.71 | 6 20 54.49 | 0.99 |
| | 51 Cephei . . . | 25 | . . . | . . . | . . . | . . . | . . . | . . . | . . . | 36.0 | 46.0 | . . . | . . . | 45 41.00 | - 3 8.92 | 26.70 | . . . | 20.65 |
| | δ Geminorum . . . | 26 | . . . | . . . | . . . | . . . | . . . | . . . | . . . | 27.4 | 30.3 | 32.0 | . . . | 13 29.90 | - 18.64 | 26.70 | 7 12 44.56 | 1.57 |
| | 3 β Tauri . . . | 27 | 33.1 | 34.8 | 37.5 | 51.2 | 52.9 | 54.8 | 56.8 | 58.7 | 12.0 | 14.9 | 16.7 | 18 54.85 | + 0.08 | 26.80 | 5 18 28.13 | 0.83 |
| | Weisse 603 . . . | 28 | 20.9 | 32.0 | 33.6 | 35.2 | 38.0 | . . . | 38.1 | 40.4 | 42.0 | 43.8 | 45.7 | 26 7.87 | - 0.05 | 26.80 | 5 25 41.02 | 0.78 |
| | δ Orionis . . . | 29 | 48.8 | 50.3 | 52.7 | 4.8 | 6.3 | 7.8 | 9.3 | 10.9 | 22.8 | 25.5 | 27.1 | 26 7.85 | + 0.02 | 26.80 | 5 25 41.07 | 0.77 |
| | ε Orionis . . . | 30 | 3.9 | 5.2 | 7.7 | 19.7 | 21.2 | 23.0 | 24.6 | 26.0 | 38.0 | 40.5 | 42.1 | 30 22.90 | + 0.02 | 26.79 | 5 29 56.13 | 0.79 |
| | Lacaille 1964 . . . | 31 | 52.9 | 54.7 | 57.4 | 12.2 | 14.0 | 15.8 | 18.0 | 19.9 | 34.2 | 37.4 | 39.5 | 38 16.00 | - 0.04 | 26.79 | 5 37 49.17 | 0.77 |
| v Aurigæ . . . | 32 | 38.9 | 40.7 | 43.8 | 59.0 | 1.0 | 3.0 | 5.0 | 7.0 | 21.9 | 25.1 | 27.0 | 43 2.95 | + 0.10 | 26.79 | 5 42 36.26 | 1.10 | |
| Weisse 1143 . . . | 33 | 3.0 | 4.6 | 7.0 | 19.3 | 20.8 | 22.6 | 24.4 | 26.0 | 38.3 | 40.9 | 42.5 | 46 22.67 | 0.00 | 26.79 | 5 45 55.88 | 0.84 | |
| *+7° 19' . . . | 34 | 9.3 | 10.8 | 13.2 | 25.0 | 26.9 | 28.6 | 30.2 | 31.9 | 43.8 | 46.3 | 47.9 | 50 28.54 | + 0.03 | 26.79 | 5 50 1.78 | 0.94 | |
| B. A. C. 1915 . . . | 35 | 23.7 | 25.4 | 28.3 | 42.5 | 44.2 | 46.1 | 48.1 | 50.0 | 4.0 | 6.9 | 9.0 | 53 46.20 | - 0.04 | 26.79 | 5 53 19.37 | 0.84 | |
| Weisse 1487 . . . | 36 | 41.4 | 43.0 | 45.7 | 58.0 | 59.5 | 1.3 | 2.9 | 4.5 | 15.8 | 19.3 | 21.0 | 59 1.13 | 0.01 | 26.78 | 5 58 34.34 | 0.90 | |
| Weisse 1500 . . . | 37 | . . . | . . . | . . . | 38.8 | 41.4 | 43.1 | 54.5 | 57.1 | 58.8 | 0.4 | 2.4 | 59 52.06 | 28.73 | 26.78 | 5 58 56.55 | 0.90 | |
| *-26° 42' . . . | 38 | . . . | . . . | . . . | 9.2 | 11.4 | 13.4 | 15.7 | 18.1 | . . . | . . . | . . . | 7 13.56 | - 0.02 | 26.78 | 6 6 46.76 | 0.91 | |
| Lalande 11959 . . . | 39 | 14.5 | 16.6 | 19.7 | 35.0 | 36.9 | 38.9 | 41.0 | 43.0 | 58.0 | 1.4 | 3.6 | 11 38.96 | + 0.10 | 26.78 | 6 11 12.28 | 1.36 | |
| μ Geminorum . . . | 40 | 34.9 | 36.5 | 39.0 | 51.9 | 52.7 | 55.6 | 57.2 | 59.0 | 11.7 | 1.4 | 16.2 | 15 55.46 | 0.07 | 26.78 | 6 15 28.75 | 1.20 | |
| *-25° 47' . . . | 41 | . . . | . . . | . . . | 52.0 | 54.7 | 56.6 | 58.9 | 11.5 | 13.3 | 15.1 | 17.4 | 24 7.44 | + 30.96 | 26.78 | 6 23 9.70 | 0.98 | |
| O. Arg. S. 5176 . . . | 42 | . . . | . . . | . . . | 30.5 | 32.2 | 33.8 | 35.8 | 37.4 | 50.6 | 53.3 | 55.4 | 24 41.12 | - 7.22 | 26.78 | 6 24 7.12 | 0.98 | |
| O. Arg. S. 5199 . . . | 43 | . . . | . . . | . . . | . . . | . . . | . . . | 6.7 | 9.2 | 11.0 | 12.8 | 15.2 | 26 10.98 | - 38.01 | 26.78 | 6 25 6.19 | 0.99 | |
| Lalande 12678 . . . | 44 | 40.6 | 42.4 | 45.5 | 59.5 | 1.5 | 3.3 | 5.2 | 7.0 | 21.0 | 23.9 | 26.0 | 32 3.26 | + 0.09 | 26.77 | 6 31 36.58 | 1.43 | |
| *+23° 49' . . . | 45 | 37.4 | 39.4 | 41.5 | 43.0 | 45.8 | . . . | 51.5 | 54.3 | 56.2 | 57.8 | 59.9 | 38 18.68 | - 0.02 | 26.77 | 6 37 51.89 | 1.36 | |
| *+23° 50' . . . | 46 | 56.5 | 58.5 | 0.5 | 2.1 | 4.9 | . . . | 10.9 | 13.5 | 15.4 | 17.3 | 19.3 | 38 37.89 | - 0.02 | 26.77 | 6 38 11.10 | 1.36 | |
| 51 Cephei . . . | 47 | . . . | . . . | . . . | 21.0 | 55.0 | 30.0 | 4.0 | 35.0 | . . . | . . . | . . . | 42 29.00 | + 2.57 | 26.77 | . . . | 20.33 | |
| *-24° 15' . . . | 48 | 39.3 | 41.0 | 43.7 | 56.9 | 58.3 | 0.3 | 1.9 | 2.5 | 17.0 | 19.7 | 21.5 | 49 0.19 | - 0.02 | 26.77 | 6 48 33.40 | 1.09 | |
| Lacaille 2558 . . . | 49 | 45.3 | 47.0 | 49.6 | 3.2 | 5.0 | 6.7 | 8.8 | 10.6 | 23.9 | 26.8 | 28.7 | 55 6 87 | 0.03 | 26.77 | 6 54 40.07 | 1.11 | |
| Piazzi 328 . . . | 50 | 2.3 | 3.8 | 6.4 | 18.7 | 20.5 | 22.0 | 23.8 | 25.3 | 37.7 | 40.3 | 42.1 | 0 22.08 | 0.01 | 26.76 | 6 59 55.31 | 1.17 | |
| O. Arg. S. 6314 . . . | 51 | 22.7 | 24.7 | 26.7 | 28.4 | 31.1 | . . . | 37.4 | 40.4 | 42.2 | 43.9 | 46.2 | 5 4.37 | - 0.11 | - 26.76 | 7 4 37.50 | - 1.15 | |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|-----------------------------------|----------------------------|--------------------------|----------------------|------------------------|
| 1876. h. Mar. 2, 5.8 3, 6.8 | ° s. - 26.73 - 26.79 | s. + 0.045 + 0.020 | s. 0.00 + 0.10 | s. + 0.02 + 0.02 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. | | | |
|-------------------------|--------------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|---------------|----------|------|---------------------------------|-------------------------|-------------|------|-------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | | Clock. | | |
| | | | m. | s. | m. | s. | s. | h. | m. | s. | | | | | | | | | | | |
| 1876. Mar. 3 Y. | O. Arg. S. 6317 . . . | 1 | 45.1 | 46.7 | 49.4 | 2.8 | 4.4 | 6.3 | 8.1 | 9.8 | 22.8 | 25.9 | 27.5 | 5 6.25 | — | 0.03 | 26.76 | 7 4 39.46 | — | 1.15 | |
| | Weisse 290 . . . | 2 | 43.3 | 44.9 | 47.4 | 59.8 | 1.4 | 3.1 | 4.8 | 6.6 | 18.7 | 21.1 | 22.9 | 11 3.09 | — | 0.01 | 26.76 | 7 10 36.32 | | 1.22 | |
| | Lalande 14499 . . . | 3 | 10.7 | 12.4 | 15.6 | 30.5 | 32.5 | 34.5 | 36.6 | 38.5 | 53.3 | 56.7 | 58.6 | 22 34.54 | + | 0.10 | 26.76 | 7 22 7.88 | | 1.90 | |
| | a ² Geminorum . . . | 4 | 47.1 | 48.9 | 51.9 | 6.1 | 7.9 | 9.9 | 11.8 | 13.6 | 27.4 | 30.5 | 32.6 | 27 9.79 | — | 0.09 | 26.76 | 7 26 43.12 | | 1.58 | |
| | *+38 20' . . . | 5 | 30.8 | 32.8 | 36.0 | 51.2 | 53.0 | 55.2 | 57.3 | 59.4 | 14.5 | 17.5 | 19.8 | 41 55.23 | — | 0.10 | 26.75 | 7 41 28.58 | | 2.07 | |
| | φ Geminorum . . . | 6 | 1.5 | 3.1 | 6.0 | 19.2 | 21.0 | 22.9 | 24.7 | 26.5 | 39.8 | 42.6 | 44.6 | 46 22.90 | + | 0.07 | 26.75 | 7 45 56.22 | | 1.83 | |
| | Lacaille 3201 . . . | 7 | 40.4 | 42.5 | 46.0 | 1.8 | 3.7 | 6.0 | 8.1 | 10.1 | 26.2 | 29.4 | 31.7 | 8 5.99 | — | 0.06 | 26.74 | 8 7 39.19 | | 1.37 | |
| | *-30° 12' . . . | 8 | 52.1 | 53.9 | 56.5 | 10.5 | 12.2 | 14.1 | 16.2 | 17.8 | 31.5 | 34.5 | 36.3 | 11 14.15 | — | 0.04 | 26.74 | 8 10 47.37 | | 1.37 | |
| | *-30° 11' . . . | 9 | ... | ... | ... | ... | ... | ... | ... | 52.9 | 56.9 | 57.8 | 59.7 | 1.9 | 11 57.84 | — | 39.60 | 26.74 | 8 10 51.50 | | 1.37 |
| | Lalande 16367 . . . | 10 | 39.0 | 40.7 | 43.5 | 57.0 | 58.7 | 0.6 | 2.3 | 4.1 | 17.6 | 20.4 | 22.2 | 16 0.55 | + | 0.07 | 26.74 | 8 15 33.88 | | 2.98 | |
| | *+13° 10' . . . | 11 | ... | ... | ... | 39.1 | 40.4 | 42.4 | 44.0 | 45.5 | ... | ... | ... | 24 42.28 | — | 0.05 | 26.74 | 8 24 15.59 | | 1.76 | |
| | Weisse 601 . . . | 12 | ... | ... | ... | 4.1 | 5.6 | 7.4 | 9.1 | 10.8 | ... | ... | ... | 25 7.40 | — | 0.05 | 26.74 | 8 24 40.71 | | 1.76 | |
| | Weisse (2) 629 . . . | 13 | 30.8 | 32.6 | 35.2 | 49.2 | 51.1 | 53.0 | 55.0 | 56.9 | 10.5 | 13.5 | 15.4 | 28 53.02 | + | 0.08 | 26.73 | 8 28 26.37 | | 2.11 | |
| | Lalande 17053 . . . | 14 | 58.2 | 0.2 | 2.0 | 3.5 | 6.1 | ... | ... | 6.5 | 9.1 | 10.6 | 12.4 | 14.5 | 33 36.31 | — | 0.04 | 26.73 | 8 33 9.54 | | 1.69 |
| | *+6° 14' . . . | 15 | 18.0 | 19.4 | 22.1 | 33.9 | 35.5 | 37.3 | 39.0 | 40.5 | 52.4 | 54.7 | 56.6 | 33 37.22 | + | 0.03 | 26.73 | 8 33 10.52 | | 1.69 | |
| | Weisse (2) 898 . . . | 16 | 39.0 | 40.5 | 43.3 | 56.4 | 58.0 | 59.8 | 1.4 | 3.4 | 16.4 | 19.0 | 20.9 | 36 59.83 | + | 0.06 | 26.73 | 8 36 33.16 | | 1.98 | |
| | Lacaille 3502 . . . | 17 | 11.6 | 13.2 | 16.2 | 30.2 | 31.9 | 34.0 | 36.0 | 37.8 | 51.7 | 54.5 | 56.6 | 40 33.97 | — | 0.04 | 26.73 | 8 40 7.20 | | 1.45 | |
| | Lacaille 3567 . . . | 18 | 48.0 | 49.8 | 52.5 | 6.1 | 7.6 | 9.5 | 11.3 | 13.0 | 26.5 | 29.4 | 31.1 | 47 9.53 | — | 0.03 | 26.73 | 8 46 42.77 | | 1.48 | |
| | Weisse 1282 . . . | 19 | 45.9 | 47.3 | 50.0 | 2.4 | 3.7 | 5.7 | 7.4 | 8.9 | 21.1 | 23.6 | 25.4 | 51 5.58 | — | 0.00 | 26.73 | 8 50 38.85 | | 1.56 | |
| | O. Arg. S. 9210 . . . | 20 | 42.6 | 44.5 | 47.1 | 1.0 | 2.8 | 4.7 | 6.5 | 8.2 | 22.1 | 25.4 | 27.1 | 54 4.73 | — | 0.04 | 26.73 | 8 53 37.96 | | 1.49 | |
| | *+53° 45' . . . | 21 | 24.6 | 27.0 | 30.9 | 51.5 | 53.9 | 56.7 | 59.7 | 2.4 | 22.2 | 26.7 | 29.4 | 57 56.82 | + | 0.17 | 26.73 | 8 57 30.26 | | 3.31 | |
| | *+21° 30' . . . | 22 | 46.3 | 47.7 | 50.4 | 3.3 | 4.8 | 6.6 | 8.4 | 9.9 | 22.9 | 25.6 | 27.1 | 1 6.64 | — | 0.06 | 26.72 | 9 0 39.98 | | 2.03 | |
| | Lalande 18122 (1st*) . . . | 23 | 22.0 | 25.3 | 27.8 | 30.4 | 34.9 | ... | ... | 15.4 | 19.8 | 22.3 | 25.1 | 28.3 | 6 25.13 | — | 0.05 | 26.72 | 9 5 58.46 | | 3.32 |
| | Lalande 18122 (2d*) . . . | 24 | 54.9 | 57.4 | 1.6 | 21.6 | 24.1 | 27.0 | 29.6 | 32.2 | 51.9 | 56.1 | 58.7 | 6 26.95 | + | 0.17 | 26.72 | 9 6 0.40 | | 3.32 | |
| | *-27° 40' . . . | 25 | 37.7 | 39.3 | 42.2 | 55.7 | 57.2 | 59.2 | 1.1 | 2.7 | 16.2 | 19.1 | 21.0 | 10 59.22 | — | 0.03 | 26.72 | 9 10 32.47 | | 1.53 | |
| | *-28° 42' . . . | 26 | 11.0 | 12.8 | 15.6 | 29.2 | 30.9 | 32.9 | 34.6 | 36.6 | 50.0 | 52.9 | 54.8 | 15 32.85 | — | 0.03 | 26.72 | 9 15 6.10 | | 1.54 | |
| | O. Arg. S. 9615 . . . | 27 | ... | ... | ... | 6.0 | 9.0 | 10.8 | 12.3 | 13.6 | 26.4 | 28.2 | 30.0 | 32.2 | 16 20.74 | — | 31.76 | 26.72 | 9 15 22.26 | | 1.54 |
| | Lacaille 3815 . . . | 28 | 24.8 | 26.7 | 29.6 | 45.0 | 47.0 | 49.0 | 51.1 | 53.2 | 8.5 | 11.7 | 13.9 | 19 49.14 | — | 0.05 | 26.72 | 9 19 22.37 | | 1.55 | |
| | *-35° 15' . . . | 29 | ... | ... | ... | 45.4 | 46.8 | 48.8 | 50.8 | 52.5 | ... | ... | ... | 30 48.86 | — | 0.04 | 26.71 | 9 30 22.11 | | 1.56 | |
| | ε Leonis . . . | 30 | 56.4 | 58.3 | 1.0 | 13.9 | 15.7 | 17.5 | 19.4 | 20.9 | 34.0 | 36.9 | 38.7 | 39 17.52 | + | 0.07 | 26.71 | 9 38 50.88 | | 2.20 | |
| | *+18° 6' . . . | 31 | 50.1 | 51.8 | 54.6 | 7.9 | 9.6 | 11.5 | 13.3 | 15.1 | 28.4 | 31.1 | 33.0 | 46 11.49 | — | 0.05 | 26.71 | 9 45 44.83 | | 2.07 | |
| 6 | κ Cancri . . . | 32 | 10.1 | 12.6 | 15.0 | 27.2 | 28.8 | 30.5 | 32.2 | 33.7 | 45.8 | 48.4 | 50.1 | 1 30.40 | — | 0.06 | 26.90 | 9 1 3.56 | | 1.83 | |
| | Uranus . . . | 33 | 53.4 | ... | 57.6 | 10.2 | 11.8 | ... | ... | 15.2 | 16.8 | 18.3 | ... | 33.5 | 18 13.48 | + | 0.08 | 26.92 | 9 17 46.64 | | ... |
| | 1 Draconis (H.) . . . | 34 | ... | ... | ... | ... | ... | ... | ... | 27.1 | 45.1 | 56.4 | 7.8 | 22.1 | 23 55.70 | — | 4 0.38 | 26.92 | ... | | 13.21 |
| | *+25° 1' . . . | 35 | ... | ... | ... | 15.4 | 17.0 | 18.8 | 20.3 | 22.2 | 35.4 | 38.4 | 39.9 | 32 25.92 | — | 7.02 | 26.92 | 9 31 41.98 | | 2.19 | |
| | *+25° 1' . . . | 36 | ... | ... | ... | ... | ... | ... | ... | 0.4 | 2.8 | 4.6 | 6.7 | 8.8 | 33 4.66 | — | 37.62 | 26.92 | 9 32 0.12 | | 2.19 |
| | μ Leonis . . . | 37 | 50.3 | 52.0 | 54.7 | 8.2 | 9.8 | 11.7 | 13.5 | 15.2 | 28.5 | 31.2 | 33.2 | 46 11.66 | + | 0.12 | 26.93 | 9 45 44.85 | | 2.27 | |
| | 24 Sextantis . . . | 38 | 17.2 | 18.7 | 21.1 | 33.0 | 34.5 | 36.3 | 37.9 | 39.5 | 51.3 | 53.8 | 55.4 | 17 36.25 | — | 0.02 | 26.95 | 10 17 9.32 | | 1.83 | |
| | B. A. C. 3563 . . . | 39 | 41.9 | 43.4 | 45.8 | 57.9 | 59.5 | ... | ... | 2.8 | 4.2 | 16.2 | 18.8 | 20.5 | 20 1.10 | — | 0.00 | 26.95 | 10 19 34.15 | | 1.76 |
| | *+2° 9' . . . | 40 | 38.4 | 39.8 | 42.2 | 54.3 | 55.7 | 57.4 | 59.2 | 0.6 | 12.4 | 14.9 | 16.7 | 23 57.42 | — | 0.03 | 26.95 | 10 23 30.50 | | 1.86 | |
| | ρ Leonis . . . | 41 | 26.4 | 27.9 | 30.4 | 42.4 | 44.0 | 45.7 | 47.4 | 48.9 | 1.1 | 3.6 | 5.4 | 26 45.75 | — | 0.05 | 26.95 | 10 26 18.85 | | 1.98 | |
| | B. A. C. 3652 . . . | 42 | 46.9 | 51.2 | 58.3 | 33.0 | 37.4 | 42.1 | 47.0 | 51.2 | 25.6 | 33.0 | 37.6 | 34 42.12 | — | 0.60 | 26.96 | 10 34 15.76 | | 6.09 | |
| | 42 Leonis Minoris . . . | 43 | 43.0 | 45.3 | 47.2 | ... | 52.1 | ... | ... | 2.8 | ... | 7.4 | 9.3 | 11.6 | 39 27.34 | — | 0.15 | 26.96 | 10 39 0.53 | | 2.49 |
| | *+31° 21' . . . | 44 | 6.9 | 8.6 | 11.6 | 25.5 | 27.3 | 29.2 | 31.2 | 33.0 | 46.9 | 49.8 | 51.6 | 39 29.24 | — | 0.15 | 26.96 | 10 39 2.43 | | 2.49 | |
| | λ Leonis . . . | 45 | 53.7 | 55.3 | 57.8 | 9.9 | 11.6 | 13.3 | 14.8 | 16.4 | 28.5 | 31.1 | 32.8 | 43 13.20 | — | 0.06 | 26.96 | 10 42 46.30 | | 2.01 | |
| 14 | Uranus . . . | 46 | 48.3 | 49.8 | 52.3 | 5.0 | 6.4 | 8.0 | 9.9 | 11.5 | 24.0 | 26.7 | 28.2 | 17 8.19 | + | 0.08 | 26.18 | 9 16 42.09 | | ... | |
| | α Hydræ . . . | 47 | ... | ... | ... | 54.0 | 55.5 | 57.3 | 59.0 | 0.4 | ... | ... | ... | 21 57.24 | — | 0.00 | 26.18 | ... | | 1.61 | |
| | O. Arg. S. 9586 . . . | 48 | 47.2 | 48.8 | 51.5 | 5.8 | 7.6 | 9.5 | 11.6 | 13.4 | 27.2 | 31.3 | 32.3 | 29 9.65 | — | 0.09 | 26.19 | 9 28 43.37 | | 1.48 | |
| | ε Leonis . . . | 49 | 55.8 | 57.4 | 0.2 | 13.6 | 15.2 | 16.7 | 18.7 | 20.4 | 33.5 | 36.4 | 38.0 | 39 16.90 | + | 0.11 | 26.19 | ... | | 2.16 | |
| | μ Leonis . . . | 50 | 49.5 | 51.3 | 54.0 | ... | ... | ... | ... | ... | 27.0 | 30.7 | 32.4 | 46 10.97 | + | 0.12 | 26.19 | ... | — | 2.24 | |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------|-----------------|--------------|--------|--------|
| 1876. h. | s. | s. | s. | s. |
| Mar. 6, 10.0 | — 26.94 | — 0.035 | + 0.20 | + 0.02 |
| 14, 9.6 | — 26.19 | — 0.035 | + 0.20 | + 0.02 |

9. North of the preceding star and fainter.
 19. Blurred; observation not good.
 20. Blurred; observation not good.
 23. Very unsteady.
 40. Fainter and southern star.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction. to 1876.0. | | |
|-------------------------|--------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|----------|---------------|-------|---------------------------------|--------------------------|------------|--------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | |
| 1876. Mar. 14 T. | Lacaille 4120 . . . | 1 | 1.3 | 3.0 | 6.1 | | | | | | | | | m. s. | | | | | |
| | 32 Ursæ Majoris . . . | 2 | | | | 7.8 | 14.2 | 17.9 | 44.8 | 51.1 | 54.9 | 59.1 | 4.1 | 58 24.00 | — | 0.11 | —26.20 | 9 57 57.69 | — 1.55 |
| | 9 Draconis (H.) . . . | 3 | 43.5 | 49.5 | 0.0 | 50.7 | 57.0 | 4.7 | 11.0 | 16.8 | 8.0 | 18.8 | 25.0 | 10 39.24 | 67.24 | 26.21 | 10 9 5.79 | 5.04 | |
| | | | | | | | | | | | | | | 25 4.09 | + | 0.91 | 26.22 | 8.63 | |
| | 23 μ Geminorum . . . | 4 | 34.1 | 35.8 | 38.3 | 51.5 | 52.9 | 54.7 | 56.6 | 58.2 | 11.0 | 13.9 | 15.6 | 15 54.78 | | 0.11 | 26.45 | 6 15 28.44 | 0.86 |
| | γ Geminorum . . . | 5 | | 41.8 | 44.4 | 56.8 | | 0.2 | | 3.6 | 15.0 | 18.6 | | 31 0.19 | | 0.10 | 26.45 | 6 0 33.84 | 0.92 |
| | 51 Cephei . . . | 6 | | | | 12.0 | 44.5 | 19.0 | 53.0 | 24.0 | | | | 42 18.50 | + | 4.96 | 26.44 | | 12.41 |
| | Lacaille 2558 . . . | 7 | 44.6 | 46.3 | 48.9 | 2.6 | 4.2 | 6.1 | 8.0 | 9.8 | 23.1 | 26.0 | 27.9 | 55 6.16 | — | 0.08 | 26.44 | 6 54 39.64 | 0.71 |
| | 22 Monocerotis . . . | 8 | 40.2 | 41.6 | 44.0 | 56.2 | 57.8 | 59.4 | 1.0 | 2.5 | 14.4 | 16.9 | 18.7 | 5 59.34 | + | 0.02 | 26.44 | 7 5 32.92 | 0.98 |
| | Lalande 14120 . . . | 9 | 7.7 | 9.8 | 13.0 | 27.7 | 29.7 | 31.8 | 33.9 | 35.7 | 50.7 | 53.9 | 56.1 | 11 31.82 | + | 0.18 | 26.44 | 7 11 5.56 | 1.46 |
| Y. | *—14° 25' . . . | 10 | 29.6 | 31.5 | 33.8 | 45.7 | 47.2 | 49.0 | 50.8 | 52.2 | 4.6 | 7.2 | 8.8 | 15 49.13 | — | 0.03 | 26.44 | 7 15 22.66 | 0.92 |
| | B. A. C. 2463 . . . | 11 | 3.8 | 5.4 | 8.3 | 21.7 | 23.3 | 25.3 | 27.0 | 29.0 | 42.4 | 45.4 | 47.1 | 21 25.34 | + | 0.18 | 26.43 | 7 20 59.09 | 1.38 |
| | Weisse (2) 728 . . . | 12 | 47.1 | 48.9 | 52.2 | 8.0 | 10.0 | 12.2 | 14.4 | 16.3 | 32.1 | 35.2 | 37.6 | 27 12.18 | + | 0.21 | 26.43 | 7 26 45.96 | 1.67 |
| | Lalande 15079 . . . | 13 | | | | 52.5 | 54.9 | 56.8 | 8.0 | 10.4 | 12.1 | 13.8 | 15.8 | 39 5.54 | — | 28.40 | 26.43 | 7 38 10.71 | 1.05 |
| | *+0° 28' . . . | 14 | | | | 36.8 | 39.3 | 41.0 | 51.8 | 54.6 | 56.1 | 57.6 | 58.2 | 46 49.42 | — | 27.83 | 26.43 | 7 45 55.16 | 1.20 |
| | ε Hydræ . . . | 15 | | | | 37.2 | 38.7 | 40.4 | 42.0 | 43.6 | | | | 40 40.38 | + | 0.05 | 26.43 | 8 40 14.00 | 1.52 |
| | O. Arg. S. 9210 . . . | 16 | 42.0 | 43.6 | 46.4 | 0.4 | 2.2 | 4.2 | 6.0 | 8.0 | 21.7 | 24.8 | 26.5 | 54 4.16 | — | 6.10 | 26.41 | 8 53 37.65 | 1.24 |
| | *+53° 45' . . . | 17 | 23.3 | 26.1 | 30.1 | 50.5 | 53.0 | 56.0 | 58.5 | 1.3 | 21.3 | 25.6 | 28.5 | 57 55.84 | + | 0.32 | 26.41 | 8 57 29.75 | 3.00 |
| | *+53° 45' . . . | 18 | 9.8 | 12.4 | 16.5 | 36.4 | 39.3 | 41.9 | 44.2 | 47.2 | 7.2 | 11.3 | 14.3 | 59 41.86 | + | 0.32 | 26.41 | 8 59 15.77 | 3.02 |
| | *+53° 48' . . . | 19 | | | | 23.8 | 28.2 | 31.0 | 49.8 | 53.8 | 56.5 | 59.4 | 2.6 | 0 45.64 | — | 46.84 | 26.41 | 8 59 32.39 | 3.02 |
| α | Lalande 18122 (1st*) | 20 | 21.2 | 24.2 | 27.1 | 29.5 | 33.9 | | 14.6 | 18.8 | 21.6 | 24.2 | 27.4 | 6 24.25 | + | 0.19 | 26.40 | 9 5 58.04 | 3.04 |
| | Lalande 18122 (2d*) | 21 | 54.1 | 56.5 | 0.7 | 20.5 | 23.4 | 26.1 | 28.6 | 31.5 | 51.4 | 55.5 | 58.1 | 6 26.04 | + | 0.31 | 26.40 | 9 5 59.95 | 3.04 |
| | *—27° 42' . . . | 22 | 37.1 | 38.8 | 41.7 | 55.1 | 57.0 | 58.9 | 0.8 | 2.5 | 15.9 | 18.7 | 20.6 | 10 58.83 | — | 0.09 | 26.40 | 9 10 32.34 | 1.33 |
| | Weisse (2) 271 . . . | 23 | 32.7 | 34.2 | 36.8 | 49.4 | 50.9 | 52.7 | 54.3 | 55.8 | 8.3 | 11.0 | 12.6 | 14 52.61 | + | 0.08 | 26.40 | 9 14 26.29 | 1.82 |
| | *—34° 58' . . . | 24 | 49.0 | 50.9 | 54.0 | 8.6 | 10.5 | 12.3 | 14.3 | 16.2 | 30.7 | 33.9 | 35.9 | 18 12.39 | — | 0.12 | 26.40 | 9 17 45.87 | 1.32 |
| | Hydræ . . . | 25 | 38.3 | 39.8 | 42.4 | 54.3 | 55.9 | 57.6 | 59.3 | 0.7 | 12.7 | 15.4 | 17.1 | 21 57.59 | — | 0.01 | 26.40 | 9 21 31.18 | 1.53 |
| | ε Leonis . . . | 26 | 56.0 | 57.8 | 0.4 | | | | | | | | | 38 58.07 | + | 19.07 | 20.39 | 9 38 50.75 | 2.09 |
| | 29 δ Canis Majoris . . . | 27 | 25.4 | 27.3 | 29.9 | 43.2 | 45.0 | 46.9 | 48.8 | 50.4 | 3.7 | 6.5 | 8.2 | 3 46.85 | — | 0.09 | 25.06 | 7 3 21.70 | 0.65 |
| | δ Geminorum . . . | 28 | 48.6 | 50.2 | 53.0 | 5.8 | 7.4 | 9.2 | 11.0 | 12.5 | 25.5 | 28.2 | 30.0 | 13 9.22 | | 0.03 | 25.05 | 7 12 44.14 | 1.16 |
| | B. A. C. 2461 . . . | 29 | 2.0 | 3.9 | 7.0 | 20.9 | 22.8 | 24.8 | 26.6 | 28.5 | 42.4 | 45.1 | 47.0 | 20 24.64 | | 0.10 | 25.05 | 7 19 59.49 | 0.67 |
| λ | *—31° 3' . . . | 30 | 48.0 | 50.2 | 53.0 | 6.9 | 8.4 | 10.4 | 12.5 | 14.3 | 28.4 | 30.9 | 32.8 | 32 10.53 | | 0.09 | 25.05 | 7 31 45.39 | 0.74 |
| | *—31° 2' . . . | 31 | | | | | | | 5.0 | 8.2 | 9.9 | 11.8 | 13.7 | 33 9.72 | 39.83 | 25.05 | 7 32 4.84 | 0.74 | |
| | Lalande 15079 . . . | 32 | 16.3 | 17.6 | 20.5 | 32.6 | 34.3 | 35.8 | 37.5 | 39.0 | 51.2 | 53.6 | 55.3 | 38 35.79 | | 0.06 | 25.05 | 7 38 10.68 | + 0.96 |
| | Ursæ Minoris, S. P. | 33 | | | | 2.0 | 28.0 | 54.0 | 24.0 | 40.0 | | | | 47 53.60 | 0.96 | 25.05 | | — 49.35 | |
| | O. Arg. N. 8586 . . . | 34 | 18.5 | 22.3 | 27.4 | 51.8 | 54.6 | 58.0 | 1.9 | 5.1 | 28.0 | 34.0 | 37.0 | 58 58.14 | 0.00 | 25.04 | 7 58 33.10 | — 2.67 | |
| | *+31° 1' . . . | 35 | 58.9 | 0.4 | 3.6 | | | | | | 37.8 | 40.0 | 42.0 | 10 20.45 | 0.01 | 25.04 | 8 9 55.40 | 1.68 | |
| | Weisse (2) 181 . . . | 36 | | | | 14.4 | 17.4 | 19.1 | 32.2 | 35.7 | 37.6 | 39.5 | 41.8 | 11 29.71 | 32.40 | 25.04 | 8 10 32.27 | 1.68 | |
| | O. Arg. S. 8610 . . . | 37 | 18.3 | 20.1 | 23.0 | 36.5 | 38.3 | 40.4 | 42.2 | 44.0 | 58.0 | 0.7 | 2.5 | 24 40.36 | — | 0.09 | 25.04 | 8 24 15.23 | 1.01 |
| | B. A. C. 2885 . . . | 38 | 10.5 | 12.6 | 15.6 | 30.0 | 31.8 | 33.8 | 35.8 | 37.5 | | | | 28 25.95 | + | 7.73 | 25.04 | 8 28 8.64 | 0.99 |
| | *—34° 13' . . . | 39 | | | | 55.2 | 57.2 | 59.1 | 0.7 | 2.8 | 17.7 | 20.6 | 22.3 | 29 6.95 | — | 7.94 | 25.04 | 8 28 33.97 | 0.99 |
| κ | Lacaille 3449 . . . | 40 | 34.8 | 36.6 | | 53.2 | 54.9 | 56.7 | 58.6 | 0.3 | | 16.7 | 18.4 | 34 56.69 | 0.08 | 25.04 | 8 34 31.57 | 1.07 | |
| | Lacaille 3502 . . . | 41 | 9.6 | 11.4 | 14.4 | 28.5 | 30.2 | 32.1 | 34.1 | 35.9 | 49.8 | 52.8 | 54.6 | 40 32.13 | 0.10 | 25.04 | 8 40 6.99 | 1.07 | |
| | *—12° 21' . . . | 42 | 13.0 | 15.0 | 18.7 | 34.7 | 36.5 | 38.9 | 41.3 | 43.5 | 59.4 | 2.9 | 4.9 | 45 38.98 | 0.12 | 25.04 | 8 45 13.82 | 1.01 | |
| | Weisse 1282 . . . | 43 | | | | 19.4 | 21.7 | 23.2 | 34.5 | 37.4 | 38.8 | 40.5 | 42.3 | 51 32.22 | 28.61 | 25.04 | 8 50 38.57 | 1.28 | |
| | *—38° 54' . . . | 44 | 22.9 | 25.0 | 28.2 | 43.5 | 45.3 | 47.5 | 49.6 | 51.6 | 7.0 | 10.2 | 12.3 | 57 47.55 | 0.11 | 25.04 | 8 57 22.40 | 1.10 | |
| | Cancrī . . . | 45 | 8.9 | 10.6 | | 25.3 | 26.9 | 28.5 | 30.1 | 31.7 | | 46.4 | 48.0 | 1 28.49 | 0.04 | 25.04 | 9 1 3.41 | 1.62 | |
| | Lalande 18122 (1st*) | 46 | 51.0 | 53.8 | 58.2 | 17.5 | 20.4 | 23.0 | 26.0 | 28.4 | 48.1 | 52.5 | 55.0 | 6 23.08 | — | 0.00 | 25.04 | 9 5 58.04 | 2.91 |
| | Lalande 18122 (2d*) | 47 | 21.6 | 24.9 | 27.5 | 30.1 | 34.6 | | 15.1 | 19.4 | 21.9 | 25.0 | 27.8 | 6 24.79 | + | 0.12 | 25.04 | 9 5 59.87 | 2.91 |
| | *—27° 42' . . . | 48 | 35.8 | 37.5 | 40.4 | 53.8 | 55.5 | 57.2 | 59.1 | 0.8 | 14.6 | 17.3 | 19.0 | 10 57.36 | — | 0.09 | 25.04 | 9 10 32.23 | 1.24 |
| | *—28° 42' . . . | 49 | 9.2 | | 14.0 | 27.4 | 29.3 | 31.1 | 32.9 | 34.8 | 48.5 | | 53.0 | 15 31.13 | 0.09 | 25.04 | 9 15 6.00 | 1.26 | |
| O. Arg. S. 9615 . . . | 50 | | | | 4.4 | 7.2 | 8.9 | 21.3 | 24.4 | 26.1 | 28.1 | 30.0 | 16 18.80 | — | 31.71 | —25.04 | 4 15 22.05 | — 1.26 | |

CORRECTIONS, &c.

March 24. Image west 0°.25. Clamp east.
Image west 0°.31. Clamp west.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------------------|--------------------|-----------------|--------------|--------------|
| 1876. h. Mar. 23, 8.1 | s. — 26.42 | s. + 0.017 | s. + 0.21 | s. + 0.02 |
| 29, 8.6 | — 25.04 | + 0.07 | + 0.06 | — 0.05 |

| Date and observer. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. |
|------------------------|------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|------------|--------------|-------|--------|---------------------------|----------------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | Clock. | | |
| | | | | | | | | | | | | | | m. s. | m. | s. | s. | h. m. s. | s. |
| 1876. Mar. 29 Y. | O. Arg. S. 9789 | 1 | | | | 10.5 | 12.2 | 14.1 | 16.2 | 18.0 | | | | 25 14.20 | | 0.10 | -25.03 | 9 24 49.07 | - 1.29 |
| | O. Arg. S. 9856 | 2 | 45.8 | 47.6 | 50.4 | 4.6 | 6.2 | 8.1 | 10.2 | 11.9 | 26.0 | 28.9 | 30.7 | 29 8.22 | | 0.10 | 25.03 | 9 28 43.09 | 1.30 |
| | ε Leonis | 3 | | | | 12.1 | 13.7 | 15.5 | 17.4 | 19.4 | 32.2 | 35.1 | 36.7 | 39 22.76 | | 7.14 | 25.03 | 9 38 50.59 | 2.04 |
| | μ Leonis | 4 | 47.9 | 49.8 | 53.0 | 6.0 | 7.8 | 9.7 | 11.9 | 13.4 | 26.8 | 29.5 | 31.2 | 46 9.73 | | 0.03 | 25.03 | 9 45 44.67 | 2.12 |
| 31 | δ Canis Majoris. | 5 | 25.6 | 27.4 | 30.4 | 43.5 | 45.2 | 47.0 | 48.9 | 50.7 | 3.8 | 6.7 | 8.3 | 3 47.05 | - | 0.13 | 25.24 | 7 3 21.68 | 0.06 |
| | δ Geminorum | 6 | 48.6 | 50.4 | 53.1 | 5.8 | 7.5 | 9.2 | 11.1 | 12.9 | 25.0 | 28.4 | 29.9 | 13 9.35 | | 0.00 | 25.24 | 7 12 44.11 | 1.12 |
| | B. A. C. 2463 | 7 | 2.4 | 4.2 | 7.2 | 20.6 | 22.3 | 24.2 | 26.0 | 27.9 | 41.2 | 44.1 | 45.8 | 21 24.17 | + | 0.02 | 25.24 | 7 20 58.95 | 1.24 |
| | Weisse (2) 728 | 8 | 45.5 | 47.6 | 50.8 | 6.6 | 8.4 | 10.7 | 12.9 | 15.0 | 30.7 | 33.9 | 35.8 | 27 10.72 | + | 0.05 | 25.24 | 7 26 45.53 | 1.50 |
| | Lacaille 2916 | 9 | 7.6 | 9.5 | 12.5 | 26.5 | 28.3 | 30.1 | 32.1 | 33.9 | 47.9 | 50.6 | 52.5 | 36 30.14 | - | 0.15 | 25.24 | 7 36 4.75 | 0.72 |
| | Rumker 2287 | 10 | 43.9 | 45.7 | 48.2 | 0.4 | 2.0 | 3.8 | 5.4 | 6.9 | 19.3 | 21.7 | 23.4 | 43 3.70 | | 0.02 | 25.23 | 7 42 38.45 | - 1.20 |
| | λ Ursæ Minoris, S. P. | 11 | | | | | 32.0 | 0.0 | 26.0 | | | | | 47 59.33 | - | 4.54 | 25.23 | | + 47.37 |
| | O. Arg. N. 8586 | 12 | 19.0 | 21.8 | 27.3 | 51.0 | 54.9 | 55.4 | 1.6 | 4.5 | | | | 58 44 81 | + | 13.37 | 25.23 | 7 58 32.95 | - 2.60 |
| | Weisse (2) 181 | 13 | 34.6 | 36.3 | 39.4 | 53.2 | 55.0 | 56.8 | 58.8 | 1.1 | 14.4 | 17.5 | 19.3 | 10 56.95 | + | 0.03 | 25.23 | 8 10 31.75 | 1.65 |
| | *-29° 45' | 14 | | | | 22.8 | 25.0 | 27.5 | 40.2 | 43.0 | 44.9 | 46.8 | 48.7 | 15 37.48 | - | 32.11 | 25.23 | 8 14 40.14 | 0.93 |
| | O. Arg. S. 8610 | 15 | 18.5 | 19.9 | 23.0 | 36.7 | 38.4 | 40.5 | 42.2 | 44.0 | 58.0 | 0.9 | 2.7 | 24 40.44 | - | 0.14 | 25.23 | 8 24 15.07 | 0.97 |
| | *+23° 43' | 16 | 45.2 | 46.9 | 49.7 | 2.9 | 4.4 | 6.2 | 8.1 | 9.7 | 22.9 | 25.5 | 27.1 | 30 6.24 | + | 0.01 | 25.23 | 8 29 41.02 | 1.63 |
| | 38 Cancri | 17 | 41.5 | 43.3 | 45.9 | 58.6 | 0.3 | 1.9 | 3.7 | 5.4 | 18.1 | 20.8 | 22.3 | 33 1.98 | | 0.00 | 25.22 | 8 32 36.76 | 1.59 |
| | Weisse (2) 893 | 18 | 37.1 | 38.9 | 41.8 | 54.8 | 56.1 | 58.0 | 59.8 | 1.6 | 14.5 | 17.3 | 19.0 | 36 58.08 | + | 0.01 | 25.22 | 8 36 32.87 | 1.66 |
| | *-32° 47' | 19 | 41.2 | 43.2 | 46.2 | 0.3 | 2.1 | 4.0 | 6.2 | 7.9 | 22.1 | 25.0 | 26.8 | 42 4.09 | - | 0.15 | 25.22 | 8 41 38.72 | 1.03 |
| | B. A. C. 3005 | 20 | 51.8 | 56.5 | 59.6 | 13.0 | 14.8 | 16.8 | 18.6 | 20.6 | 34.1 | 37.1 | 38.7 | 45 16.78 | | 0.14 | 25.22 | 8 44 51.42 | 1.08 |
| | *-35° 6' | 21 | 53.7 | 55.7 | 58.5 | 13.1 | 14.9 | 16.9 | 18.8 | 20.8 | 35.5 | 38.5 | 40.4 | 50 16.98 | | 0.16 | 25.22 | 8 49 51.60 | 1.05 |
| | *-38° 54' | 22 | 23.0 | 25.1 | 28.2 | 43.7 | 45.5 | 47.6 | 49.7 | 51.6 | 7.3 | 10.4 | 12.4 | 57 17.68 | | 0.18 | 25.22 | 8 57 22.28 | 1.06 |
| | B. A. C. 3104 | 23 | | | | 52.4 | 53.8 | 55.4 | 57.2 | 58.7 | 11.3 | 13.7 | 15.4 | 0 2.24 | | 6.74 | 25.22 | 8 59 30.28 | 1.66 |
| | B. A. C. 3107 | 24 | | | | 35.4 | 37.9 | 39.4 | 40.7 | 42.5 | 55.1 | 57.0 | 58.7 | 0 48.46 | | 28.84 | 25.22 | 8 59 54.40 | 1.66 |
| | *+20° 10' | 25 | | | | 59.6 | 1.4 | 3.1 | 4.9 | 6.8 | | | | 10 3.16 | | 0.01 | 25.22 | 9 9 37.93 | 1.79 |
| | Weisse (2) 271 | 26 | 31.5 | 33.3 | 35.8 | 48.3 | 49.9 | 51.5 | 53.4 | 54.8 | 7.2 | 9.7 | 11.4 | 14 51.53 | | 0.01 | 25.22 | 9 14 26.30 | 1.74 |
| | B. A. C. 3202 | 27 | 1.2 | 2.9 | 5.3 | 17.4 | 18.9 | 20.6 | 22.2 | 23.9 | 35.8 | 38.3 | 39.9 | 17 20.58 | | 0.03 | 25.22 | 9 16 55.33 | 1.63 |
| | Lacaille 3374 | 28 | 32.9 | 34.6 | 37.6 | 52.0 | 53.7 | 55.7 | 57.5 | 59.5 | 13.8 | 16.8 | 18.7 | 24 55.73 | | 0.15 | 25.22 | 9 24 30.36 | 1.24 |
| | ζ ² Antliae | 29 | | | | 58.3 | 1.4 | 2.9 | 4.5 | 6.8 | 20.7 | 22.6 | 24.7 | 27 13.15 | | 32.63 | 25.22 | 9 26 15.30 | 1.26 |
| | *+10° 12' | 30 | | | | 11.7 | 13.2 | 14.9 | 16.7 | 18.2 | | | | 32 14.94 | | 0.04 | 25.21 | 9 31 49.69 | 1.72 |
| | *+10° 8' | 31 | | | | 40.0 | 42.6 | 44.2 | 45.5 | 47.8 | 59.4 | 1.1 | 2.9 | 32 52.90 | - | 28.23 | 25.21 | 9 31 59.46 | 1.72 |
| | ε Leonis | 32 | 54.7 | 56.5 | 59.3 | 12.3 | 14.0 | 15.6 | 17.5 | 19.3 | 32.4 | 35.3 | 36.9 | 39 15.80 | + | 0.01 | 25.21 | 9 38 50.60 | 2.02 |
| | μ Leonis | 33 | 48.2 | 50.0 | 53.0 | 6.4 | 8.0 | 10.0 | 11.8 | 13.5 | 26.8 | 29.5 | 31.2 | 46 9.85 | + | 0.01 | 25.21 | 9 45 44.65 | 2.10 |
| | Lacaille 4120 | 34 | 0.0 | 1.8 | 4.9 | 19.0 | 21.8 | 22.8 | 24.7 | 26.6 | 40.8 | 43.8 | 45.5 | 58 22.88 | - | 0.15 | 25.21 | 9 57 57.52 | 1.39 |
| | γ ¹ Leonis | 35 | 14.9 | 16.7 | 19.3 | 32.1 | 33.6 | 35.4 | 37.1 | 38.6 | 51.6 | 54.2 | 55.7 | 13 35.38 | | 0.00 | 25.21 | 10 13 10.17 | 2.08 |
| | O. Arg. N. 10874 | 36 | 22.6 | 25.4 | 30.1 | 51.6 | 54.4 | 57.1 | 59.9 | 3.4 | 25.0 | 29.3 | 32.4 | 22 57.38 | + | 0.10 | 25.20 | 10 22 32.28 | 3.69 |
| | 36 Ursæ Majoris | 37 | | 37.4 | 42.0 | | 6.6 | 9.4 | 12.6 | | 37.2 | 41.7 | | 23 9.56 | + | 0.07 | 25.20 | 10 22 44.43 | 3.69 |
| | ρ Leonis | 38 | | 26.2 | 28.7 | 40.7 | 42.4 | 43.9 | 45.7 | 47.5 | 59.4 | 1.9 | | 26 44.04 | - | 0.04 | 25.20 | 10 26 18.80 | 1.93 |
| Apr. 1 | ε Canis Majoris | 39 | 49.5 | 51.1 | 54.0 | 7.6 | 9.5 | 11.2 | 13.2 | 15.0 | 28.6 | 31.5 | 33.1 | 54 11.30 | | 0.14 | 25.42 | 6 54 45.74 | 0.51 |
| | δ Canis Majoris | 40 | 25.7 | 27.7 | 30.5 | 43.6 | 45.4 | 47.3 | 49.0 | 50.8 | 4.2 | 6.9 | 8.7 | 3 47.25 | - | 0.13 | 25.41 | 7 3 21.71 | 0.59 |
| | δ Geminorum | 41 | 48.6 | 50.5 | 53.2 | 6.1 | 7.6 | 9.4 | 11.2 | 13.0 | 25.9 | 28.6 | 30.0 | 13 9.46 | + | 0.01 | 25.41 | 7 12 44.06 | 1.11 |
| | B. A. C. 2463 | 42 | 2.5 | 4.3 | 7.3 | 20.7 | 22.4 | 24.3 | 26.1 | 27.8 | 41.5 | 44.1 | 45.9 | 21 24.26 | + | 0.05 | 25.40 | 7 20 58.91 | 1.22 |
| | g ¹ Puppis | 43 | 27.1 | 29.0 | 31.8 | 45.2 | 46.8 | 48.7 | 50.6 | 52.3 | 5.5 | 8.3 | 9.9 | 29 48.65 | - | 0.13 | 25.40 | 7 29 23.12 | 0.72 |
| | Lacaille 2916 | 44 | 7.8 | 9.7 | 12.6 | 26.5 | 28.3 | 30.3 | 32.2 | 33.9 | 48.1 | 50.9 | 52.5 | 36 30.25 | | 0.15 | 25.40 | 7 36 4.70 | 0.69 |
| | Rumker 2287 | 45 | 44.1 | 45.8 | 48.3 | 0.7 | 2.2 | 3.9 | 5.5 | 7.1 | 19.4 | 21.9 | 23.4 | 43 3.85 | | 0.02 | 25.40 | 7 42 38.43 | - 1.18 |
| | λ Ursæ Minoris, S. P. | 46 | | | | 9.0 | 35.0 | 2.0 | 23.0 | 51.0 | | | | 48 1.00 | - | 5.09 | 25.39 | | + 46.44 |
| | Weisse (2) 1642 | 47 | 43.5 | 45.3 | 48.4 | 1.8 | 3.4 | 5.2 | 7.4 | 9.3 | 22.8 | 25.7 | 27.5 | 1 54.48 | + | 0.03 | 25.39 | 8 0 40.12 | - 1.52 |
| | *+19° 57' | 48 | 40.0 | 41.7 | 44.4 | 57.1 | 58.7 | 0.4 | 2.0 | 3.8 | 16.5 | 19.1 | 20.8 | 25 0.11 | | 0.00 | 25.38 | 8 24 35.03 | 1.52 |
| | *+23° 43' | 49 | | | | 3.0 | 4.5 | 6.4 | 8.0 | 10.0 | 22.8 | 25.7 | 27.3 | 30 13.46 | - | 7.06 | 25.37 | 8 29 41.03 | 1.62 |
| | *+25° 1' | 50 | | | | 40.2 | 41.9 | 43.8 | 45.7 | 47.4 | 0.4 | 3.3 | 4.9 | 32 50.95 | - | 7.12 | -25.37 | 8 32 18.46 | - 1.66 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------|-----------------|--------------|--------|--------|
| 1876. h. | s. | s. | s. | s. |
| Mar. 31, 9.0 | - 25.22 | + 0.11 | + 0.14 | - 0.05 |
| Apr. 1, 8.3 | - 25.38 | + 0.027 | + 0.15 | - 0.05 |

| Date and ob- servet. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. |
|-------------------------|---------------------|---------|--------------------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------------------|-----------------|--------------|---------------------------------|-------------------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | |
| 1876. Apr. 1 Y. | *-23° 49' . . . | 1 | 5.5 | 7.3 | 10.3 | 23.3 | 24.7 | 26.5 | 28.3 | 30.0 | 43.3 | 45.9 | 47.4 | m. s. 36 26.59 | m. s. — 0.12 | s. —25.37 | h. m. s. 8 36 1.10 | s. — 1.07 |
| | O. Arg. S. 8887 . . | 2 | 14.0 | 15.8 | 18.6 | 31.7 | 33.5 | 35.3 | 37.0 | 38.6 | 51.9 | 54.5 | 56.2 | 37 35.19 | 0.12 | 25.37 | 8 37 9.70 | 1.07 |
| | Hydræ . . . | 3 | 20.0 | 21.6 | 24.2 | 36.3 | 37.7 | 39.3 | 41.0 | 42.6 | 54.6 | 57.1 | 58.6 | 40 39.36 | 0.03 | 25.37 | 8 40 13.96 | 1.41 |
| | *-41° 14' . . . | 4 | 16.7 | 18.5 | 21.1 | 37.8 | 39.9 | 42.0 | 44.0 | 46.1 | 1.7 | 5.5 | 7.8 | 45 41.92 | — 0.20 | 25.37 | 8 45 16.35 | 0.96 |
| | B. A. C. 3042 . . . | 5 | . . . | . . . | . . . | 46.3 | 56.5 | 6.7 | 17.9 | 27.6 | . . . | . . . | . . . | 53 7.00 | + 0.59 | 25.36 | 8 52 42.23 | 9.42 |
| | *+53° 45' . . . | 6 | 22.4 | 25.4 | 29.5 | 49.6 | 52.1 | 54.5 | 57.8 | 0.3 | 20.2 | 24.4 | 27.4 | 57 54.87 | 0.12 | 25.36 | 8 57 29.63 | 2.80 |
| | Weisse (2) 87 . . . | 7 | 27.2 | 29.0 | 31.7 | 44.0 | 46.5 | 48.3 | 50.0 | 51.9 | 4.8 | 7.8 | 9.4 | 6 48.32 | 0.02 | 25.36 | 9 6 22.98 | 1.85 |
| | B. A. C. 3182 . . . | 8 | 2.5 | 5.0 | 8.9 | 27.4 | 29.7 | . . . | 35.0 | 37.4 | 56.2 | 59.9 | 2.0 | 14 32.40 | + 0.10 | 25.36 | 9 14 7.14 | 2.74 |
| | Lacaille 3815 . . . | 9 | 22.8 | 25.0 | 28.4 | 43.5 | 45.5 | 47.7 | 49.8 | 51.8 | 7.0 | 10.2 | 12.1 | 19 47.62 | — 0.19 | 25.35 | 9 19 22.08 | 1.15 |
| | *+12° 9' . . . | 10 | 53.6 | 55.1 | 57.5 | 9.9 | 11.3 | 13.0 | 14.8 | 16.3 | 28.5 | 31.2 | 32.6 | 41 13.07 | — 0.02 | 25.34 | 9 40 47.71 | 1.78 |
| μ | Leonis . . . | 11 | 48.4 | 50.2 | 53.1 | 6.3 | 8.0 | 9.9 | 11.7 | 13.6 | 26.9 | 29.7 | 31.4 | 46 9.93 | + 0.02 | 25.34 | 9 45 44.61 | 2.09 |
| | *-38° 57' . . . | 12 | 51.3 | 53.3 | 56.6 | 11.8 | 13.6 | 15.9 | 18.0 | 20.0 | 35.1 | 38.6 | 40.5 | 51 15.88 | — 0.19 | 25.34 | 9 50 50.35 | 1.31 |
| | *-34° 42' . . . | 13 | 55.5 | 57.3 | 0.3 | 15.0 | 16.7 | 18.8 | 20.7 | 22.6 | 37.1 | 40.2 | 42.1 | 55 18.75 | 0.17 | 25.34 | 9 54 53.24 | 1.35 |
| | Lacaille 4120 . . . | 14 | 0.1 | 2.2 | 5.0 | 19.1 | 21.0 | 23.0 | 25.0 | 26.8 | 41.0 | 44.2 | 45.8 | 58 23.02 | — 0.16 | 25.33 | 9 57 57.53 | 1.38 |
| | Groombridge 1618 . | 15 | 44.8 | 47.5 | 51.3 | 9.7 | 12.4 | 15.0 | 17.3 | 19.8 | 38.2 | 42.0 | 44.4 | 4 14.76 | + 0.10 | 25.33 | 10 3 49.53 | 3.08 |
| 21 | Sextantis . . . | 16 | 5.2 | 7.0 | 9.5 | 21.6 | 23.2 | 24.8 | 26.5 | 28.0 | 40.0 | 42.5 | 44.1 | 8 24.76 | — 0.07 | 25.33 | 10 7 59.36 | 1.63 |
| | *-3° 27' . . . | 17 | 4.7 | 6.6 | 8.4 | 20.7 | 22.2 | 23.8 | 25.6 | 27.2 | 39.0 | 41.1 | 43.2 | 13 23.86 | 0.06 | 25.33 | 10 12 58.47 | 1.69 |
| | Weisse 255 . . . | 18 | 31.0 | 32.8 | 35.2 | 47.2 | 48.7 | 50.3 | 52.0 | 53.5 | 5.5 | 8.0 | 9.5 | 16 50.34 | 0.06 | 25.33 | 10 16 24.95 | 1.78 |
| | B. A. C. 3563 . . . | 19 | 40.2 | 41.8 | 44.3 | 56.4 | 57.9 | 59.6 | 1.2 | 2.8 | 14.7 | 17.3 | 18.8 | 19 59.55 | 0.07 | 25.32 | 10 19 34.16 | 1.68 |
| | B. A. C. 3592 . . . | 20 | 28.4 | 30.1 | 32.5 | 44.4 | 46.0 | 47.6 | 49.3 | 50.9 | 2.9 | 5.1 | 6.7 | 23 47.63 | 0.04 | 25.32 | 10 23 22.27 | 1.80 |
| ρ | Leonis . . . | 21 | 24.7 | 26.3 | 28.9 | 41.0 | 42.5 | 44.1 | 45.8 | 47.4 | 59.6 | 2.0 | 3.7 | 26 44.18 | 0.03 | 25.32 | 10 26 18.83 | 1.93 |
| | Weisse 600 . . . | 22 | 9.0 | 10.6 | 13.2 | 25.6 | 27.3 | 29.0 | 30.8 | 32.2 | 44.5 | 47.0 | 48.7 | 35 28.90 | — 0.02 | 25.32 | 10 35 3.56 | 2.03 |
| | 42 Leonis Minoris . | 23 | 3.1 | 5.0 | 8.0 | 21.9 | 23.7 | 25.7 | 27.6 | 29.4 | 43.4 | 46.2 | 48.1 | 39 25.65 | + 0.03 | 25.32 | 10 39 0.36 | 2.43 |
| | *+31° 17' . . . | 24 | 43.2 | 45.5 | 47.6 | 49.4 | 52.2 | . . . | 2.7 | 5.9 | 7.6 | 9.7 | 11.7 | 39 27.55 | + 0.11 | 25.32 | 10 39 2.34 | 2.43 |
| 5 | B. A. C. 3202 . . . | 25 | . . . | . . . | . . . | 17.0 | 18.7 | 20.4 | 22.1 | 23.7 | 35.8 | 38.2 | 39.8 | 17 26.96 | — 6.59 | 25.17 | 9 16 55.20 | 1.57 |
| | a Hydræ . . . | 26 | 36.9 | 38.7 | 41.1 | 53.1 | 54.7 | 56.2 | 57.9 | 59.6 | 11.6 | 14.0 | 15.6 | 21 56.31 | 0.06 | 25.17 | 9 21 31.08 | 1.39 |
| | 5 Antlæ . . . | 27 | 17.9 | 19.6 | 22.9 | 36.8 | 38.5 | 40.4 | 42.2 | 44.2 | 58.2 | 1.0 | 2.9 | 26 40.42 | 0.10 | 25.17 | 9 26 15.15 | 1.18 |
| | Lacaille 3918 . . . | 28 | 5.6 | 7.1 | 10.4 | 24.9 | 26.9 | 28.8 | 30.8 | 32.5 | 47.3 | 50.3 | 52.3 | 30 28.81 | 0.11 | 25.16 | 9 30 3.54 | 1.17 |
| | *+18° 2' . . . | 29 | . . . | . . . | . . . | 32.0 | 34.7 | 36.3 | 47.7 | 50.5 | 52.0 | 53.8 | 55.8 | 45 45.35 | 29.22 | 25.15 | 9 44 50.98 | 1.86 |
| | Lacaille 4095 . . . | 30 | 36.2 | 38.0 | 41.0 | 55.7 | 57.4 | 59.5 | 1.5 | 3.7 | 18.3 | 21.3 | 23.2 | 53 59.62 | 0.11 | 25.14 | 9 53 34.37 | 1.29 |
| | Lacaille 4120 . . . | 31 | 59.9 | 1.8 | 4.8 | 19.1 | 21.0 | 22.9 | 24.7 | 26.6 | 40.9 | 43.7 | 45.5 | 58 22.81 | 0.10 | 25.13 | 9 57 57.58 | 1.33 |
| | Groombridge 1616 . | 32 | . . . | . . . | . . . | 15.3 | 19.2 | 21.1 | 38.5 | 42.7 | 44.9 | 47.4 | 50.5 | 3 34.95 | 43.30 | 25.13 | 10 2 26.52 | 3.01 |
| | Groombridge 1618 . | 33 | . . . | . . . | . . . | 9.3 | 11.7 | 14.2 | 16.7 | 19.4 | . . . | . . . | . . . | 4 14.26 | 0.03 | 25.13 | 10 3 49.10 | 3.02 |
| | Radcliffe 2472 . . | 34 | 2.6 | 6.4 | 9.4 | 28.5 | 31.2 | 33.8 | 36.5 | 39.2 | 58.7 | 2.6 | 5.0 | 11 33.99 | 0.00 | 25.12 | 10 11 8.87 | 3.18 |
| ρ | Weisse 255 . . . | 35 | 30.7 | 32.4 | 35.1 | 46.8 | 48.3 | 49.9 | 51.6 | 52.2 | 5.2 | 7.6 | 9.2 | 16 49.91 | 0.05 | 25.11 | 10 16 24.75 | 1.67 |
| | B. A. C. 3563 . . . | 36 | 39.8 | 41.6 | 44.1 | 56.0 | 57.6 | 59.2 | 0.9 | 2.5 | 14.6 | 17.0 | 18.5 | 19 59.25 | 0.06 | 25.11 | 10 19 34.08 | 1.65 |
| | B. A. C. 3592 . . . | 37 | 28.0 | 29.7 | 32.1 | 44.2 | 45.6 | 47.3 | 48.9 | 50.5 | 2.4 | 4.9 | 6.5 | 23 47.28 | 0.05 | 25.11 | 10 23 22.12 | 1.77 |
| | Leonis . . . | 38 | 24.4 | 26.0 | 28.6 | 40.7 | 42.2 | 43.9 | 45.6 | 47.2 | 59.2 | 1.8 | 3.3 | 26 43.90 | 0.04 | 25.10 | 10 26 18.76 | 1.89 |
| | 43 Leonis Minoris . | 39 | 11.8 | 13.9 | 16.8 | 30.5 | . . . | 34.2 | . . . | 37.8 | 51.7 | 54.4 | 56.3 | 42 34.16 | 0.02 | 25.09 | 10 42 9.05 | 2.38 |
| δ | *+12° 31' . . . | 40 | 3.0 | 4.7 | 7.3 | 19.4 | 20.7 | 22.5 | 24.1 | 25.5 | 38.0 | 41.6 | 42.3 | 53 22.65 | 0.04 | 25.07 | 10 52 57.54 | 2.02 |
| | Lalande 21185 . . | 41 | 36.9 | 38.9 | 42.2 | 57.0 | 58.8 | 1.0 | 3.2 | 5.1 | 19.9 | 23.0 | 24.8 | 57 0.98 | 0.02 | 25.07 | 10 56 35.89 | 2.64 |
| | Weisse 1044 . . . | 42 | 27.1 | 28.8 | 31.5 | 43.7 | 45.2 | 47.0 | 48.7 | 50.4 | 2.5 | 5.1 | 6.6 | 59 46.96 | 0.04 | 25.07 | 10 59 21.85 | 2.06 |
| | Leonis . . . | 43 | 37.4 | 39.0 | 41.8 | 54.7 | 56.4 | 58.1 | 59.7 | 1.5 | 14.4 | 17.0 | 18.5 | 7 58.05 | 0.03 | 25.06 | 11 7 32.96 | 2.24 |
| | Lalande 21645 . . | 44 | 25.0 | 26.7 | 29.3 | 41.5 | 43.0 | 44.7 | 46.4 | 48.0 | 0.1 | 2.7 | 4.4 | 15 44.71 | 0.06 | 25.05 | 11 15 19.60 | 1.78 |
| λ | R. A. C. 3901 . . . | 45 | 41.5 | 43.0 | 45.5 | 57.4 | 59.0 | 0.7 | 2.3 | 4.0 | 15.8 | 18.3 | 19.8 | 22 0.66 | — 0.05 | 25.05 | 11 21 35.56 | — 1.91 |
| | Draconis . . . | 46 | 35.7 | 40.7 | 48.0 | 22.8 | 27.4 | 32.2 | 37.1 | 41.7 | 16.8 | 23.5 | 28.4 | 24 32.21 | + 0.02 | 25.04 | . . . | . . . |
| | v Leonis . . . | 47 | 43.9 | 45.5 | 48.0 | 0.0 | 1.5 | 3.0 | 4.8 | 6.3 | 18.2 | 20.7 | 22.1 | 31 3.09 | — 0.05 | 25.04 | 11 30 38.00 | 1.94 |
| | 3 Draconis . . . | 48 | 12.5 | 17.1 | 23.6 | 54.4 | 58.5 | 2.5 | 7.0 | 11.4 | 42.1 | 48.8 | 52.5 | 36 2.76 | + 0.01 | 25.03 | 11 35 37.74 | 5.42 |
| β | Leonis . . . | 49 | 51.4 | 53.1 | 55.6 | 8.0 | 9.6 | 11.4 | 13.1 | 14.7 | 27.1 | 29.6 | 31.0 | 43 11.33 | — 0.04 | —25.02 | 11 42 46.27 | — 2.19 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------------------|--------------------|-----------------|--------------|--------------|
| 1876. h. Apr. 5, 10.8 | s. — 25.08 | s. + 0.063 | s. + 0.06 | s. — 0.05 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. | | |
|-------------------------|-------------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|---------------|-------|----------|---------------------------------|-------------------------|----|-------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | | |
| | | | m. | s. | m. | s. | m. | s. | m. | s. | m. | s. | m. | s. | m. | s. | h. | m. | s. | |
| 1876. Apr. 6 Y. | β Geminorum . . . | 1 | 48.1 | 50.0 | 52.8 | 6.4 | 8.2 | 10.0 | 11.9 | 13.6 | 27.3 | 30.1 | 31.6 | 38 10.00 | — | 0.00 | —25.15 | 7 37 44.85 | — | 1.25 |
| | λ Ursæ Minoris, S. P. | 2 | .. | .. | .. | 13.0 | 35.0 | 5.0 | 33.0 | 53.0 | .. | .. | .. | 48 3.80 | — | 2.99 | 25.15 | .. | + | 41.29 |
| | ρ Argus . . . | 3 | 21.0 | 22.6 | 25.5 | 38.5 | 40.1 | 41.9 | 43.8 | 45.5 | 58.5 | 1.3 | 2.9 | 2 41.96 | — | 0.10 | 25.15 | 8 2 16.71 | — | 0.81 |
| | B. A. C. 2749 . . . | 4 | 22.0 | 27.3 | 36.0 | 15.6 | 21.0 | 26.4 | 32.3 | 37.7 | 17.9 | 26.0 | 31.2 | 7 26.67 | + | 0.19 | 25.15 | 8 7 1.71 | + | 3.81 |
| | Lacaille 3248 . . . | 5 | 39.3 | 41.2 | 44.2 | 58.3 | 0.0 | 1.9 | 4.0 | 5.7 | 19.9 | 22.9 | 24.7 | 13 2.01 | — | 0.13 | 25.15 | 8 12 36.73 | — | 0.77 |
| | Lalande 16413 . . . | 6 | 11.7 | 13.5 | 16.9 | 31.3 | 33.2 | 35.1 | 37.2 | 39.1 | 53.8 | 56.9 | 58.7 | 17 35.22 | + | 0.02 | 25.15 | 8 17 10.09 | — | 1.70 |
| | B. A. C. 2824 . . . | 7 | 8.8 | 13.4 | 20.8 | 54.9 | 59.5 | 4.6 | 9.4 | 13.8 | 48.0 | 55.0 | 59.5 | 21 4.34 | + | 0.15 | 25.15 | 8 20 39.34 | — | 3.60 |
| | Weisse 601 . . . | 8 | .. | .. | .. | 2.1 | 3.7 | 5.3 | 6.9 | 8.6 | 20.8 | 23.4 | 24.9 | 25 11.96 | — | 6.68 | 25.15 | 8 24 40.13 | — | 1.35 |
| | *+23° 43' . . . | 9 | 45.0 | 47.0 | 49.6 | 2.0 | 4.2 | 6.0 | 7.8 | 9.5 | 22.6 | 25.2 | 26.8 | 30 6.03 | — | 0.01 | 25.15 | 8 29 40.87 | — | 1.54 |
| | *-23° 49' . . . | 10 | 5.2 | 7.0 | 9.6 | 22.9 | 24.4 | 6.1 | 27.9 | 29.7 | 42.8 | 45.5 | 47.3 | 36 25.22 | — | 0.08 | 25.14 | 8 36 1.00 | — | 0.99 |
| | ϵ Hydræ . . . | 11 | 19.7 | 21.4 | 23.9 | 35.9 | 37.5 | 38.9 | 40.8 | 42.2 | 54.3 | 56.8 | 58.3 | 40 39.06 | — | 0.04 | 25.14 | 8 40 13.88 | — | 1.34 |
| | *-13° 26' . . . | 12 | .. | .. | .. | 9.7 | 11.2 | 13.1 | 14.8 | 16.6 | .. | .. | .. | 51 13.08 | — | 0.09 | 25.14 | 8 50 47.85 | — | 1.17 |
| | *-13° 26' . . . | 13 | .. | .. | .. | 42.5 | 44.9 | 46.6 | 57.7 | 0.4 | 1.8 | 3.7 | 5.5 | 51 55.39 | — | 28.62 | 25.14 | 8 51 1.63 | — | 1.17 |
| | Weisse (2) 1352 . . . | 14 | 19.8 | 21.7 | 24.2 | 37.3 | 38.8 | 40.7 | 42.4 | 44.0 | 57.2 | 59.9 | 1.5 | 56 40.68 | — | 0.01 | 25.14 | 8 56 15.53 | — | 1.69 |
| | B. A. C. 3107 . . . | 15 | 59.5 | 1.2 | 3.8 | 16.2 | 17.8 | 19.5 | 21.2 | 22.9 | 35.2 | 37.8 | 39.5 | 6 19.51 | — | 0.02 | 25.14 | 8 59 54.35 | — | 1.58 |
| | B. A. C. 3182 . . . | 16 | 1.9 | 4.6 | 8.6 | 27.2 | 29.7 | 32.2 | 34.8 | 37.0 | 55.7 | 59.4 | 1.8 | 14 32.08 | + | 0.05 | 25.14 | 9 14 6.99 | — | 2.63 |
| | *-38° 50' . . . | 17 | .. | .. | .. | 21.0 | 23.7 | 26.1 | 39.8 | 43.2 | 45.4 | 47.7 | 50.2 | 18 37.12 | — | 35.78 | 25.14 | 9 17 36.20 | — | 1.05 |
| | B. A. C. 3874 . . . | 18 | 32.8 | 34.8 | 37.8 | 52.0 | 3.7 | 55.6 | 7.7 | 59.5 | 13.7 | 16.7 | 18.4 | 24 55.70 | — | 0.13 | 25.14 | 9 24 30.43 | — | 1.15 |
| | Antix . . . | 19 | .. | .. | .. | 58.2 | 1.1 | 3.0 | 15.6 | 18.8 | 20.6 | 22.5 | 24.5 | 27 13.04 | — | 32.62 | 25.14 | 9 26 15.28 | — | 1.17 |
| | *+10° 12' . . . | 20 | .. | .. | .. | 11.6 | 12.9 | 14.7 | 16.5 | 18.6 | .. | .. | .. | 32 14.86 | — | 0.04 | 25.14 | 9 31 49.68 | — | 1.66 |
| | B. A. C. 3318 . . . | 21 | 32.4 | 34.1 | 36.7 | 49.4 | 51.0 | 52.8 | 54.6 | 56.4 | 9.0 | 11.7 | 13.3 | 36 52.85 | — | 0.01 | 25.14 | 9 36 27.70 | — | 1.86 |
| | μ Leonis . . . | 22 | 48.0 | 50.0 | 52.8 | 6.2 | 7.7 | 9.7 | 11.6 | 13.0 | 26.7 | 29.4 | 31.0 | 46 9.65 | — | 0.00 | 25.14 | 9 45 44.51 | — | 2.03 |
| | Weisse (2) 1038 . . . | 23 | 11.2 | 13.1 | 15.0 | 29.6 | 31.4 | 33.1 | 35.0 | 36.9 | 50.6 | 53.5 | 55.3 | 50 33.24 | — | 0.00 | 25.14 | 9 50 8.10 | — | 2.12 |
| | *-34° 42' . . . | 24 | 55.3 | 57.3 | 0.5 | 14.8 | 16.5 | 18.5 | 20.6 | 22.6 | 37.0 | 40.2 | 41.9 | 55 18.65 | — | 0.11 | 25.14 | 9 54 53.37 | — | 1.29 |
| | *-35° 49' . . . | 25 | 54.1 | 56.4 | 59.2 | 14.7 | 16.8 | 18.8 | 20.8 | 23.0 | 38.2 | 41.3 | 42.2 | 58 18.68 | — | 0.15 | 25.14 | 9 57 53.39 | — | 1.27 |
| | Groombridge 1616 . . . | 26 | 21.7 | 24.1 | 28.2 | 46.8 | 49.1 | 51.5 | 54.3 | 56.7 | 15.1 | 19.3 | 21.5 | 2 51.66 | + | 0.05 | 25.14 | 10 2 26.57 | — | 3.00 |
| | Groombridge 1618 . . . | 27 | 44.0 | 46.8 | 50.8 | 9.2 | 11.8 | 14.4 | 16.8 | 19.2 | 37.8 | 41.7 | 44.1 | 4 14.24 | + | 0.05 | 25.14 | 10 3 49.15 | — | 3.00 |
| | *-30° 12' . . . | 28 | 10.8 | 12.9 | 15.5 | 29.2 | 31.0 | 33.1 | 34.9 | 36.8 | 50.6 | 53.4 | 55.3 | 9 33.04 | — | 0.12 | 25.14 | 10 9 7.78 | — | 1.39 |
| | 24 Sextantis . . . | 29 | 15.3 | 17.0 | 19.5 | 31.3 | 32.9 | 34.4 | 36.0 | 37.7 | 49.6 | 52.0 | 53.6 | 17 34.48 | — | 0.05 | 25.13 | 10 17 9.30 | — | 1.70 |
| | B. A. C. 3503 . . . | 30 | 39.8 | 41.6 | 44.2 | 56.0 | 37.5 | 59.3 | 1.0 | 2.6 | 14.5 | 17.0 | 18.5 | 19 59.27 | — | 0.06 | 25.13 | 10 19 34.08 | — | 1.64 |
| | B. A. C. 3592 . . . | 31 | 27.0 | 29.7 | 32.2 | 44.2 | 45.6 | 47.4 | 48.9 | 50.6 | 2.5 | 4.9 | 6.5 | 23 47.31 | — | 0.04 | 25.13 | 10 23 22.14 | — | 1.76 |
| | Weisse 600 . . . | 32 | 8.6 | 10.4 | 13.0 | 25.4 | 26.9 | 28.5 | 30.3 | 31.9 | 44.2 | 46.7 | 48.4 | 35 28.57 | — | 0.02 | 25.13 | 10 35 3.42 | — | 1.99 |
| | Weisse 608 . . . | 33 | .. | .. | .. | 38.7 | 0.8 | 2.4 | 13.7 | 16.2 | 18.0 | 19.6 | 21.6 | 36 11.38 | — | 28.70 | 25.13 | 10 35 17.55 | — | 1.99 |
| | 42 Leonis Minoris . . . | 34 | 2.9 | 4.8 | 7.8 | .. | .. | .. | .. | .. | 43.1 | 46.0 | 47.8 | 39 25.40 | + | 0.02 | 25.13 | 10 39 6.29 | — | 2.39 |
| | *+31° 17' . . . | 35 | .. | .. | .. | 23.7 | 25.5 | 27.4 | 29.4 | 31.3 | .. | .. | .. | 39 27.46 | — | 0.00 | 25.13 | 10 39 2.33 | — | 2.39 |
| | 43 Leonis Minoris . . . | 36 | 12.0 | 13.9 | 16.8 | 30.6 | 32.4 | 34.3 | 36.2 | 38.1 | 51.7 | 54.6 | 56.4 | 42 34.27 | — | 0.01 | 25.13 | 10 42 9.15 | — | 2.37 |
| | Weisse (2) 944 . . . | 37 | 50.7 | 52.6 | 55.9 | 11.1 | 13.0 | 15.0 | 17.0 | 19.0 | 33.9 | 37.0 | 39.0 | 48 14.93 | + | 0.02 | 25.13 | 10 47 49.82 | — | 2.63 |
| | *+12° 31' . . . | 38 | 2.9 | 4.6 | 7.0 | 19.2 | 0.9 | 22.7 | 24.5 | 26.1 | 38.1 | 40.8 | 42.2 | 53 22.65 | — | 0.03 | 25.13 | 10 52 57.49 | — | 2.02 |
| | Lalande 21185 . . . | 39 | 39.9 | 38.8 | 42.0 | 57.4 | 0.0 | 1.1 | 3.0 | 5.0 | 20.2 | 23.3 | 25.1 | 57 1.05 | + | 0.02 | 25.13 | 10 56 35.94 | — | 2.64 |
| | Weisse (2) 1185 . . . | 40 | 14.2 | 16.1 | 19.9 | 53.4 | 36.3 | 38.6 | 40.6 | 42.8 | 57.5 | 0.5 | 2.7 | 0 38.47 | + | 0.02 | 25.13 | 11 0 13.36 | — | 2.67 |
| | δ Leonis . . . | 41 | 37.5 | 39.2 | 41.9 | 54.8 | 36.3 | 58.2 | 59.9 | 1.6 | 14.5 | 17.0 | 18.7 | 7 58.15 | — | 0.01 | 25.13 | 11 7 33.01 | — | 2.24 |
| | δ Crateris . . . | 42 | 15.7 | 17.3 | 20.0 | 32.2 | 33.8 | 35.6 | 37.3 | 38.9 | 51.2 | 53.5 | 55.2 | 13 35.52 | — | 0.08 | 25.13 | 11 13 10.31 | — | 1.75 |
| | β Geminorum . . . | 43 | 48.8 | 50.6 | 53.4 | 7.0 | 8.7 | 10.6 | 12.5 | 14.3 | 27.9 | 30.5 | 32.4 | 38 10.61 | + | 0.04 | 25.82 | 7 37 44.83 | — | 1.22 |
| | ρ Argus . . . | 44 | 21.5 | 23.3 | 26.1 | 39.2 | 40.7 | 42.6 | 44.4 | 46.3 | 59.4 | 2.0 | 3.5 | 2 42.64 | — | 0.16 | 25.82 | 8 2 16.66 | — | 0.78 |
| | B. A. C. 2749 . . . | 45 | 21.7 | 27.5 | 36.1 | 16.4 | 21.6 | 27.1 | 32.7 | 38.1 | 18.5 | 26.7 | 31.8 | 7 27.11 | + | 0.44 | 25.82 | 8 7 1.73 | — | 3.69 |
| | λ Ursæ Minoris, S. P. | 46 | .. | .. | .. | .. | .. | .. | .. | .. | 9.0 | 23.0 | 46.0 | 17.0 | 2.0 | 18 43.40 | —30 39.54 | 25.83 | — | 38.88 |
| | 35 Cassi . . . | 47 | 18.4 | 20.5 | 22.8 | 35.6 | 37.0 | 38.9 | 40.6 | 43.3 | 55.0 | 57.8 | 59.3 | 28 39.00 | + | 0.01 | 25.83 | 8 28 13.18 | — | 1.44 |
| | O. Arg. S. 8806 . . . | 48 | 7.1 | 9.1 | 11.8 | 25.1 | 26.7 | 28.7 | 30.5 | 32.2 | 45.6 | 48.2 | 0.0 | 33 28.66 | — | 0.16 | 25.83 | 8 33 2.67 | — | 0.91 |
| | Lalande 17182 . . . | 49 | .. | .. | .. | 27.0 | 30.2 | 32.1 | 45.9 | 49.2 | 51.2 | 53.2 | 55.7 | 38 43.06 | — | 35.02 | 25.83 | 8 37 42.21 | — | 1.86 |
| | O. Arg. N. 9350 . . . | 50 | 27.6 | 31.3 | 36.5 | 3.1 | 6.8 | 10.2 | 13.9 | 17.6 | 43.6 | 49.2 | 52.4 | 44 10.20 | + | 0.26 | —25.83 | 8 43 44.63 | — | 3.13 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|------------------------|-------------------------------------|--------------------------|------------------------|------------------------|
| 1876. Apr. 6, S. | h. s. 0.4 — 25.14 9.6 — 25.85 | s. + 0.006 + 0.017 | s. + 0.11 + 0.20 | s. — 0.05 — 0.06 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. | | |
|-------------------------|-----------------------------|---------|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|------------------|-------|--------|---------------------------------|-------------------------|------|------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | | |
| 1876. Apr. 8 Y. | Lacaille 3567 . . . | 1 | 46.5 | 48.3 | 51.0 | 4.5 | 6.2 | 8.0 | 9.9 | 11.7 | 25.2 | 28.0 | 29.7 | m. s. 47 8.09 | — | 0.17 | —25.84 | h. m. s. 8 46 42.08 | — | 0.97 |
| | Lalande 17662 . . . | 2 | 27.7 | 29.4 | 31.9 | 44.4 | 45.9 | 47.6 | 49.3 | 50.8 | 3.0 | 5.7 | 7.2 | 50 47.54 | — | 0.11 | 25.84 | 8 50 21.59 | — | 1.14 |
| | Weisse 1282 . . . | 3 | . . . | . . . | . . . | 20.1 | 22.6 | 23.9 | 35.2 | 37.7 | 38.9 | 40.2 | 42.6 | 51 32.58 | — | 28.64 | 25.84 | 8 50 38.10 | — | 1.14 |
| | *—31° 56' . . . | 4 | 26.4 | 28.0 | 31.0 | 45.3 | 47.0 | 48.8 | 50.7 | 52.5 | 6.7 | 9.5 | 11.3 | 59 48.84 | — | 0.20 | 25.84 | 8 59 22.80 | — | 0.99 |
| | Weisse (2) 87 . . . | 5 | 27.5 | 29.3 | 32.0 | 45.0 | 46.7 | 48.5 | 50.5 | 52.0 | 5.3 | 8.0 | 9.6 | 6 48.58 | + | 0.04 | 25.84 | 9 0 22 78 | — | 1.75 |
| | Lacaille 3741 . . . | 6 | 48.4 | 50.6 | 53.6 | 8.6 | 10.1 | 12.6 | 14.0 | 16.1 | 30.8 | 33.8 | 35.7 | 10 12.15 | — | 0.22 | 25.84 | 9 9 46.09 | — | 1.01 |
| | *—34° 49' . . . | 7 | 8.7 | 10.9 | 14.1 | 28.5 | 30.3 | 32.4 | 34.3 | 36.4 | 51.0 | 53.9 | 56.2 | 16 32.47 | — | 0.22 | 25.84 | 9 16 6.35 | — | 1.05 |
| | *—34° 58' . . . | 8 | . . . | . . . | . . . | . . . | . . . | . . . | 48.3 | 51.6 | 53.3 | 55.6 | 57.7 | 18 53.30 | — | 41.77 | 25.84 | 9 17 45.69 | — | 1.05 |
| | O. Arg. S. 9789 . . . | 9 | 52.9 | 54.7 | 57.5 | 11.4 | 13.0 | 14.7 | 16.7 | 18.5 | 32.3 | 35.3 | 36.8 | 25 14.89 | — | 0.18 | 25.85 | 9 24 48.86 | — | 1.14 |
| | O. Arg. S. 9855 . . . | 10 | 44.2 | 46.1 | 49.0 | 3.0 | 4.7 | 6.7 | 8.7 | 10.7 | 24.6 | 27.4 | 29.4 | 29 6.77 | — | 0.19 | 25.85 | 9 28 40.73 | — | 1.15 |
| ε μ 19 | O. Arg. S. 9856 . . . | 11 | 24.4 | 26.7 | 28.8 | 30.6 | 33.6 | . . . | 44.1 | 47.2 | 49.0 | 51.0 | 53.2 | 29 8.86 | — | 0.11 | 25.85 | 9 28 42.90 | — | 1.15 |
| | Leonis . . . | 12 | 55.3 | 57.0 | 59.8 | 12.8 | 14.5 | 16.3 | 18.2 | 20.0 | 32.9 | 35.5 | 37.4 | 39 16.34 | + | 0.02 | 25.85 | 9 38 50.51 | — | 1.92 |
| | Leonis . . . | 13 | 48.8 | 50.6 | 53.5 | 6.7 | 8.5 | 10.3 | 12.1 | 13.8 | 27.1 | 30.2 | 31.8 | 46 10.31 | — | 0.03 | 25.85 | 9 46 44.49 | — | 2.00 |
| | Leonis Minoris . . . | 14 | 7.6 | 10.0 | 13.3 | 28.0 | 31.3 | 33.4 | 35.5 | 37.7 | 53.6 | 56.9 | 58.9 | 50 33.37 | — | 0.10 | 25.85 | 9 50 7.62 | — | 2.48 |
| | B. A. C. 3420 . . . | 15 | 57.8 | 59.6 | 2.7 | 16.8 | 18.6 | 20.5 | 22.5 | 24.4 | 38.5 | 41.4 | 43.1 | 55 20.54 | + | 0.05 | 25.86 | 9 54 54.73 | — | 2.20 |
| | *—38° 49' . . . | 16 | . . . | . . . | . . . | 38.6 | 41.0 | 44.0 | 57.9 | 1.2 | 2.2 | 5.4 | 7.8 | 58 54.88 | — | 35.86 | 25.86 | 9 57 53.16 | — | 1.24 |
| | *—30° 12' . . . | 17 | 11.4 | 13.2 | 16.4 | 30.0 | 31.8 | 33.8 | 35.8 | 37.5 | 51.3 | 54.0 | 55.9 | 9 33.74 | — | 0.19 | 25.86 | 10 9 7.69 | — | 1.36 |
| | Lacaille 4242 . . . | 18 | 14.7 | 16.7 | 19.8 | 34.4 | 36.4 | 38.3 | 40.5 | 42.5 | 57.0 | 0.2 | 2.0 | 13 38.41 | — | 0.22 | 25.86 | 10 13 12.33 | — | 1.34 |
| | Sextantis . . . | 19 | 15.8 | 17.5 | 20.2 | 31.9 | 33.5 | 35.2 | 36.8 | 38.5 | 50.4 | 52.8 | 54.3 | 17 35.17 | — | 0.06 | 25.86 | 10 17 9.25 | — | 1.69 |
| | O. Arg. N. 10874 . . . | 20 | 22.9 | 25.6 | 30.4 | 52.1 | 55.0 | 57.6 | 0.7 | 3.6 | 25.4 | 29.7 | 32.8 | 22 57.80 | + | 0.20 | 25.86 | 10 22 32 14 | — | 3.54 |
| 37 p ² | Ursæ Majoris . . . | 21 | 34.6 | 38.0 | 42.5 | . . . | . . . | . . . | . . . | 37.5 | 42.2 | 44.8 | . . . | 23 9.93 | + | 0.21 | 25.86 | 10 22 44.28 | — | 3.51 |
| | Leonis . . . | 22 | 24.5 | 26.1 | 28.6 | 40.5 | 42.0 | 43.6 | 45.2 | 46.8 | 58.9 | 1.0 | 2.8 | 57 43.64 | — | 0.06 | 25.87 | 10 57 17.71 | — | 1.84 |
| | Weisse 1044 . . . | 23 | . . . | . . . | . . . | 3.3 | 5.8 | 7.4 | 18.5 | 21.3 | 22.7 | 24.5 | 26.2 | 0 16.21 | — | 28.54 | 25.87 | 10 59 21.80 | — | 2.04 |
| | Leonis . . . | 24 | 38.1 | 39.9 | 42.7 | 55.3 | 57.0 | 58.8 | 0.7 | 2.3 | 15.1 | 17.8 | 19.4 | 7 58.83 | + | 0.01 | 25.88 | 11 7 32.96 | — | 2.23 |
| | Crateris . . . | 25 | 16.4 | 18.2 | 20.8 | 33.0 | 34.6 | 36.5 | 38.0 | 39.8 | 51.8 | 54.5 | 56.1 | 13 36.34 | — | 0.11 | 25.88 | 11 13 10.35 | — | 1.74 |
| | Weisse (2) 266 . . . | 26 | 2.9 | 5.0 | 8.1 | 22.8 | 24.7 | 26.7 | 28.8 | 30.8 | 45.2 | 48.4 | 50.0 | 16 26.67 | + | 0.07 | 25.88 | 11 16 0.86 | — | 2.64 |
| | B. A. C. 3901 . . . | 27 | 42.3 | 43.9 | 46.4 | 58.2 | 59.7 | 1.5 | 3.0 | 4.7 | 16.5 | 19.0 | 20.6 | 22 1.44 | — | 0.06 | 25.88 | 11 21 35.50 | — | 1.90 |
| | a Leonis . . . | 28 | 55.0 | 56.5 | 58.9 | 11.2 | 12.7 | 14.5 | 16.2 | 17.7 | 30.0 | 32.6 | 34.2 | 2 14.50 | + | 0.09 | 26.79 | 10 1 47.30 | — | 1.79 |
| | Lacaille 4192 . . . | 29 | 23.3 | 25.1 | 28.2 | 42.0 | 43.8 | 45.6 | 47.7 | 49.7 | 3.6 | 6.4 | 8.5 | 7 45.82 | — | 0.14 | 26.80 | 10 7 18.88 | — | 1.31 |
| | Weisse (2) 197 . . . | 30 | 8.8 | 10.4 | 13.8 | 28.8 | 30.8 | 32.9 | 35.2 | 37.0 | 52.0 | 55.3 | 57.5 | 11 32.95 | + | 0.26 | 26.80 | 10 11 6.41 | — | 2.44 |
| 10 | Struve Cat. 1198 (1st*) | 31 | . . . | . . . | . . . | 20.7 | 24.3 | 26.6 | 41.8 | 45.6 | 47.7 | 50.6 | 52.9 | 15 38.78 | — | 38.74 | 26.80 | 10 14 33.24 | — | 2.71 |
| | Struve Cat. 1198 (2d*) | 32 | . . . | . . . | . . . | 55.8 | 57.7 | 0.3 | 2.4 | 4.5 | . . . | . . . | . . . | 15 0.14 | + | 0.33 | 26.80 | 10 14 33.67 | — | 2.71 |
| | Rumker 3211 . . . | 33 | 0.3 | 1.7 | 4.2 | 16.4 | 18.0 | 19.6 | 21.4 | 22.9 | 35.0 | 37.6 | 39.4 | 24 19.68 | — | 0.09 | 26.80 | 10 23 52.97 | — | 1.88 |
| | B. A. C. 3652 . . . | 34 | 45.7 | 50.3 | 57.7 | 32.2 | 36.5 | 41.4 | 45.8 | 50.5 | 24.7 | 32.0 | 36.6 | 34 41.22 | — | 0.85 | 26.80 | 10 34 15.27 | — | 5.42 |
| | Leonis . . . | 35 | 53.6 | 55.1 | 57.6 | 9.7 | 11.2 | 13.2 | 14.8 | 16.4 | 28.4 | 30.9 | 32.6 | 43 13.05 | — | 0.09 | 26.80 | 10 42 46.34 | — | 1.93 |
| | Weisse (2) 944 . . . | 36 | 52.2 | 54.2 | 57.3 | 12.3 | 14.2 | 16.4 | 18.4 | 20.4 | 35.3 | 38.6 | 40.7 | 48 16.36 | — | 0.26 | 26.80 | 10 47 49.82 | — | 2.58 |
| | Weisse 957 . . . | 37 | 22.9 | 24.6 | 26.9 | 39.0 | 40.5 | 42.1 | 43.7 | 45.2 | 57.3 | 59.6 | 1.5 | 54 42.12 | — | 0.05 | 26.80 | 10 54 15.37 | — | 1.87 |
| | p ² Leonis . . . | 38 | 25.2 | 26.7 | 29.2 | 41.0 | 42.6 | 44.3 | 45.9 | 47.4 | 59.3 | 2.0 | 3.5 | 57 44.28 | — | 0.03 | 26.80 | 10 57 17.51 | — | 1.83 |
| | B. A. C. 3821 . . . | 39 | 52.8 | 57.0 | 4.0 | 37.0 | 41.4 | 46.1 | 50.9 | 55.0 | 28.0 | 35.1 | 39.7 | 4 46.09 | — | 0.82 | 26.80 | 11 4 20.11 | — | 5.49 |
| | φ Leonis . . . | 40 | 31.2 | 32.6 | 35.0 | 47.1 | 48.6 | . . . | 51.8 | 53.3 | 5.2 | 7.6 | 9.4 | 10 50.18 | — | 0.02 | 26.81 | 11 10 23.39 | — | 1.83 |
| Weisse (2) 257 (2d*) | 41 | 4.5 | 6.9 | 9.2 | 11.0 | 14.6 | . . . | 30.2 | 33.6 | 35.8 | 37.7 | 40.2 | 15 52.37 | + | 0.17 | 26.81 | 11 15 25.73 | — | 2.70 | |
| Lacaille 4746 . . . | 42 | 45.7 | 48.1 | 51.5 | 6.6 | 8.2 | 10.4 | 12.5 | 14.3 | 29.5 | 32.5 | 34.4 | 21 10.34 | — | 0.18 | 26.81 | 11 20 43.35 | — | 1.65 | |
| Weisse 421 . . . | 43 | 59.0 | 0.5 | 3.0 | 15.0 | 16.6 | 18.4 | 20.0 | 21.5 | 33.5 | 35.7 | 37.6 | 26 18.25 | — | 0.00 | 26.81 | 11 25 51.44 | — | 1.84 | |
| v ζ | Leonis . . . | 44 | 45.5 | 47.0 | 49.5 | 1.5 | 3.0 | 4.8 | 6.3 | 7.9 | 19.7 | 22.3 | 24.0 | 31 4.68 | + | 0.03 | 26.81 | 11 30 37.90 | — | 1.93 |
| | Crateris . . . | 45 | 37.4 | 39.0 | 41.6 | 54.1 | 55.7 | 57.6 | 59.2 | 0.9 | 13.4 | 15.9 | 17.7 | 38 57.50 | — | 0.06 | 26.81 | 11 38 30.63 | — | 1.79 |
| | O. Arg. S. 11656 . . . | 46 | 12.3 | 14.0 | 16.9 | 30.0 | 31.7 | 33.5 | 35.3 | 37.0 | 50.2 | 53.0 | 54.7 | 41 33.51 | — | 0.10 | 26.81 | 11 41 6.60 | — | 1.76 |
| | B. A. C. 4009 . . . | 47 | 32.0 | 33.8 | 36.5 | 50.2 | 52.0 | 54.3 | 56.1 | 57.9 | 11.4 | 14.5 | 16.1 | 45 54.07 | — | 0.13 | 26.81 | 11 45 27.13 | — | 1.77 |
| | Weisse (2) 954 . . . | 48 | 59.0 | 1.0 | 3.9 | 18.8 | 20.8 | 22.9 | 24.9 | 26.7 | 41.3 | 44.6 | 46.6 | 50 22.77 | + | 0.24 | 26.81 | 11 49 56.20 | — | 2.73 |
| | Weisse 908 . . . | 49 | 13.8 | 15.7 | 17.9 | . . . | . . . | . . . | . . . | . . . | 48.4 | 50.7 | 52.4 | 54 33.15 | + | 0.06 | —26.81 | 11 54 6.40 | — | 2.10 |

CORRECTIONS, &c.

April 10. Image west of 51. Clamp west.
Image west of 42. Clamp east.

| Date. | Error of clock. | Hourly rate. | n | c |
|---------------------------|--------------------|-----------------|--------------|--------------|
| 1876. h. Apr. 10, 11.7 | s. — 26.81 | s. — 0.009 | s. + 0.28 | s. + 0.03 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. | | |
|-------------------------|--------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|----------|---------------|-------|--------|---------------------------------|-------------------------|------|-------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | | |
| | | | m. | s. | m. | s. | m. | s. | m. | s. | m. | s. | m. | s. | m. | s. | h. m. | s. | | |
| 1876. Apr. 10 Y. | Weisse 963 . . . | 1 | 46.7 | 48.2 | 50.7 | . . | . . | . . | . . | . . | 20.7 | 23.5 | 25.4 | 58 5.87 | + | 0.04 | 26.81 | 11 57 39.10 | — | 2.05 |
| | Weisse 966 . . . | 2 | . . | . . | . . | 9.6 | 11.1 | 12.9 | 14.4 | 16.3 | . . | . . | . . | 58 12.86 | + | 0.06 | 26.81 | 11 57 46.11 | | 2.05 |
| | Lacaille 5065 . . | 3 | 2.8 | 4.7 | 7.8 | 23.0 | 24.7 | 27.0 | 28.9 | 31.0 | 46.3 | 49.7 | 50.5 | 7 26.95 | — | 0.18 | 26.81 | 12 6 59.96 | | 1.85 |
| | Weisse (2) 199 . . | 4 | 22.7 | 24.5 | 27.2 | 41.3 | 42.9 | 45.0 | 46.7 | 48.6 | 2.2 | 5.0 | 6.8 | 11 44.81 | + | 0.20 | 26.81 | 12 11 18.20 | | 2.56 |
| | Lacaille 5144 . . | 5 | 56.4 | 58.2 | 1.0 | 14.3 | 15.9 | 17.7 | 19.6 | 21.2 | 34.6 | 37.5 | 39.4 | 19 17.80 | — | 0.11 | 26.82 | 12 18 50.87 | | 1.88 |
| | *—37° 18' . . . | 6 | 23.2 | 25.1 | 28.2 | 43.2 | 45.0 | 47.1 | 49.0 | 51.0 | 6.1 | 9.1 | 11.2 | 22 47.11 | | 0.18 | 26.82 | 12 22 20.11 | | 1.90 |
| | O. Arg. S. 12254 . | 7 | 26.3 | 28.0 | 30.6 | . . | . . | . . | . . | . . | 2.9 | 6.1 | 8.1 | 28 47.00 | — | 0.09 | 26.82 | 12 28 20.09 | | 1.91 |
| | Weisse 498 . . . | 8 | 19.9 | 21.4 | 23.8 | 36.0 | 37.5 | 38.9 | 40.7 | 42.4 | 54.2 | 56.7 | 58.3 | 31 39.07 | + | 0.02 | 26.82 | 12 31 12.27 | | 2.04 |
| | Lacaille 5239 . . | 9 | 23.9 | 25.7 | 28.2 | 41.8 | 43.6 | 45.4 | 47.3 | 49.0 | 2.4 | 4.9 | 6.9 | 34 45.37 | — | 0.11 | 26.82 | 12 34 18.44 | | 1.92 |
| | Weisse 743 . . . | 10 | 7.5 | 9.0 | 11.7 | 24.1 | 25.6 | 27.3 | 28.8 | 30.5 | 42.7 | 45.3 | 46.9 | 45 27.22 | | 0.03 | 26.82 | 12 45 0.37 | | 1.99 |
| | *—27° 15' . . . | 11 | 43.3 | 44.8 | 47.8 | 0.9 | 2.5 | 4.6 | 6.7 | 8.2 | 21.6 | 24.5 | 26.3 | 48 4.65 | — | 0.11 | 26.82 | 12 47 37.72 | | 1.96 |
| 15 | *+69° 23' . . . | 12 | . . | . . | . . | 56.6 | 1.2 | 6.3 | 11.0 | 14.9 | . . | . . | . . | 54 6.00 | + | 0.86 | 26.82 | 12 53 40.04 | | 5.80 |
| | Groombridge 1947 | 13 | . . | . . | . . | 44.2 | 48.5 | 53.1 | 57.5 | 2.5 | . . | . . | . . | 54 53.16 | | 0.86 | 26.82 | 12 54 27.20 | | 5.82 |
| | θ Virginis . . . | 14 | 11.5 | 13.0 | 15.5 | 57.5 | 59.0 | 0.7 | 2.4 | 3.9 | 15.9 | 18.3 | 20.1 | 4 0.71 | | 0.01 | 26.82 | 13 3 33.90 | | 2.06 |
| | B. A. C. 4131 . . | 15 | 48.3 | 49.9 | 52.4 | 4.2 | 5.6 | 7.5 | 8.2 | 10.9 | 22.7 | 25.2 | 26.8 | 8 7.43 | + | 0.04 | 26.82 | 13 7 40.65 | — | 2.12 |
| | Polaris, S. P. . | 16 | . . | . . | . . | 32.0 | 38.0 | 48.0 | 59.0 | 3.0 | . . | . . | . . | 12 48.00 | — | 13.45 | 26.82 | | 1 | 73.38 |
| | α Virginis . . . | 17 | 49.3 | 50.7 | 53.4 | 5.4 | 6.9 | 8.7 | 10.4 | 12.0 | 24.2 | 26.5 | 28.2 | 19 8.70 | — | 0.02 | 28.82 | 13 18 41.86 | — | 2.05 |
| | 16 Comæ . . . | 18 | 6.8 | 8.3 | 11.0 | 24.4 | 26.4 | 28.3 | 30.2 | 31.8 | 45.1 | 48.1 | 50.0 | 21 28.22 | + | 0.07 | 38.63 | 12 29 49.66 | | 2.51 |
| | Lacaille 5239 . . | 19 | 35.9 | 37.4 | 40.6 | 53.6 | 55.4 | 57.2 | 59.0 | 0.6 | 14.1 | 16.7 | 18.8 | 34 57.15 | | 0.00 | 38.65 | 12 34 18.50 | | 1.94 |
| | *—26° 52' . . . | 20 | . . | . . | . . | 55.5 | 56.9 | 59.0 | 0.9 | 2.7 | 15.8 | 19.0 | 20.9 | 42 6.34 | — | 7.26 | 38.65 | 12 41 20.43 | | 1.96 |
| | B. A. C. 4297 . . | 21 | . . | . . | . . | 17.5 | 50.4 | 51.9 | 4.3 | 7.3 | 9.1 | 10.9 | 12.9 | 43 1.79 | — | 31.21 | 38.65 | 12 41 51.93 | | 1.96 |
| | Weisse 743 . . . | 22 | 19.5 | 20.9 | 23.5 | 35.7 | 37.4 | 39.1 | 40.8 | 42.3 | 54.5 | 57.0 | 58.9 | 45 39.05 | + | 0.02 | 38.66 | 12 45 0.41 | | 2.00 |
| 19 | B. A. C. 4345 . . | 23 | 5.1 | 7.7 | 9.7 | 11.7 | 15.0 | . . | 32.4 | 35.7 | 37.9 | 40.1 | 42.7 | 50 53.80 | | 0.00 | 38.67 | 12 50 15.13 | | 2.89 |
| | α Canum Venat. . | 24 | 30.4 | 32.3 | 35.6 | 50.8 | 52.7 | 54.9 | 57.0 | 58.9 | 14.2 | 17.6 | 19.7 | 50 54.92 | + | 0.09 | 38.67 | 12 50 16.34 | | 2.88 |
| | *+69° 23' . . . | 25 | . . | . . | . . | 1.1 | 8.7 | 13.2 | 43.5 | 51.5 | 56.1 | 0.6 | 6.4 | 55 37.64 | — | 78.86 | 38.67 | 12 53 40.11 | | 5.77 |
| | θ Virginis . . . | 26 | 53.5 | 55.0 | 57.3 | 9.5 | 10.9 | 12.5 | 14.3 | 15.8 | 27.8 | 30.2 | 32.0 | 4 12.62 | + | 0.03 | 38.69 | 13 3 33.96 | | 2.09 |
| | B. A. C. 4431 . . | 27 | 0.1 | 1.6 | 4.0 | 16.2 | 17.6 | 19.4 | 21.0 | 22.5 | 34.4 | 36.7 | 38.6 | 8 19.28 | + | 0.03 | 38.69 | 13 7 40.62 | — | 2.15 |
| | Polaris, S. P. . | 28 | . . | . . | . . | 38.0 | 41.0 | 51.0 | 1.0 | 7.0 | . . | . . | . . | 12 51.60 | — | 4.09 | 38.70 | | + | 72.32 |
| | α Virginis . . . | 29 | 1.0 | 2.5 | 5.2 | 17.3 | 18.9 | 20.6 | 22.3 | 23.8 | 35.8 | 38.5 | 40.3 | 19 20.56 | + | 0.02 | 38.71 | 13 18 41.87 | — | 2.08 |
| | Weisse 370 . . . | 30 | 31.5 | 33.0 | 35.3 | 47.5 | 49.2 | 50.8 | 52.5 | 54.0 | 6.0 | 8.4 | 10.3 | 24 50.77 | | 0.04 | 38.72 | 13 24 12.09 | | 2.22 |
| | μ Virginis . . . | 31 | 27.6 | 29.2 | 31.9 | 43.7 | 45.4 | 47.1 | 48.8 | 50.4 | 2.4 | 4.9 | 6.6 | 35 47.09 | | 0.02 | 38.74 | 13 35 8.37 | | 2.10 |
| | B. A. C. 4632 . . | 32 | 37.2 | 39.0 | 42.1 | 56.8 | 58.5 | 0.7 | 2.6 | 4.6 | 19.2 | 22.2 | 24.0 | 47 0.63 | | 0.08 | 38.75 | 13 46 21.96 | | 2.71 |
| | B. A. C. 4652 . . | 33 | 59.0 | 0.6 | 3.7 | 17.7 | 19.6 | 21.7 | 23.7 | 25.5 | 39.6 | 42.6 | 44.5 | 51 21.65 | | 0.07 | 38.76 | 13 50 42.96 | | 2.64 |
| α Bootis . . . | 34 | 21.0 | 22.6 | 25.4 | 38.0 | 39.7 | 41.4 | 43.2 | 44.8 | 57.4 | 0.0 | 1.8 | 10 41.39 | | 0.05 | 38.79 | 14 10 2.65 | | 2.32 | |
| ε Hydrae . . . | 35 | 19.1 | 20.6 | 33.1 | 35.2 | 36.7 | 38.6 | 40.2 | 41.7 | 53.6 | 56.2 | 57.8 | 40 38.44 | | 0.04 | 24.73 | 8 40 13.75 | | 1.16 | |
| 19 | 60 Cancri . . . | 36 | 15.5 | 17.1 | 19.6 | 31.8 | 33.3 | 35.1 | 36.9 | 38.5 | 50.7 | 53.2 | 54.9 | 49 35.15 | + | 0.05 | 24.73 | 8 49 10.47 | | 1.29 |
| | B. A. C. 3070 . . | 37 | 3.7 | 5.6 | 8.4 | 21.9 | 23.6 | 25.6 | 27.4 | 29.1 | 42.9 | 45.6 | 47.4 | 54 25.56 | — | 0.02 | 24.73 | 8 54 0.81 | | 0.80 |
| | B. A. C. 3104 . . | 38 | 34.8 | 36.5 | 38.9 | 51.4 | 52.9 | 54.7 | 56.4 | 57.9 | 10.3 | 13.0 | 14.7 | 59 54.68 | + | 0.06 | 24.72 | 8 59 30.02 | | 1.40 |
| | B. A. C. 3107 . . | 39 | . . | . . | . . | 34.3 | 37.0 | 38.7 | 50.2 | 52.8 | 54.5 | 56.1 | 58.2 | 0 47.72 | — | 28.87 | 24.72 | 8 59 54.13 | | 1.40 |
| | ε Ursæ Majoris . | 40 | 9.0 | 11.5 | 16.0 | 36.7 | 39.1 | 42.1 | 44.9 | 47.4 | 8.2 | 12.0 | 15.2 | 7 42.01 | + | 0.21 | 24.72 | 9 7 17.50 | | 2.48 |
| | α Lyncis . . . | 41 | 32.7 | 34.7 | 37.6 | 51.9 | 54.0 | 56.0 | 58.1 | 0.0 | 14.5 | 17.4 | 19.5 | 13 56.04 | + | 0.11 | 24.72 | 9 13 31.43 | | 1.85 |
| | *—34° 45' . . . | 42 | 7.5 | 9.4 | 12.3 | 27.0 | 29.0 | 31.0 | 33.0 | 34.6 | 49.3 | 52.4 | 54.3 | 16 30.89 | — | 0.04 | 24.72 | 9 16 6.13 | | 0.85 |
| | α Hydrae . . . | 43 | 36.2 | 37.7 | 40.2 | 52.2 | 54.0 | 55.5 | 57.2 | 58.7 | 10.9 | 13.3 | 15.0 | 21 55.54 | + | 0.02 | 24.72 | 9 21 30.84 | | 1.20 |
| | B. A. C. 3255 . . | 44 | 6.7 | 8.6 | 11.2 | 25.0 | 26.8 | 28.6 | 30.5 | 32.3 | 45.9 | 48.8 | 50.7 | 26 28.65 | + | 0.09 | 24.72 | 9 26 4.02 | | 1.80 |
| | O. Arg. S. 9586 . | 45 | . . | . . | . . | 3.9 | 5.5 | 7.6 | 9.4 | 11.3 | 25.4 | 28.3 | 30.1 | 29 15.19 | — | 7.62 | 24.72 | 9 28 42.85 | | 0.97 |
| | B. A. C. 3314 . . | 46 | 32.0 | 33.8 | 36.5 | 50.6 | 52.3 | 54.3 | 56.2 | 57.8 | 11.7 | 14.8 | 16.6 | 35 54.24 | + | 0.10 | 24.71 | 9 35 29.63 | | 1.89 |
| *—37° 8' . . . | 47 | . . | . . | . . | 40.0 | 41.6 | 43.7 | 45.9 | 47.8 | 2.9 | 6.0 | 7.8 | 42 51.96 | — | 8.17 | 24.71 | 9 42 19.18 | | 0.98 | |
| B. A. C. 3385 . . | 48 | 29.3 | 31.1 | 33.7 | 47.3 | 49.0 | 50.9 | 52.8 | 54.6 | 7.8 | 10.5 | 12.6 | 47 50.87 | | 0.02 | 24.71 | 9 47 26.14 | | 1.13 | |
| Lacaille 4076 . . | 49 | 22.6 | 24.2 | 26.9 | 40.4 | 42.2 | 44.0 | 46.0 | 47.6 | 0.9 | 3.7 | 5.4 | 51 43.99 | | 0.02 | 24.71 | 9 51 19.26 | | 1.15 | |
| *—38° 49' . . . | 50 | 53.6 | 55.6 | 58.5 | 13.7 | 15.7 | 17.9 | 20.0 | 21.8 | 37.4 | 40.7 | 42.7 | 58 17.96 | — | 0.05 | 24.71 | 9 57 53.20 | — | 1.06 | |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|---------------|-----------------|--------------|--------|--------|
| 1876. h. | s. | s. | s. | s. |
| Apr. 15, 13.3 | — 38.71 | — 0.091 | + 0.06 | + 0.03 |
| 19, 11.1 | — 24.69 | + 0.016 | + 0.11 | + 0.03 |

April 15. Before observing I noticed that the clock had stopped.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction. to 1876.0. | | |
|-------------------------|---------------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|---------------|-------|---------------------------------|--------------------------|-------------|---------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | |
| 1876. Apr. 19 Y. | γ^1 Leonis | 1 | 14.2 | 16.0 | 18.5 | 31.3 | 32.8 | 34.6 | 36.1 | 38.0 | 50.8 | 53.4 | 55.0 | m. s. | m. s. | s. | h. m. s. | s. | |
| | Weisse 247 | 2 | .. | .. | .. | 25.7 | 27.3 | 28.9 | 30.6 | 32.2 | 44.0 | 46.5 | 48.1 | 13 34.61 | + | 0.07 | -24.70 | 10 13 9.98 | - 1.89 |
| | *-35° 32' | 3 | 44.3 | 46.2 | 49.2 | 3.9 | 5.7 | 7.8 | 9.6 | 11.5 | 26.2 | 29.6 | 31.4 | 23 7.78 | - | 0.04 | 24.70 | 10 16 4.26 | 1.61 |
| | *+ 4° 54' | 4 | 31.2 | 32.7 | 35.1 | 47.0 | 48.6 | 50.5 | 52.1 | 53.9 | 5.5 | 7.8 | 9.7 | 27 50.37 | + | 0.04 | 24.70 | 10 22 43.04 | 1.25 |
| | Weisse 608 | 5 | 22.4 | 23.8 | 26.4 | 38.8 | 40.3 | 41.8 | 43.8 | 45.5 | 57.8 | 0.2 | 1.9 | 35 42.06 | + | 0.06 | 24.70 | 10 27 25.71 | 1.70 |
| | | | | | | | | | | | | | | | | | 10 35 17.42 | 1.88 | |
| | λ Leonis | 6 | 57.9 | 59.5 | 2.0 | 14.4 | 15.9 | 17.7 | 19.6 | 21.0 | 33.5 | 35.8 | 37.6 | 40 17.72 | | 0.06 | -24.70 | 10 39 53.08 | 1.91 |
| | Weisse 859 | 7 | 21.6 | 23.2 | 25.7 | 37.5 | 39.2 | 40.9 | 42.5 | 43.9 | 55.9 | 58.3 | 59.8 | 48 40.77 | | 0.03 | 24.69 | 10 48 16.11 | 1.72 |
| | Weisse 957 | 8 | 20.8 | 22.5 | 24.9 | 36.9 | 38.5 | 40.1 | 41.8 | 43.3 | 55.2 | 57.8 | 59.5 | 54 40.12 | + | 0.04 | 29.69 | 10 54 15.47 | 1.81 |
| | B. A. C. 3792 | 9 | 5.7 | 7.6 | 10.5 | 25.3 | 27.2 | 29.3 | 31.3 | 33.0 | 47.5 | 50.7 | 52.8 | 59 29.17 | - | 0.04 | 24.69 | 10 59 4.44 | 1.46 |
| | B. A. C. 3821 | 10 | 50.6 | 54.9 | 1.3 | 34.9 | 39.0 | 43.8 | 48.2 | 52.1 | 25.7 | 33.0 | 37.5 | 4 43.73 | + | 0.37 | 24.69 | 11 4 19.41 | 5.20 |
| | Weisse 137 | 11 | 22.4 | 24.0 | 26.4 | .. | .. | .. | .. | .. | 56.6 | 59.0 | 0.6 | 10 41.50 | + | 0.02 | 24.69 | 11 10 16.82 | 1.78 |
| | δ Crateris | 12 | 15.2 | 16.7 | 19.1 | 31.5 | 33.1 | 34.9 | 36.6 | 38.2 | 50.6 | 53.0 | 54.7 | 13 34.87 | | 0.00 | 24.69 | 11 13 10.18 | 1.68 |
| | Weisse (2) 266 | 13 | .. | .. | .. | 21.4 | 23.2 | 25.5 | 27.5 | 29.5 | 43.9 | 47.2 | 49.2 | 16 33.42 | - | 8.01 | 24.69 | 11 16 0.72 | 2.55 |
| | B. A. C. 3903 | 14 | 50.2 | 51.6 | 54.0 | 6.2 | 7.6 | 9.6 | 11.0 | 12.5 | 24.5 | 27.0 | 28.5 | 22 9.34 | + | 0.03 | 24.69 | 11 21 44.68 | 1.86 |
| | B. A. C. 3927 | 15 | 47.8 | 49.5 | 52.8 | 8.6 | 11.4 | 12.5 | 14.7 | 16.8 | 32.3 | 35.4 | 37.4 | 27 12.65 | - | 0.05 | 24.69 | 11 26 47.91 | 1.61 |
| | ζ Crateris | 16 | 35.2 | 36.6 | 39.3 | 51.8 | 53.4 | 55.3 | 57.0 | 58.6 | 11.0 | 13.6 | 15.4 | 38 55.20 | | 0.00 | 24.68 | 11 38 30.52 | 1.76 |
| | β Leonis | 17 | 51.0 | 52.7 | 55.0 | 7.5 | 9.0 | 10.9 | 12.5 | 14.1 | 26.3 | 28.9 | 30.5 | 43 10.76 | + | 0.06 | 24.68 | 11 42 46.14 | 2.14 |
| | *-37° 37' | 18 | 34.7 | 36.6 | 39.8 | 54.7 | 56.8 | 59.0 | 1.0 | 2.8 | 17.8 | 21.2 | 23.3 | 46 58.88 | - | 0.05 | 24.68 | 11 46 34.15 | 1.72 |
| | Weisse (2) 954 | 19 | 57.2 | 59.6 | 2.0 | 16.7 | 18.9 | 20.8 | 22.7 | 24.7 | 39.3 | 42.6 | 44.6 | 50 20.77 | + | 0.12 | 24.68 | 11 49 56.21 | 2.68 |
| | γ Draconis (H) | 20 | .. | .. | .. | 39.4 | 46.5 | 55.0 | 3.0 | 10.6 | .. | .. | .. | 6 54.90 | + | 0.73 | 24.67 | 12 6 30.96 | 9.30 |
| | Weisse 144 | 21 | 14.6 | 16.0 | 18.5 | 30.3 | 31.9 | 33.8 | 35.4 | 36.9 | 48.8 | 51.5 | 53.2 | 11 33.72 | + | 0.04 | 24.67 | 12 11 9.09 | 2.11 |
| | Lacaille 5144 | 22 | 54.1 | 55.8 | 58.6 | 11.8 | 13.7 | 15.5 | 17.5 | 19.1 | 32.4 | 35.3 | 37.2 | 19 15.55 | - | 0.02 | 24.67 | 12 18 50.86 | 1.88 |
| | γ Draconis | 23 | 14.4 | 18.5 | 26.1 | 0.6 | 5.5 | 10.2 | 15.0 | 19.3 | 54.3 | 1.4 | 6.1 | 25 10.13 | + | 0.39 | 24.67 | 12 24 45.85 | 5.83 |
| | Lacaille 5239 | 24 | 21.7 | 23.5 | 26.2 | 39.5 | 41.2 | 43.2 | 45.0 | 46.7 | 0.1 | 3.0 | 4.7 | 34 43.16 | - | 0.02 | 24.67 | 12 34 18.47 | 1.94 |
| | *-26° 52' | 25 | 23.3 | 24.9 | 27.8 | 40.9 | 42.6 | 44.6 | 46.6 | 48.4 | 1.6 | 4.6 | 6.3 | 41 44.69 | | 0.02 | 24.66 | 12 41 20.01 | 1.96 |
| | B. A. C. 4297 | 26 | .. | .. | .. | 12.6 | 14.4 | 16.4 | 18.4 | 19.8 | 33.3 | 36.0 | 38.0 | 42 23.61 | | 7.27 | 24.66 | 12 41 51.68 | 1.97 |
| | *-27° 15' | 27 | .. | .. | .. | 59.6 | 1.0 | 2.8 | 4.8 | 6.7 | .. | .. | .. | 48 2.98 | - | 0.01 | 24.66 | 12 47 38.31 | 1.95 |
| | Weisse 880 | 28 | 48.1 | 49.6 | 52.2 | 4.1 | 5.6 | 7.3 | 8.8 | 10.5 | 22.6 | 25.2 | 26.9 | 53 7.36 | + | 0.01 | 24.66 | 12 52 42.71 | 2.05 |
| | θ Virginis | 29 | 39.4 | 40.9 | 43.3 | 55.3 | 56.9 | 58.7 | 0.4 | 1.8 | 13.8 | 16.4 | 17.8 | 3 58.61 | + | 0.02 | 24.66 | 13 3 33.97 | - 2.11 |
| | Polaris, S. P. . . . | 30 | .. | .. | .. | 26.0 | 29.0 | 40.0 | 51.0 | 54.0 | .. | .. | .. | 12 40.00 | - | 5.97 | 24.66 | .. | + 71.76 |
| | α Virginis | 31 | 47.1 | 48.7 | 51.4 | 3.2 | 4.7 | 6.6 | 8.2 | 9.6 | 21.8 | 24.5 | 26.0 | 19 6.53 | + | 0.01 | 24.65 | 13 18 41.89 | - 2.10 |
| | B. A. C. 4506 | 32 | .. | .. | .. | 18.2 | 23.5 | 29.8 | 34.8 | 40.1 | .. | .. | .. | 23 29.28 | | 0.49 | 24.65 | 13 23 5.12 | 6.66 |
| 21 | κ Cancri | 33 | 8.2 | 9.7 | 12.2 | 24.5 | 26.0 | 27.8 | 29.4 | 31.0 | 43.1 | 45.7 | 47.3 | 1 27.72 | | 0.09 | 24.70 | 4 1 3.11 | 1.31 |
| | ϵ Ursæ Majoris | 34 | 8.9 | 11.6 | 15.9 | 36.4 | 39.1 | 42.0 | 44.8 | 47.4 | 7.7 | 12.3 | 14.9 | 7 41.91 | | 0.34 | 24.70 | 9 7 17.55 | 2.42 |
| | 38 Lyncis | 35 | 9.6 | 11.4 | 14.5 | 29.6 | 31.5 | 33.7 | 35.7 | 37.6 | 52.6 | 55.7 | 57.8 | 11 33.61 | | 0.20 | 24.70 | 9 11 9.11 | 1.86 |
| | 41 Lyncis | 36 | 4.1 | 6.7 | 9.2 | 11.4 | 15.1 | .. | 42.0 | 45.7 | 47.9 | 50.4 | 53.2 | 21 58.57 | | 0.15 | 24.70 | 9 21 34.02 | 2.19 |
| | *+46° 9' | 37 | 33.4 | 35.5 | 39.0 | 56.3 | 58.5 | 1.0 | 3.4 | 5.4 | 22.6 | 26.3 | 28.6 | 21 0.91 | + | 0.26 | 24.70 | 9 20 36.47 | 2.20 |
| | ψ Argus | 38 | 49.6 | 51.8 | 55.0 | 10.5 | 12.5 | 14.7 | 16.8 | 18.9 | 34.4 | 37.7 | 39.9 | 26 14.71 | - | 0.08 | 24.70 | 9 25 49.93 | 0.80 |
| | B. A. C. 3275 | 39 | 13.5 | 20.7 | 33.9 | 34.6 | 42.5 | 51.0 | 59.2 | 7.1 | 8.1 | 20.9 | 29.1 | 31 50.96 | + | 1.16 | 24.70 | 9 31 27.42 | 6.70 |
| | 28 Ursæ Majoris | 40 | .. | .. | .. | 41.9 | 45.3 | 49.0 | 52.9 | 56.5 | .. | .. | .. | 36 49.12 | | 0.51 | 24.70 | 9 36 24.93 | 3.46 |
| | *-10° 57' | 41 | 53.2 | 54.9 | 57.0 | 9.4 | 11.0 | 12.7 | 14.1 | 15.9 | .. | .. | .. | 42 6.06 | | 6.62 | 24.70 | 9 41 47.98 | 1.25 |
| | B. A. C. 3376 | 42 | 36.9 | 42.2 | 50.8 | 32.6 | 38.2 | 44.0 | 49.8 | 54.9 | 37.0 | 45.8 | 51.6 | 47 43.98 | | 0.78 | 24.71 | 9 47 20.05 | 5.14 |
| | α Leonis | 43 | 52.7 | 54.4 | 56.7 | 9.0 | 10.6 | 12.4 | 14.0 | 15.6 | 27.7 | 30.3 | 32.0 | 2 12.31 | | 0.09 | 24.71 | 10 1 47.69 | 1.67 |
| | Weisse 38 | 44 | 48.1 | 49.7 | 52.3 | 4.4 | 5.9 | 7.5 | 9.1 | 10.7 | 22.7 | 25.4 | 26.9 | 5 7.52 | | 0.07 | 24.71 | 10 4 42.88 | 1.60 |
| | Weisse 209 | 45 | 57.4 | 59.0 | 1.4 | 13.6 | 15.2 | 17.0 | 18.6 | 20.1 | 32.3 | 35.0 | 36.5 | 14 16.92 | | 0.09 | 24.71 | 10 13 52.30 | 1.72 |
| | B. A. C. 3566 | 46 | 11.7 | 13.1 | 15.7 | 27.6 | 29.2 | 30.9 | 32.5 | 34.1 | 46.0 | 48.6 | 50.3 | 20 30.88 | | 0.03 | 24.71 | 10 20 6.20 | 1.51 |
| | B. A. C. 3629 | 47 | .. | .. | .. | 19.5 | 30.4 | 40.9 | 51.6 | 1.0 | .. | .. | .. | 31 40.68 | | 1.53 | 24.71 | 10 31 17.50 | 10.13 |
| | *+4° 59' | 48 | 6.2 | 7.7 | 10.2 | 22.0 | 23.7 | 25.2 | 26.9 | 28.5 | 40.4 | 43.0 | 44.6 | 37 25.31 | | 0.07 | 24.71 | 10 37 0.67 | 1.72 |
| | Weisse (2) 818 | 49 | 23.5 | 25.3 | 28.6 | .. | .. | .. | .. | .. | 6.9 | 10.3 | 12.4 | 41 47.83 | + | 0.27 | -24.71 | 10 41 23.39 | - 2.45 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|---------------------------|--------------------|-----------------|--------------|--------------|
| 1876. h. Apr. 21, 11.6 | s. - 24.72 | s. - 0.008 | s. + 0.18 | s. + 0.05 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. | | |
|-------------------------|-----------------------------|---------|--------------------------------|-----------|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|-------|-------|---------------------------------|-------------------------|--------|-------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | | Clock. | |
| | | | | | | | | | | | | | | | m. | s. | | | | s. |
| 1876. Apr. 21 Y. | B. A. C. 3747 . . . | 1 | 54.5 | 2.4 | 14.7 | 13.6 | 21.5 | 20.9 | 38.1 | 45.5 | 44.7 | 57.1 | 5.7 | 50 29.79 | + | 1.13 | -24.71 | 10 50 6.21 | - | 8.38 |
| | ρ^2 Leonis | 2 | 23.0 | 24.7 | 27.0 | 39.0 | 40.4 | 42.3 | 43.9 | 45.5 | 57.4 | 59.9 | 1.5 | 57 42 23 | | 0.05 | 24.71 | 10 57 17.57 | | 1.76 |
| | δ Leonis | 3 | 36.8 | 38.4 | 41.2 | 53.8 | 55.6 | 57.4 | 59.0 | 0.8 | 13.5 | 16.2 | 18.0 | 7 57.34 | | 0.12 | 24.72 | 11 7 32.74 | | 2.13 |
| | β Leonis | 4 | 51.0 | 52.6 | 55.0 | 7.5 | 9.0 | 10.8 | 12.5 | 14.1 | 26.4 | 29.0 | 30.7 | 43 10.78 | | 0.07 | 24.72 | 11 42 46.13 | | 2.13 |
| | *+36° 9' | 5 | 25.7 | 27.3 | 30.1 | 45.2 | 47.0 | 49.3 | 51.2 | 52.9 | 7.7 | 10.8 | 12.5 | 49 49.09 | | 0.20 | 24.72 | 11 49 24.57 | | 2.66 |
| | Weisse (2) 199 . . . | 6 | 20.7 | 22.3 | 25.2 | 39.0 | 40.8 | 42.8 | 44.6 | 46.4 | 0.0 | 3.0 | 4.8 | 11 42.69 | | 0.16 | 24.72 | 12 11 18.13 | | 2.53 |
| | Radcliffe 2857 . . . | 7 | | | 52.6 | 55.8 | 0.0 | 3.5 | 7.3 | | | | | 18 59.84 | | 0.51 | 24.73 | 12 18 35.62 | | 4.75 |
| | Radcliffe 2860 . . . | 8 | | | 39.9 | 43.4 | 47.4 | 51.4 | 55.0 | | | | | 19 47.42 | | 0.51 | 24.73 | 12 19 23.20 | | 4.75 |
| | γ Draconis | 9 | 14.0 | 18.0 | 25.5 | 59.9 | 4.5 | 9.5 | 14.5 | 18.6 | 53.2 | 0.7 | 5.6 | 25 9.45 | | 0.64 | 24.73 | 12 24 45.36 | | 5.80 |
| | Weisse 463 | 10 | 4.3 | 5.8 | 8.4 | 20.4 | 21.9 | 23.6 | 25.3 | 26.8 | 38.7 | 41.3 | 42.9 | 29 23.58 | + | 0.06 | 24.73 | 12 28 58.91 | | 2.10 |
| | O. Arg. S. 12333 . . | 11 | 43.8 | 45.5 | 48.1 | 1.7 | 3.5 | 5.3 | 7.2 | 9.0 | 22.4 | 25.1 | 27.0 | 35 5.33 | - | 0.04 | 24.73 | 12 34 40.56 | | 1.94 |
| | O. Arg. S. 12389 . . | 12 | | | 2.3 | 4.3 | 6.0 | 8.0 | 9.7 | 23.1 | 26.0 | 27.9 | | 39 13.41 | - | 7.37 | 24.73 | 12 38 41.31 | | 1.95 |
| | Weisse (2) 868 . . . | 13 | 33.7 | 35.5 | 38.4 | 51.7 | 53.3 | 55.3 | 57.2 | 58.9 | 12.3 | 15.0 | 16.9 | 43 55.29 | + | 0.15 | 24.73 | 12 43 30.71 | | 2.52 |
| | *-27° 15' | 14 | 10.9 | 42.7 | 45.1 | 58.7 | 0.4 | 2.3 | 4.3 | 5.8 | 19.4 | 22.5 | 24.4 | 48 2.41 | - | 0.04 | 24.73 | 12 47 37.64 | | 1.99 |
| | *+69° 23' | 15 | 9.7 | 13.9 | 20.7 | 54.6 | 59.0 | 3.6 | 8.4 | 12.7 | 46.5 | 53.7 | 55.4 | 54 3.75 | + | 0.62 | 24.73 | 12 53 39.64 | | 5.69 |
| | Lacaille 5382 | 16 | | | 2.8 | 4.5 | 6.2 | 8.0 | 10.0 | 23.5 | 26.3 | 28.1 | | 58 13.68 | - | 7.35 | 24.73 | 12 57 41.60 | | 2.02 |
| | O. Arg. S. 12687 . . | 17 | 45.7 | 47.2 | 49.8 | 2.9 | 4.7 | 6.3 | 8.0 | 9.8 | | | | 3 59.30 | + | 7.03 | 24.73 | 13 3 41.60 | | 2.04 |
| | Polaris, S. P. . . . | 18 | | | 30.0 | 34.0 | 44.0 | 55.0 | 0.0 | | | | | 12 44.60 | - | 9.94 | 24.73 | | + | 71.27 |
| | α Virginis | 19 | 17.1 | 48.8 | 51.0 | 3.3 | 5.0 | 6.7 | 8.5 | 9.8 | 21.9 | 24.6 | 26.2 | 19 6.63 | + | 0.02 | 24.73 | 13 18 41.92 | | 2.11 |
| | B. A. C. 4506 | 20 | 23.2 | 28.6 | 36.4 | | | | | | 20.7 | 28.9 | 34.7 | 23 28.75 | | 0.74 | 24.73 | 13 23 4.76 | | 6.64 |
| | Weisse 461 | 21 | 51.2 | 52.6 | 55.0 | 7.0 | 8.8 | 10.4 | 12.0 | 13.5 | 25.4 | 28.2 | 29.8 | 29 10.35 | + | 0.07 | 24.74 | 13 28 45.68 | | 2.24 |
| | Weisse 472 | 22 | | | 43.9 | 46.3 | 47.9 | 59.0 | 1.4 | 2.0 | 4.8 | 6.8 | | 29 56.51 | + | 28.00 | 24.74 | 13 29 3.77 | | 2.24 |
| | Weisse 626 | 23 | 43.1 | 44.6 | 47.2 | 59.3 | 0.8 | 2.5 | 4.2 | 5.6 | 17.9 | 20.6 | 22.2 | 38 2.55 | + | 0.01 | 24.74 | 13 37 37.82 | | 2.13 |
| | B. A. C. 4593 | 24 | 4.2 | 5.7 | 8.2 | 20.3 | 21.7 | 23.5 | 25.0 | 26.6 | 38.6 | 41.2 | 42.8 | 41 23.44 | | 0.03 | 24.74 | 13 40 58.73 | | 2.16 |
| | B. A. C. 4632 | 25 | 22.9 | 24.7 | 27.9 | 42.3 | 44.4 | 46.5 | 48.3 | 50.1 | 4.8 | 7.8 | 9.8 | 46 46.32 | | 0.19 | 24.74 | 13 46 21.77 | | 2.75 |
| | B. A. C. 4652 | 26 | 44.6 | 46.7 | 49.5 | 3.5 | 5.4 | 7.6 | 9.5 | 11.2 | 25.4 | 28.4 | 30.4 | 51 7.47 | | 0.18 | 24.74 | 13 50 42.91 | | 2.68 |
| | Weisse (2) 1167 . . . | 27 | 1.4 | 2.8 | 5.6 | 18.6 | 20.3 | 22.2 | 23.9 | 25.6 | 38.6 | 41.4 | 43.1 | 54 22.14 | | 0.13 | 24.74 | 13 53 57.53 | | 2.48 |
| | B. A. C. 4680 | 28 | 55.0 | 56.5 | 59.1 | 11.0 | 12.6 | 14.3 | 16.1 | 17.6 | 29.5 | 32.2 | 33.8 | 58 14.34 | + | 0.02 | 24.74 | 13 57 49.62 | | 2.17 |
| | Weisse (2) 1314 . . . | 29 | | | 56.7 | 58.3 | 0.7 | 2.8 | 4.7 | 19.0 | 22.2 | 24.2 | | 1 8.57 | - | 7.71 | 24.74 | 14 0 36.12 | | 2.73 |
| | Lalande 26054 . . . | 30 | 30.3 | 31.7 | 34.2 | 46.9 | 48.4 | 50.2 | 51.7 | 53.4 | 5.8 | 8.5 | 10.3 | 8 50.13 | | 0.00 | 24.74 | 14 8 25.39 | | 2.17 |
| | α Bootis | 31 | | | 23.8 | 25.7 | 27.3 | 29.1 | 30.7 | 32.4 | 46.0 | 47.8 | | 10 34.22 | - | 6.77 | 24.74 | 14 10 2.71 | | 2.38 |
| | γ Hydrae | 32 | 35.9 | 37.4 | 39.9 | 51.9 | 53.6 | 55.4 | 57.0 | 58.4 | 10.4 | 13.1 | 14.7 | 21 55.25 | + | 0.04 | 24.51 | 9 21 30.78 | | 1.11 |
| | Lacaille 3928 | 33 | 30.2 | 31.8 | 34.5 | 47.6 | 49.4 | 51.2 | 53.0 | 54.6 | 7.8 | 10.5 | 12.4 | 31 51.18 | - | 0.04 | 24.51 | 9 31 26.63 | | 0.95 |
| | ψ Leonis | 34 | 4 7 6.3 | 8.9 | 21.2 | 22.8 | 24.6 | 26.3 | 27.8 | 40.0 | 42.7 | 44.4 | | 37 24.52 | + | 0.14 | 24.51 | 9 37 0.15 | | 1.50 |
| | *+12° 9' | 35 | 52.1 | 53.8 | 56.2 | 8.4 | 10.0 | 11.7 | 13.4 | 15.0 | 27.1 | 29.8 | 31.6 | 41 11.74 | + | 0.13 | 24.51 | 9 40 47.36 | | 1.49 |
| | Lacaille 4046 | 36 | 40.4 | 42.4 | 44.8 | 59.0 | 0.6 | 2.6 | 4.5 | 6.6 | 20.2 | 23.2 | 25.2 | 46 2.68 | - | 0.07 | 24.51 | 9 45 38.10 | | 0.96 |
| | 19 Leonis Minoris . . | 37 | 5.8 | 7.8 | 11.0 | 26.7 | 29.0 | 31.4 | 33.6 | 35.5 | 51.4 | 55.2 | 56.9 | 50 31.30 | + | 0.32 | 24.50 | 9 50 7.12 | | 2.17 |
| | *-38° 49' | 38 | 53.0 | 54.8 | 58.0 | 13.4 | 15.2 | 17.7 | 20.6 | 22.6 | | | | 58 9.41 | + | 8.20 | 24.50 | 9 57 53.11 | | 0.93 |
| | Weisse (2) 1316 . . . | 39 | 34.6 | 36.2 | 38.8 | 51.5 | 53.2 | 55.0 | 56.8 | 58.6 | 11.1 | 13.9 | 15.7 | 2 55.04 | - | 0.17 | 24.50 | 10 2 30.71 | | 1.75 |
| | Lacaille 4192 | 40 | 20.8 | 22.5 | 25.4 | 39.7 | 41.3 | 43.2 | 45.2 | 47.1 | 0.9 | 4.0 | 6.2 | 7 43.30 | - | 0.07 | 24.50 | 10 7 18.73 | | 1.08 |
| | *-3° 27' | 41 | 3.4 | 4.8 | 7.1 | 19.4 | 20.8 | 22.5 | 24.0 | 25.5 | 37.6 | 40.1 | 41.7 | 13 22.45 | + | 0.05 | 24.50 | 10 12 58.00 | | 1.44 |
| | *+2° 6' | 42 | 9.5 | 11.0 | 13.3 | 25.4 | 26.9 | 28.7 | 30.3 | 31.8 | 43.6 | 46.3 | 47.9 | 16 28.61 | + | 0.08 | 24.50 | 10 16 4.19 | | 1.53 |
| | Runkel 3211 | 43 | 57.6 | 58.9 | 1.5 | 13.8 | 15.3 | 17.1 | 18.6 | 20.2 | 32.5 | 35.0 | 36.8 | 24 17.03 | | 0.13 | 24.49 | 10 23 52.67 | | 1.72 |
| | *+4° 52' | 44 | 30.9 | 32.2 | 34.6 | 46.7 | 48.3 | 49.9 | 51.6 | 53.2 | 5.0 | 7.6 | 9.1 | 27 49.92 | + | 0.09 | 24.49 | 10 27 25.52 | | 1.63 |
| | Weisse 526 | 45 | 38.9 | 40.2 | 42.7 | | | | | | 13.3 | 15.9 | 17.6 | 30 58.10 | - | 0.02 | 24.49 | 10 30 33.63 | | 1.47 |
| | δ Leonis | 46 | | | 32.8 | 35.5 | 37.3 | 38.6 | 51.3 | 52.8 | 54.5 | 56.5 | | 40 46.16 | | 28.68 | 24.49 | 10 39 52.99 | | 1.84 |
| | *-29° 40' | 47 | | | 26.2 | 27.7 | 29.3 | 30.9 | 32.7 | | | | | 47 29.36 | | 0.05 | 24.48 | 10 47 4.83 | | 1.35 |
| | O. Arg. S. 10974 . . . | 48 | 1.9 | 3.6 | 6.3 | 20.1 | 22.0 | 23.8 | 25.6 | 27.4 | 41.2 | 44.0 | 46.1 | 49 23.82 | | 0.06 | 24.48 | 10 48 59.28 | | 1.36 |
| | *+12° 25' | 49 | | | 35.1 | 36.7 | 38.5 | 40.0 | 41.6 | 53.9 | 56.4 | 58.2 | | 53 45.05 | - | 6.50 | 24.48 | 10 53 14.07 | | 1.86 |
| | B. A. C. 3781 | 50 | 24.6 | 26.6 | 29.9 | 45.4 | 47.3 | 49.4 | 51.6 | 53.7 | 9.0 | 12.4 | 14.4 | 57 49.48 | + | 0.30 | -24.48 | 10 57 25.30 | - | 2.51 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | δ | ϵ |
|------------------------------|--------------------|-----------------|----------|------------|
| 1876. h. s. Apr. 26, 12.3 | - 24.45 | + 0.022 | + 0.25 | + 0.07 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | |
|-------------------------|------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|-------|---------|------------------|-------|---------------------------------|-------------------------|------------------------|--------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | |
| 1876. Apr. 26 Y. | Weisse 1075 . . . | 1 | 51.3 | 52.9 | 55.4 | 7.5 | 9.1 | 10.7 | 12.4 | 14.0 | 26.2 | 28.7 | 30.3 | m. s. 1 10.77 | + | m. s. 0.12 | s. -24.48 | h. m. s. 11 0 46.41 | s. - 1.87 |
| δ | Weisse 133 . . . | 2 | 59.3 | 0.7 | 3.2 | 15.0 | 16.6 | 18.4 | 20.0 | 21.5 | 33.5 | 36.0 | 37.6 | 10 18.35 | + | 0.06 | 24.48 | 11 9 53.93 | 1.73 |
| | Crateris . . . | 3 | 14.8 | 16.5 | 18.9 | 31.4 | 32.8 | 34.6 | 36.4 | 37.9 | 50.2 | 52.8 | 54.5 | 13 34.62 | + | 0.01 | 24.47 | 11 13 10.16 | 1.62 |
| | Lacaille 4746 . . . | 4 | 13.9 | 15.5 | 18.1 | 3.7 | 5.2 | 7.2 | 8.8 | 10.8 | 20.3 | 22.1 | 24.2 | 20 59.15 | + | 8.06 | 24.47 | 11 20 42.74 | 1.51 |
| | *+36° 57' . . . | 5 | 36.2 | 38.1 | 41.2 | 56.1 | 57.9 | 0.1 | 2.2 | 4.2 | 19.0 | 22.1 | 24.2 | 25 0.12 | + | 0.28 | 24.47 | 11 24 35.93 | 2.55 |
| | Lalande 21902. . . | 6 | 37.5 | 39.4 | 42.5 | 57.5 | 59.5 | 1.5 | 3.6 | 5.3 | 20.5 | 23.6 | 25.5 | 26 1.49 | + | 0.28 | 24.47 | 11 25 37.30 | 2.56 |
| 67 | O. Arg. S. 11656 . . . | 7 | 10.0 | 11.5 | 14.2 | 27.5 | 28.9 | 31.1 | 32.9 | 34.5 | 47.7 | 50.4 | 52.3 | 41 31.00 | + | 0.04 | 24.46 | 11 41 6.50 | 1.69 |
| | B. A. C. 4009 . . . | 8 | 29.6 | 31.3 | 34.1 | 47.8 | 49.6 | 51.6 | 53.6 | 55.3 | 9.1 | 12.1 | 14.0 | 45 51.65 | + | 0.06 | 24.46 | 11 45 27.13 | 1.69 |
| | Ursæ Majoris. . . | 9 | 49.5 | 51.4 | 54.7 | 11.4 | 13.3 | 15.7 | 18.3 | 20.3 | 30.3 | 32.6 | 34.7 | 56 6.68 | + | 9.31 | 24.46 | 11 55 51.53 | 2.93 |
| | Weisse (2) 1086 . . . | 10 | 33.8 | 35.2 | 38.3 | 3.3 | 5.0 | 6.7 | 8.4 | 10.1 | 20.1 | 22.1 | 24.2 | 56 47.35 | + | 8.63 | 24.46 | 11 56 14.26 | 2.93 |
| | Corvi . . . | 11 | 6.7 | 8.2 | 10.8 | 23.9 | 25.7 | 27.5 | 29.2 | 30.9 | 44.0 | 46.8 | 48.5 | 2 27.47 | + | 0.04 | 24.46 | 12 2 2.97 | 1.79 |
| η | Lacaille 5073 . . . | 12 | 55.8 | 57.3 | 0.4 | 14.7 | 16.5 | 18.6 | 20.5 | 22.3 | 36.3 | 39.5 | 41.5 | 8 18.49 | + | 0.08 | 24.45 | 12 7 53.96 | 1.80 |
| | Virginis . . . | 13 | 41.0 | 42.4 | 45.0 | 56.8 | 58.4 | 0.2 | 1.8 | 3.3 | 15.2 | 17.7 | 19.5 | 14 0.12 | + | 0.08 | 24.45 | 12 13 35.75 | 2.01 |
| | *+27° 34' . . . | 14 | 44.5 | 46.2 | 48.7 | 2.4 | 4.0 | 6.0 | 7.9 | 9.6 | 23.3 | 26.0 | 27.8 | 20 6.04 | + | 0.21 | 24.45 | 12 19 41.80 | 2.47 |
| | O. Arg. S. 12243 . . . | 15 | 40.7 | 42.1 | 44.1 | 45.9 | 47.7 | 49.7 | 51.7 | 53.7 | 55.7 | 57.7 | 59.7 | 27 44.10 | + | 0.03 | 24.45 | 12 27 19.62 | 1.91 |
| | O. Arg. S. 12246 . . . | 16 | 57.3 | 58.8 | 0.8 | 2.5 | 4.2 | 5.9 | 7.6 | 9.3 | 29.3 | 31.3 | 33.3 | 28 0.72 | + | 0.03 | 24.45 | 12 27 36.24 | 1.91 |
| 10 | O. Arg. S. 12338 . . . | 17 | 43.6 | 45.2 | 48.0 | 1.5 | 3.2 | 5.0 | 7.0 | 8.5 | 22.0 | 24.9 | 26.7 | 35 5.05 | + | 0.05 | 24.44 | 12 34 40.56 | 1.93 |
| | Canum Venat. . . | 18 | 9.2 | 11.0 | 14.3 | 29.8 | 32.0 | 34.3 | 36.3 | 38.3 | 53.9 | 57.1 | 59.3 | 39 34.14 | + | 0.30 | 24.44 | 12 39 10.00 | 2.88 |
| | Weisse (2) 868 . . . | 19 | 33.8 | 35.2 | 38.3 | 3.3 | 5.0 | 6.7 | 8.4 | 10.1 | 20.1 | 22.1 | 24.2 | 43 55.07 | + | 0.20 | 24.44 | 12 43 30.83 | 2.51 |
| | Lacaille 5367 . . . | 20 | 44.7 | 46.1 | 49.0 | 2.5 | 4.3 | 6.2 | 7.9 | 9.7 | 23.1 | 26.0 | 27.9 | 56 6.13 | + | 0.05 | 24.44 | 12 55 41.64 | 2.02 |
| | O. Arg. S. 12687 . . . | 21 | 45.2 | 46.8 | 48.4 | 50.0 | 51.6 | 53.2 | 54.8 | 56.4 | 58.0 | 59.6 | 61.2 | 4 6.57 | + | 0.04 | 24.43 | 13 3 42.10 | 2.05 |
| a | Polaris, S. P. . . | 22 | 35.0 | 39.0 | 43.0 | 47.0 | 51.0 | 55.0 | 59.0 | 63.0 | 67.0 | 71.0 | 75.0 | 12 50.20 | + | 13.74 | 24.43 | 13 3 42.10 | + 69.13 |
| | Virginis . . . | 23 | 46.8 | 48.4 | 50.9 | 3.0 | 4.6 | 6.3 | 8.2 | 9.5 | 21.7 | 24.1 | 25.9 | 19 6.31 | + | 0.03 | 24.43 | 13 18 41.91 | 2.13 |
| | Weisse 370 . . . | 24 | 17.4 | 18.9 | 21.2 | 33.4 | 35.0 | 36.6 | 38.4 | 39.9 | 51.8 | 54.5 | 56.0 | 24 36.64 | + | 0.11 | 24.43 | 13 24 12.32 | 2.27 |
| | B. A. C. 4578 . . . | 25 | 34.2 | 35.6 | 38.1 | 50.1 | 51.8 | 53.5 | 55.1 | 56.8 | 8.6 | 11.3 | 13.0 | 38 53.46 | + | 0.04 | 24.42 | 13 38 29.08 | 2.18 |
| | Virginis . . . | 26 | 56.2 | 57.6 | 0.2 | 12.2 | 13.8 | 15.5 | 17.0 | 18.5 | 30.6 | 33.1 | 34.7 | 42 15.40 | + | 0.04 | 24.42 | 13 41 51.02 | 2.19 |
| η | Bootis . . . | 27 | 53.5 | 54.8 | 57.3 | 10.0 | 11.7 | 13.5 | 15.2 | 17.0 | 20.4 | 22.1 | 23.8 | 40 13.48 | + | 0.16 | 24.42 | 13 48 49.22 | 2.43 |
| | Weisse (2) 1167 . . . | 28 | 38.3 | 41.2 | 43.4 | 45.0 | 46.6 | 48.2 | 49.8 | 51.4 | 53.0 | 54.6 | 56.2 | 54 52.31 | + | 30.19 | 24.42 | 13 53 57.70 | 2.50 |
| | B. A. C. 4680 . . . | 29 | 54.7 | 56.2 | 58.7 | 10.8 | 12.4 | 14.1 | 15.7 | 17.2 | 29.3 | 31.9 | 33.6 | 58 14.06 | + | 0.03 | 24.41 | 13 57 49.68 | 2.21 |
| | Weisse (2) 1314 . . . | 30 | 37.0 | 38.8 | 41.9 | 56.4 | 58.5 | 0.2 | 2.5 | 4.3 | 19.0 | 22.1 | 23.8 | 1 0.41 | + | 0.26 | 24.41 | 14 0 36.16 | 2.75 |
| | Bootis . . . | 31 | 6.6 | 8.4 | 11.0 | 23.7 | 25.3 | 27.0 | 28.9 | 30.4 | 43.3 | 45.8 | 47.5 | 10 27.08 | + | 0.16 | 24.41 | 14 10 2.83 | 2.42 |
| 29 | Hydræ . . . | 32 | 4.8 | 6.4 | 8.8 | 21.0 | 22.6 | 24.3 | 25.8 | 27.3 | 39.5 | 42.0 | 43.7 | 22 24.20 | + | 0.04 | 53.44 | 9 21 30.80 | 1.07 |
| | Argus . . . | 33 | 18.4 | 20.4 | 23.6 | 39.0 | 41.0 | 43.2 | 45.6 | 47.6 | 3.0 | 6.4 | 8.5 | 26 43.34 | + | 0.12 | 53.44 | 9 25 49.78 | 0.63 |
| | Leonis . . . | 34 | 2.5 | 4.2 | 6.8 | 40.0 | 41.7 | 43.5 | 45.2 | 47.0 | 0.0 | 2.9 | 4.5 | 39 43.48 | + | 0.21 | 53.44 | 9 38 50.25 | 1.64 |
| | Ursæ Majoris . . . | 35 | 1.7 | 4.4 | 8.7 | 29.4 | 32.1 | 34.7 | 37.6 | 40.3 | 0.7 | 5.3 | 8.2 | 44 34.83 | + | 0.52 | 53.44 | 9 43 41.91 | 2.58 |
| | B. A. C. 3385 . . . | 36 | 15.8 | 17.5 | 19.5 | 21.4 | 23.0 | 24.6 | 26.3 | 27.9 | 39.2 | 40.9 | 42.6 | 48 26.72 | + | 7.30 | 53.44 | 9 47 25.98 | 0.98 |
| a | Lacaille 4074 . . . | 37 | 42.5 | 44.3 | 46.8 | 0.2 | 1.9 | 3.6 | 5.4 | 7.1 | 20.6 | 23.2 | 25.1 | 52 3.70 | + | 0.04 | 53.44 | 9 51 10.22 | 1.01 |
| | B. A. C. 3439 . . . | 38 | 1.6 | 3.6 | 6.6 | 21.2 | 23.3 | 25.3 | 27.4 | 29.1 | 43.9 | 47.0 | 48.0 | 59 25.26 | + | 0.30 | 53.44 | 9 58 32.12 | 2.00 |
| | Leonis . . . | 39 | 21.2 | 22.8 | 25.3 | 37.5 | 39.2 | 40.9 | 42.6 | 44.3 | 56.2 | 59.0 | 0.5 | 2 40.86 | + | 0.14 | 53.44 | 10 1 47.56 | 1.57 |
| | Weisse 70 . . . | 40 | 47.4 | 48.9 | 51.5 | 3.5 | 5.1 | 6.7 | 8.4 | 10.1 | 22.1 | 24.7 | 26.5 | 7 6.81 | + | 0.03 | 53.43 | 10 6 13.41 | 1.29 |
| | *-28° 22' . . . | 41 | 11.5 | 13.3 | 15.9 | 29.1 | 31.2 | 33.1 | 35.0 | 36.7 | 50.3 | 53.0 | 54.9 | 11 33.09 | + | 0.06 | 53.43 | 10 10 39.60 | 1.10 |
| | B. A. C. 3521 . . . | 42 | 59.5 | 1.3 | 4.1 | 17.6 | 19.4 | 21.2 | 23.1 | 24.9 | 38.4 | 41.3 | 43.2 | 13 21.27 | + | 0.06 | 53.43 | 10 12 27.78 | 1.12 |
| | Lalande 20169. . . | 43 | 50.0 | 52.0 | 55.0 | 9.9 | 11.8 | 13.9 | 15.9 | 18.1 | 32.9 | 36.0 | 38.0 | 19 13.95 | + | 0.31 | 53.43 | 10 18 20.83 | 2.16 |
| | *+12° 16' . . . | 44 | 58.7 | 0.2 | 2.7 | 14.9 | 15.5 | 18.0 | 19.7 | 21.3 | 33.4 | 36.0 | 37.5 | 23 17.99 | + | 0.14 | 53.43 | 10 22 24.70 | 1.68 |
| | B. A. C. 3747 . . . | 45 | 22.2 | 29.7 | 41.6 | 41.6 | 49.1 | 57.7 | 6.0 | 13.1 | 13.0 | 25.0 | 33.5 | 50 57.50 | + | 1.72 | 53.43 | 10 50 5.79 | 7.75 |
| | Lacaille 4567 . . . | 46 | 59.8 | 1.6 | 5.0 | 20.3 | 22.5 | 24.6 | 27.0 | 28.9 | 44.5 | 48.2 | 50.1 | 57 24.77 | + | 0.12 | 53.42 | 10 56 31.23 | 1.29 |
| | *-40° 14' . . . | 47 | 25.6 | 27.9 | 30.2 | 45.4 | 48.6 | 50.5 | 52.8 | 55.2 | 3.2 | 42.02 | 3 42.02 | + | 36.60 | 53.42 | 11 2 12.00 | 1.33 | |
| | O. Arg. S. 11226 . . . | 48 | 51.5 | 53.2 | 56.0 | 9.7 | 11.5 | 13.5 | 15.4 | 17.0 | 30.6 | 33.5 | 35.3 | 7 13.38 | + | 0.06 | 53.42 | 11 6 19.90 | 1.44 |
| | Weisse 133 . . . | 49 | 28.1 | 29.6 | 32.1 | 44.1 | 45.6 | 47.2 | 48.9 | 50.4 | 2.3 | 4.9 | 6.6 | 10 47.25 | + | 0.07 | 53.42 | 11 9 53.90 | 1.71 |
| | Weisse (2) 257. . . | 50 | 30.6 | 33.1 | 35.2 | 37.2 | 40.5 | 43.8 | 47.1 | 50.4 | 1.7 | 3.9 | 6.0 | 16 18.48 | + | 0.23 | 53.42 | 11 15 25.29 | 2.50 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|---------------------------|-----------------|---------------|--------------|--------------|
| 1876. h. Apr. 29, 10.5 | s. — 53.43 | s. + 0.012 | s. + 0.27 | s. + 0.08 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | |
|-------------------------|------------------------|---------|--------------------------------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|---------------|-------|---------------------------------|-------------------------|-------------|---------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | |
| | | | m. | s. | m. | s. | s. | h. | m. | s. | s. | | | | | | | | |
| 1876. Apr. 29 Y. | Weisse (2) 258. . . | 1 | 54.5 | 56.3 | 59.4 | 14.5 | 16.6 | 18.4 | 20.6 | 22.6 | 37.4 | 41.0 | 43.0 | 16 18.57 | + | 0.32 | 53.42 | 11 15 25.47 | — 2.50 |
| | B. A. C. 3903 . . . | 2 | 18.7 | 20.2 | 22.7 | 34.6 | 35.9 | 37.7 | 39.4 | 41.0 | 52.8 | 55.3 | 57.0 | 22 37 75 | | 0.08 | 53.42 | 11 21 44.41 | 1.79 |
| | Weisse 421 . . . | 3 | 25.4 | 26.7 | 29.0 | 41.2 | 42.8 | 44.4 | 46.2 | 47.7 | 59.7 | 2.3 | 3.9 | 26 44.48 | + | 0.05 | 53.42 | 11 25 51.11 | 1.74 |
| | B. A. C. 3988 . . . | 4 | 6.9 | 8.8 | 11.7 | 27.3 | 29.2 | 31.5 | 33.6 | 35.6 | 51.2 | 54.5 | 56.6 | 41 31.54 | — | 0.12 | 53.42 | 11 40 38.00 | 1.60 |
| | *—37° 37' . . . | 5 | 3.3 | 5.1 | 8.3 | 23.4 | 25.2 | 27.3 | 29.5 | 31.6 | 46.5 | 49.8 | 51.8 | 47 27.44 | | 0.11 | 53.42 | 11 46 33.91 | 1.64 |
| | B. A. C. 4032 . . . | 6 | 55.5 | 57.3 | 0.0 | 13.4 | 15.2 | 17.3 | 19.0 | 20.6 | 33.8 | 36.8 | 38.8 | 50 17.06 | — | 0.05 | 53.41 | 11 49 23.60 | 1.70 |
| | Virginis . . . | 7 | 11.7 | 13.1 | 15.8 | 27.9 | 29.4 | 31.2 | 32.8 | 34.2 | 46.1 | 48.7 | 50.4 | 54 31.03 | + | 0.10 | 53.41 | 11 53 37.72 | 1.98 |
| | Weisse 963 . . . | 8 | . . . | . . . | . . . | 28.9 | 30.4 | 32.2 | 33.8 | 35.4 | . . . | . . . | . . . | 58 32.14 | + | 0.11 | 53.41 | 11 57 38.84 | 1.99 |
| | *—27° 18' . . . | 9 | 41.0 | 42.7 | 45.4 | 59.0 | 0.4 | 2.5 | 4.1 | 5.9 | 19.7 | 22.4 | 24.3 | 3 2.49 | — | 0.05 | 53.41 | 12 2 9.03 | 1.77 |
| | Lacaille 5065 . . . | 10 | 29.3 | 30.9 | 34.3 | 49.5 | 51.4 | 53.5 | 55.6 | 57.4 | 12.5 | 15.9 | 17.8 | 7 53.46 | — | 0.11 | 53.41 | 12 6 59.94 | 1.77 |
| | Weisse 144 . . . | 11 | 43.1 | 44.6 | 47.0 | 59.0 | 0.6 | 2.3 | 4.0 | 5.5 | 17.6 | 20.1 | 21.7 | 12 2.32 | + | 0.12 | 53.41 | 12 11 9.03 | 2.08 |
| | Radcliffe 2857 . . . | 12 | . . . | . . . | . . . | 19.9 | 21.6 | 28.3 | 32.5 | 36.0 | . . . | . . . | . . . | 19 28.26 | | 0.77 | 53.41 | 12 18 35.62 | 4.59 |
| | Radcliffe 3860 . . . | 13 | . . . | . . . | . . . | 8.3 | 11.8 | 16.0 | 19.8 | 23.4 | . . . | . . . | . . . | 20 15.86 | + | 0.77 | 53.41 | 12 19 23.22 | 4.59 |
| | Lacaille 5189 . . . | 14 | 50.4 | 52.0 | 55.3 | 11.2 | 13.0 | 15.2 | 17.3 | 19.6 | 35.2 | 38.6 | 40.4 | 26 15.29 | — | 0.12 | 53.41 | 12 25 21.76 | 1.89 |
| | O. Arg. S. 12288 . . . | 15 | . . . | . . . | . . . | 49.2 | 51.1 | 53.0 | 54.8 | 56.7 | 9.9 | 12.7 | 14.5 | 32 0.24 | — | 7.36 | 53.41 | 12 30 59.47 | 1.91 |
| | Lalande 23711 . . . | 16 | 50.7 | 52.4 | 55.3 | 9.7 | 11.6 | 13.8 | 15.7 | 17.6 | . . . | . . . | . . . | 37 5.85 | + | 8.14 | 53.40 | 12 36 20.59 | 2.68 |
| | Weisse 786 . . . | 17 | 51.5 | 53.0 | 55.5 | 7.6 | 8.9 | 10.6 | 12.0 | 13.8 | 25.8 | 28.4 | 29.8 | 48 10.63 | + | 0.08 | 53.40 | 12 47 17.31 | 2.12 |
| | *—9° 4' . . . | 18 | . . . | . . . | . . . | 52.5 | 53.9 | 55.7 | 57.5 | 59.0 | 11.2 | 13.8 | 15.5 | 52 2.39 | — | 6.51 | 53.40 | 12 51 2.48 | 2.06 |
| | Weisse 880 . . . | 19 | 16.7 | 18.2 | 20.6 | 32.7 | 34.4 | 35.8 | 37.7 | 39.2 | 51.5 | 53.8 | 55.6 | 53 36.02 | + | 0.04 | 53.40 | 12 52 42.86 | 2.06 |
| | Lacaille 5379 . . . | 20 | 50.1 | 51.5 | 54.5 | 7.5 | 9.3 | 11.0 | 12.9 | 14.5 | 27.5 | 30.2 | 31.9 | 58 10.99 | — | 0.04 | 53.40 | 12 57 17.55 | 2.03 |
| | Virginis . . . | 21 | 8.2 | 9.7 | 12.6 | 24.1 | 25.5 | 27.2 | . . . | . . . | . . . | . . . | . . . | 4 17.88 | + | 9.54 | 53.40 | 13 3 34.02 | — 2.13 |
| | Polaris, S. P. . . | 22 | . . . | . . . | . . . | 6.0 | . . . | 21.0 | . . . | 38.0 | . . . | . . . | . . . | 13 21.67 | — | 15.33 | 53.40 | . . . | + 67.87 |
| May 1 | ε Leonis . . . | 23 | 2.8 | 4.5 | 7.0 | 20.3 | 22.0 | 23.8 | 25.6 | 27.2 | 40.3 | 43.1 | 44.8 | 39 23.76 | + | 0.16 | 33.72 | 9 38 50.20 | — 1.61 |
| | μ Leonis . . . | 24 | 56.4 | 58.0 | 0.8 | 14.2 | 15.8 | 17.8 | 19.7 | 21.3 | 34.7 | 37.5 | 39.3 | 46 17.77 | | 0.17 | 33.72 | 9 45 44.22 | 1.69 |
| | Lacaille 4074 . . . | 25 | 22.7 | 24.5 | 27.1 | 40.4 | 42.2 | 43.9 | 45.7 | 47.4 | 0.6 | 3.6 | 5.3 | 51 43.95 | | 0.01 | 33.73 | 9 51 10.23 | 0.98 |
| | B. A. C. 3439 . . . | 26 | 42.0 | 44.0 | 47.1 | 1.6 | 3.7 | 5.7 | 7.8 | 9.6 | 24.4 | 27.5 | 29.3 | 59 5.70 | + | 0.21 | 33.73 | 9 58 32.18 | 1.97 |
| | A Leonis . . . | 27 | . . . | . . . | . . . | 51.1 | 52.8 | 54.4 | 56.2 | 57.6 | 9.7 | 12.4 | 14.0 | 2 1.02 | — | 6.53 | 33.73 | 10 1 20.76 | 1.52 |
| | Weisse 70 . . . | 28 | 27.7 | 29.1 | 31.7 | 43.8 | 45.3 | 47.0 | 48.7 | 50.3 | 2.4 | 4.9 | 6.4 | 6 47.03 | + | 0.05 | 33.73 | 10 6 13.35 | 1.27 |
| | Radcliffe 2472 . . . | 29 | 10.4 | 12.8 | 16.9 | 36.3 | 38.8 | 41.4 | 44.2 | 46.9 | 5.8 | 10.1 | 12.7 | 11 41.48 | | 0.33 | 33.73 | 10 11 8.08 | 2.64 |
| | Weisse 240 . . . | 30 | 49.3 | 50.9 | 53.3 | 5.5 | 7.2 | 8.9 | 10.5 | 12.0 | 24.3 | 26.8 | 28.5 | 16 8.84 | + | 0.12 | 33.73 | 10 15 35.23 | 1.61 |
| | *—35° 32' . . . | 31 | 52.8 | 54.8 | 57.7 | 12.4 | 14.2 | 16.2 | 18.3 | 20.1 | 35.0 | 37.9 | 40.7 | 23 16.32 | — | 0.02 | 33.73 | 10 22 42.57 | 1.07 |
| | B. A. C. 3629 . . . | 32 | . . . | . . . | . . . | 28.0 | 37.9 | 48.8 | 59.6 | 9.4 | . . . | . . . | . . . | 31 48.74 | + | 1.60 | 33.73 | 10 31 16.61 | 9.03 |
| | *+4° 59' . . . | 33 | 38.6 | 40.0 | 42.5 | 54.5 | 56.2 | 57.7 | 59.3 | 0.9 | 12.9 | 15.3 | 16.9 | 35 57.71 | | 0.09 | 33.73 | 10 35 24.07 | 1.62 |
| | *+4° 59' . . . | 34 | 14.9 | 16.4 | 19.0 | 30.9 | 32.5 | 34.1 | 35.7 | 37.3 | 49.2 | 51.7 | 53.4 | 37 34.10 | | 0.09 | 33.73 | 10 37 0.46 | 1.63 |
| | Leonis . . . | 35 | 0.0 | 1.6 | 4.1 | 16.5 | 18.1 | 19.6 | 21.3 | 22.9 | 35.1 | 37.6 | 39.2 | 43 19.64 | | 0.11 | 33.73 | 10 42 46.02 | 1.75 |
| | *—29° 40' . . . | 36 | 17.7 | 19.0 | 21.8 | 35.6 | 37.2 | 39.2 | 41.0 | 43.0 | 56.6 | 59.5 | 1.2 | 47 39.25 | | 0.00 | 33.73 | 10 47 5.52 | 1.29 |
| | Weisse 137 . . . | 37 | 12.7 | 14.5 | 16.1 | 17.6 | 20.4 | . . . | 20.7 | 23.2 | 24.8 | 26.5 | 28.4 | 10 50.49 | | 0.00 | 33.74 | 11 10 16.75 | 1.69 |
| | Leonis . . . | 38 | 37.7 | 39.1 | 41.6 | 53.6 | 55.0 | 56.7 | 58.3 | 59.9 | 11.9 | 14.5 | 15.9 | 10 56.75 | | 0.07 | 33.74 | 11 10 23.08 | 1.69 |
| | Lalande 21645 . . . | 39 | 33.5 | 35.0 | 37.7 | 49.8 | 51.4 | 53.0 | 54.9 | 56.4 | 8.5 | 11.1 | 12.8 | 15 53.10 | | 0.05 | 33.74 | 11 15 19.41 | 1.62 |
| | *—0° 11' . . . | 40 | 44.0 | 45.4 | 47.8 | 59.8 | 1.5 | 3.2 | 4.7 | 6.3 | 18.4 | 20.8 | 22.4 | 20 3.12 | | 0.08 | 33.74 | 11 19 29.46 | 1.77 |
| | B. A. C. 3906 . . . | 41 | . . . | . . . | . . . | 21.4 | 31.6 | 44.2 | 55.9 | 5.7 | . . . | . . . | . . . | 23 43.76 | + | 1.74 | 33.74 | 11 23 11.76 | 11.13 |
| | B. A. C. 3927 . . . | 42 | 56.9 | 58.6 | 1.6 | 17.1 | 19.2 | 21.5 | 23.8 | 25.7 | 41.0 | 44.4 | 46.6 | 27 21.49 | — | 0.03 | 33.74 | 11 26 47.72 | 1.48 |
| | Lacaille 4837 . . . | 43 | 2.3 | 3.9 | 7.0 | 21.9 | 24.0 | 25.9 | 28.0 | 30.0 | 45.1 | 48.3 | 50.4 | 34 26.07 | — | 0.02 | 33.74 | 11 33 52.31 | 1.54 |
| | Crateris . . . | 44 | 44.1 | 45.8 | 48.4 | 0.9 | 2.5 | 4.2 | 6.0 | 7.5 | 20.0 | 22.7 | 24.6 | 39 4.25 | + | 0.04 | 33.74 | 11 38 30.55 | 1.69 |
| | Leonis . . . | 45 | 59.9 | 1.5 | 4.1 | 16.4 | 18.0 | 19.8 | 21.5 | 22.9 | 35.4 | 38.0 | 39.7 | 43 19.75 | + | 0.13 | 33.74 | 11 42 46.14 | 2.07 |
| | *—37° 37' . . . | 46 | . . . | . . . | . . . | 26.8 | 30.0 | 32.6 | 45.8 | 49.2 | 50.9 | 53.3 | 55.7 | 47 43.04 | — | 35.18 | 33.74 | 11 46 34.12 | 1.63 |
| | Weisse 947 . . . | 47 | 41.0 | 42.5 | 44.8 | 57.0 | 58.6 | 0.4 | 1.9 | 3.4 | 15.5 | 18.0 | 19.4 | 57 0.23 | + | 0.10 | 33.74 | 11 56 26.59 | 2.03 |
| | Comæ . . . | 48 | 1.5 | 3.2 | 6.0 | 19.4 | 21.4 | 23.2 | 25.0 | 26.8 | 39.9 | 42.9 | 44.9 | 21 23.11 | | 0.17 | 33.75 | 12 20 49.53 | 2.45 |
| | Draconis . . . | 49 | 23.0 | 27.2 | 34.4 | 8.7 | 13.3 | 18.0 | 23.0 | 27.4 | 2.4 | 9.6 | 14.0 | 25 18.27 | + | 0.67 | 33.75 | 12 24 45.19 | 5.52 |
| | Weisse (2) 599 . . . | 50 | . . . | . . . | . . . | 28.7 | 30.6 | 32.3 | 34.0 | 35.7 | 48.6 | 51.3 | 53.2 | 29 39.30 | — | 6.86 | —33.75 | 12 28 58.69 | — 2.36 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|----------------------|-----------------|---------------|--------------|--------------|
| 1876. May 1, 11.4 | s. — 33.74 | s. — 0.009 | s. + 0.16 | s. + 0.08 |

May 1. Image west of 52. Clamp east.
Image west of 75. Clamp west.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | |
|-------------------------|------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|-------------------|--------------|--------|---------------------------------|-------------------------|--------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | |
| 1876. May 1 Y. | Lalande 23666 . . . | 1 | 19.0 | 20.9 | 23.9 | 38.5 | 40.4 | 42.4 | 44.5 | 46.3 | 0.9 | 3.8 | 5.8 | m. s. 34 42.40 | + | 0.21 | — 33.75 | h. m. s. 12 34 8.86 | — s. 2.67 |
| | 7 Draconis . . . | 2 | 18.5 | 22.2 | 28.7 | 59.7 | 3.9 | 8.0 | 12.6 | 16.8 | 47.3 | 53.9 | 58.1 | 43 8.15 | | 0.60 | 33.75 | 12 42 35.00 | 5.14 |
| | δ Virginis . . . | 3 | 38.1 | 39.6 | 42.1 | 54.1 | 55.6 | 57.3 | 58.9 | 0.5 | 12.4 | 14.8 | 16.5 | 49 57.26 | | 0.09 | 33.75 | 12 49 23.60 | 2.15 |
| | 46 Virginis . . . | 4 | 29.5 | 31.0 | 33.5 | 45.3 | 46.9 | 48.6 | 50.3 | 51.7 | 3.7 | 6.3 | 8.0 | 54 48.62 | | 0.07 | 33.75 | 12 54 14.94 | 2.11 |
| | Lacaille 5382 . . . | 5 | 53.7 | 55.5 | 58.3 | 12.0 | 13.7 | 15.4 | 17.0 | 18.8 | | | | 58 8.05 | — | 7.33 | 33.75 | 12 57 41.63 | 2.03 |
| | η Virginis . . . | 6 | 48.5 | 50.0 | 52.6 | 4.5 | 5.9 | 7.7 | 9.3 | 10.8 | 22.6 | 25.4 | 27.0 | 4 7.66 | + | 0.06 | 33.75 | 13 3 33.97 | — 2.13 |
| | Polaris, S. P. . . | 7 | | | | 42.0 | 48.0 | 58.0 | 8.0 | 13.0 | | | | 12 57.80 | — | 10.16 | 33.76 | | + 67.17 |
| | α Virginis . . . | 8 | 56.1 | 57.8 | 0.2 | 12.4 | 14.1 | 15.7 | 17.3 | 18.8 | 30.8 | 33.5 | 35.1 | 19 15.62 | + | 0.05 | 33.76 | 13 18 41.91 | — 2.14 |
| | * +64° 55' . . . | 9 | 25.4 | 29.7 | 36.3 | 3.3 | 7.9 | 11.8 | 15.9 | 19.0 | | | | 22 56.16 | + | 14.95 | 33.89 | 10 22 37.22 | 3.63 |
| | ρ Leonis . . . | 10 | 33.0 | 34.6 | 37.2 | 49.2 | 50.8 | 52.5 | 54.2 | 55.9 | 7.9 | 10.3 | 11.9 | 26 52.50 | — | 0.13 | 33.89 | 10 26 18.48 | 1.63 |
| | B. A. C. 3652 . . . | 11 | 52.3 | 57.0 | 3.9 | 38.6 | 43.0 | 47.6 | 52.3 | 56.8 | 31.6 | 35.8 | 42.7 | 34 47.69 | | 0.40 | 33.89 | 10 34 13.40 | 4.45 |
| | * — 37° 38' . . . | 12 | 40.9 | 43.0 | 46.0 | 1.0 | 2.7 | 5.1 | 6.9 | 8.7 | 24.4 | 27.1 | 29.2 | 44 5.00 | | 0.14 | 33.89 | 10 43 30.97 | 1.16 |
| | O. Arg. S. 10941 . . . | 13 | 51.1 | 52.9 | 55.9 | 9.5 | 11.3 | 13.0 | 15.0 | 17.0 | 30.9 | 33.6 | 35.3 | 47 13.23 | | 0.13 | 33.89 | 10 46 39.21 | 1.26 |
| | O. Arg. S. 10952 . . . | 14 | | | | 54.5 | 56.5 | 58.1 | 0.1 | 1.7 | 15.7 | 18.4 | 20.0 | 48 5.62 | | 7.58 | 33.89 | 10 47 24.15 | 1.27 |
| | * +12° 28' . . . | 15 | 11.5 | 13.0 | 15.5 | 27.8 | 29.4 | 31.0 | 32.8 | 34.5 | 46.7 | 49.2 | 50.7 | 53 31.10 | | 0.13 | 33.89 | 10 52 57.08 | 1.79 |
| | * +12° 31' . . . | 16 | 33.5 | 35.2 | 37.8 | 50.0 | 51.6 | 53.2 | 54.9 | 56.5 | 8.6 | 11.3 | 12.9 | 54 53.23 | | 0.13 | 33.89 | 10 54 19.21 | 1.80 |
| | * +12° 34' . . . | 17 | | | | 25.0 | 27.5 | 29.1 | 40.3 | 43.0 | 44.5 | 46.3 | 48.2 | 55 37.99 | | 28.57 | 33.89 | 10 54 35.53 | 1.80 |
| | * — 32° 51' . . . | 18 | 30.5 | 32.1 | 35.3 | 49.6 | 51.2 | 53.4 | 55.3 | 57.1 | 11.5 | 14.2 | 16.0 | 1 53.29 | | 0.13 | 33.89 | 11 1 19.27 | 1.33 |
| | O. Arg. S. 11213 . . . | 19 | 59.4 | 1.5 | 3.6 | 18.3 | 19.7 | 21.4 | 23.4 | 25.1 | 38.7 | 42.0 | 43.4 | 5 21.50 | | 0.12 | 33.89 | 11 4 47.49 | 1.39 |
| | Weisse 137 . . . | 20 | 31.3 | 32.9 | 35.9 | 47.5 | 49.0 | 50.4 | 52.1 | 53.7 | 5.9 | 8.6 | 9.9 | 10 50.65 | | 0.12 | 33.89 | 11 10 16.64 | 1.67 |
| | Lalande 21645 . . . | 21 | 33.7 | 35.5 | 38.0 | 50.2 | 51.7 | 53.4 | 55.0 | 56.7 | 8.9 | 11.4 | 13.0 | 15 53.41 | | 0.12 | 33.89 | 11 15 19.40 | 1.60 |
| | B. A. C. 3906 . . . | 22 | 30.3 | 41.2 | 59.5 | 23.0 | 33.5 | 45.5 | 57.8 | 8.5 | 31.7 | 48.6 | 59.8 | 23 45.40 | | 0.98 | 33.89 | 11 23 10.53 | 10.86 |
| | * +71° 15' . . . | 23 | | | | 31.7 | 36.1 | 42.2 | 48.1 | 52.6 | | | | 31 42.14 | | 0.46 | 33.89 | 11 31 7.79 | 5.39 |
| | Rumker 3697 . . . | 24 | 53.9 | 55.8 | 58.6 | 11.5 | 13.0 | 14.9 | 16.7 | 18.4 | 31.3 | 34.0 | 35.7 | 36 14.89 | | 0.14 | 33.89 | 11 35 40.86 | 2.17 |
| | Rumker 3727 . . . | 25 | 3.5 | 5.2 | 7.8 | 20.2 | 21.7 | 23.5 | 25.2 | 26.9 | 39.2 | 41.7 | 43.3 | 39 23.47 | | 0.13 | 33.89 | 11 38 49.45 | 2.04 |
| | β Leonis . . . | 26 | 0.2 | 1.9 | 4.6 | 16.8 | 18.5 | 20.2 | 21.9 | 23.6 | 35.9 | 38.5 | 39.9 | 43 20.18 | | 0.13 | 33.89 | 11 42 46.16 | 2.05 |
| | B. A. C. 4015 . . . | 27 | 51.6 | 53.6 | 56.6 | 10.8 | 12.9 | 14.7 | 16.8 | 18.6 | 32.8 | 35.8 | 37.6 | 47 14.71 | — | 0.13 | 33.89 | 11 46 40.69 | 1.62 |
| | Weisse 908 . . . | 28 | 20.8 | 22.3 | 24.8 | 37.0 | 38.4 | 39.9 | 41.6 | 43.0 | | | | 54 33.48 | + | 6.43 | 33.89 | 11 54 6.02 | 2.01 |
| | Weisse 921 . . . | 29 | | | | 31.7 | 34.2 | 35.8 | 46.8 | 49.3 | 51.0 | 52.6 | 54.6 | 55 44.50 | — | 28.19 | 33.89 | 11 54 42.42 | 2.01 |
| | α Corvi . . . | 30 | 16.0 | 17.7 | 20.4 | 33.5 | 35.3 | 37.0 | 38.7 | 40.5 | 53.6 | 56.2 | 57.8 | 2 36.97 | | 0.12 | 33.89 | 12 2 2.96 | 1.76 |
| | Lacaille 5073 . . . | 31 | 5.2 | 7.2 | 10.2 | 24.3 | 26.1 | 28.1 | 30.1 | 32.0 | 46.2 | 49.2 | 51.0 | 8 28.15 | | 0.13 | 33.89 | 12 7 54.13 | 1.76 |
| | η Virginis . . . | 32 | 50.6 | 52.2 | 54.7 | 6.6 | 8.1 | 9.8 | 11.4 | 13.0 | 25.0 | 27.4 | 28.9 | 14 9.79 | | 0.12 | 33.89 | 12 13 35.78 | 1.93 |
| | B. A. C. 4171 . . . | 33 | 3.6 | 5.2 | 7.7 | 19.8 | 21.3 | 23.0 | 24.6 | 26.2 | 38.3 | 40.7 | 42.3 | 17 22.97 | | 0.12 | 33.89 | 12 16 48.96 | 1.94 |
| | Lalande 23270 . . . | 34 | 41.8 | 43.5 | 46.0 | 57.9 | 59.5 | 1.0 | 2.8 | 4.3 | 16.3 | 18.7 | 20.2 | 21 1.09 | | 0.12 | 33.89 | 12 20 27.08 | 1.97 |
| | Lacaille 5188 . . . | 35 | 48.9 | 51.0 | 54.0 | 7.7 | 9.5 | 11.4 | 13.4 | 15.0 | 29.3 | 32.0 | 33.8 | 25 11.45 | | 0.13 | 33.89 | 12 24 37.43 | 1.86 |
| | O. Arg. S. 12259 . . . | 36 | 17.0 | 18.7 | 21.7 | 35.3 | 36.7 | 38.7 | 40.5 | 42.3 | 55.7 | 58.6 | 0.4 | 29 38.69 | | 0.12 | 33.89 | 12 29 4.68 | 1.89 |
| | B. A. C. 4262 . . . | 37 | 21.0 | 23.4 | 26.6 | 42.0 | 43.9 | 46.1 | 48.3 | 50.2 | 5.6 | 8.8 | 10.8 | 33 46.06 | | 0.14 | 33.89 | 12 33 12.03 | 1.92 |
| | Lacaille 5256 . . . | 38 | 53.8 | 55.5 | 58.1 | 11.4 | 12.9 | 14.9 | 16.7 | 18.3 | 31.5 | 34.2 | 35.9 | 37 14.84 | | 0.12 | 33.89 | 12 36 40.83 | 1.93 |
| | Lacaille 5295 . . . | 39 | 57.3 | 59.0 | 2.0 | 15.8 | 17.6 | 19.5 | 21.5 | 23.3 | 37.0 | 40.1 | 41.6 | 44 19.52 | | 0.13 | 33.89 | 12 43 45.50 | 1.96 |
| | B. A. C. 4378 . . . | 40 | | | | 5.9 | 7.9 | 10.1 | 12.3 | 14.4 | 30.1 | 33.3 | 35.3 | 0 18.66 | — | 8.71 | 33.89 | 12 59 36.06 | — 2.09 |
| | Polaris, S. P. . . | 41 | | | | 32.0 | 43.0 | 54.0 | | | | | | 12 43.00 | + | 5.55 | 33.89 | | + 66.43 |
| | ζ Virginis . . . | 42 | 39.6 | 41.2 | 43.7 | 55.7 | 57.3 | 58.8 | 0.6 | 2.1 | 14.0 | 16.4 | 18.0 | 28 58.85 | — | 0.12 | 33.89 | 13 28 24.84 | — 2.22 |
| | Weisse 569 . . . | 43 | | | | 59.8 | 1.2 | 3.1 | 4.7 | 6.4 | 18.5 | 21.0 | 22.5 | 35 9.65 | | 6.66 | 33.89 | 13 34 29.10 | 2.20 |
| | Weisse (2) 777 . . . | 44 | 22.7 | 24.6 | 27.2 | | | 43.8 | | | 0.1 | 2.7 | 4.4 | 38 43.64 | | 0.13 | 33.89 | 13 38 9.62 | 2.50 |
| | Weisse (2) 782 . . . | 45 | | | | 18.3 | 21.2 | 22.7 | 34.4 | 37.4 | 38.9 | 40.9 | 42.9 | 39 32.09 | | 30.18 | 33.89 | 13 38 28.02 | 2.50 |
| | O. Arg. S. 13159 . . . | 46 | 24.8 | 26.6 | 29.3 | 42.0 | 43.5 | 45.2 | 47.1 | 48.7 | 1.5 | 4.0 | 5.5 | 42 45.29 | | 0.13 | 33.89 | 13 42 11.27 | 2.20 |
| | η Bootis . . . | 47 | 2.9 | 4.7 | 7.4 | 19.9 | 21.6 | 23.2 | 25.1 | 26.7 | 39.4 | 42.0 | 43.5 | 49 23.31 | | 0.13 | 33.89 | 13 48 49.29 | 2.45 |
| | Lalande 21081 . . . | 48 | 49.3 | 51.4 | 54.6 | 9.5 | 11.3 | 13.4 | 15.6 | 17.5 | 32.3 | 35.4 | 37.2 | 53 13.41 | | 0.02 | 33.88 | 10 52 39.51 | 2.28 |
| | Weisse (2) 1185 . . . | 49 | 22.7 | 24.6 | 27.8 | 42.9 | 44.7 | 46.6 | 48.9 | 50.9 | 6.0 | 9.0 | 10.8 | 0 46.81 | — | 0.01 | — 33.88 | 11 0 12.92 | — 2.35 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|-------------------------|--------------------|-----------------|--------------|--------------|
| 1876. h. May 3, 12.3 | s. — 33.89 | s. — 0.001 | s. — 0.02 | s. — 0.12 |
| 4, 12.4 | — 33.84 | + 0.029 | + 0.18 | — 0.12 |

OBSERVATIONS WITH THE MERIDIAN TRANSIT INSTRUMENT.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1875.0. | | | |
|-------------------------|------------------------|---------|--------------------------------|------|-------|-----------|-----------|-----------|-----------|-----------|-----------|-------|------------|---------------|----------|---------------------------------|-------------------------|-------------|-------------|--------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | | |
| | | | m. s. | | m. s. | | s. | | h. m. s. | | s. | | s. | | h. m. s. | | | | | |
| 1876. May 4 Y. | Weisse (2) 1106 . . . | 1 | | 40.7 | 44.0 | 45.9 | 59.8 | 3.0 | 4.9 | 7.0 | 9.3 | 1 | 56.82 | — | 34.97 | —33.88 | 11 0 47.97 | — 2.35 | | |
| | O. Arg. S. 11220 . . . | 2 | 31.9 | 33.9 | 36.9 | 50.5 | 52.2 | 54.1 | 55.9 | 57.8 | 11.3 | 14.4 | 16.0 | 6 | 54.08 | 0.24 | 33.88 | 11 6 19.96 | 1.38 | |
| | Crateris | 3 | 24.4 | 26.0 | 28.6 | 40.9 | 42.5 | 44.2 | 45.9 | 47.4 | 59.9 | 2.3 | 4.0 | 13 | 44.19 | 0.17 | 33.88 | 11 13 10.14 | 1.56 | |
| | B. A. C. 3875 . . . | 4 | 24.6 | 26.6 | 29.5 | 44.2 | 46.1 | 48.2 | 50.2 | 52.0 | 6.8 | 9.8 | 11.5 | 17 | 48.14 | 0.28 | 33.87 | 11 17 13.99 | 1.41 | |
| | Leonis | 5 | 50.0 | 51.7 | 54.3 | 6.2 | 7.8 | 9.4 | 11.1 | 12.7 | 24.6 | 27.1 | 28.6 | 22 | 9.41 | 0.11 | 33.87 | 11 21 35.43 | 1.80 | |
| | Weisse 349 | 6 | 32.2 | 34.2 | 35.8 | 37.5 | 40.0 | . . . | 40.3 | 43.0 | 44.5 | 46.1 | 48.0 | 22 | 10.16 | 0.04 | 33.87 | 11 21 36.25 | 1.80 | |
| | Lacaille 4773 . . . | 7 | 36.9 | 38.5 | 41.5 | 55.0 | 56.5 | 58.5 | 0.2 | 1.9 | 15.6 | 18.6 | 20.5 | 26 | 58.52 | 0.23 | 33.87 | 11 26 24.42 | 1.52 | |
| | Ursæ Majoris . . . | 8 | 43.8 | 45.8 | 48.9 | 3.4 | 5.0 | 7.2 | 9.1 | 11.1 | 125.7 | 25.6 | 30.5 | 35 | 7.19 | 0.02 | 33.86 | 11 34 33.31 | 2.44 | |
| | Weisse (2) 746 . . . | 9 | 10.6 | 12.5 | 15.0 | 27.8 | 29.2 | 31.1 | 32.9 | 34.6 | 47.4 | 49.9 | 51.6 | 39 | 31.15 | 0.06 | 33.86 | 11 38 57.23 | 2.13 | |
| | B. A. C. 3994 . . . | 10 | 43.9 | 45.6 | 48.5 | 1.8 | 3.5 | 5.3 | 7.1 | 8.9 | 22.1 | 24.9 | 26.8 | 43 | 5.31 | 0.22 | 33.86 | 11 42 31.23 | 1.63 | |
| | B. A. C. 4016 . . . | 11 | 23.9 | 25.9 | 28.9 | 43.3 | 45.3 | 47.1 | 49.0 | 51.0 | 5.6 | 8.5 | 10.5 | 47 | 47.18 | 0.27 | 33.86 | 11 47 13.05 | 1.61 | |
| | Virginis | 12 | 10.0 | 11.7 | 14.2 | 26.4 | 27.8 | 29.6 | 31.2 | 32.8 | 44.9 | 47.4 | 48.9 | 59 | 29.54 | 0.09 | 33.85 | 11 58 55.60 | 2.04 | |
| | Corvi | 13 | | 33.7 | 35.3 | 36.9 | 38.7 | 40.6 | 53.5 | 56.4 | 57.9 | 2 | 44.12 | 7.30 | 33.85 | 12 2 2.97 | 1.75 | | | |
| | Lacaille 5097 . . . | 14 | 17.0 | 18.7 | 22.0 | 35.9 | 37.7 | 39.7 | 41.7 | 43.8 | 57.7 | 0.5 | 2.0 | 13 | 39.70 | 0.25 | 33.85 | 12 13 5.60 | 1.78 | |
| | Weisse (2) 348 . . . | 15 | 4.7 | 6.6 | 9.3 | 22.6 | 24.3 | 26.1 | 28.0 | 29.8 | 43.1 | 45.8 | 47.6 | 18 | 26.17 | 0.04 | 33.84 | 12 17 52.29 | 2.40 | |
| | Lalande 23270 . . . | 16 | 41.6 | 43.3 | 45.8 | 57.8 | 59.4 | 1.1 | 2.6 | 4.2 | 16.3 | 18.7 | 20.1 | 21 | 0.99 | — | 0.14 | 12 20 27.01 | 1.97 | |
| | Draconis | 17 | 22.8 | 27.6 | 34.7 | 9.7 | 13.8 | 18.5 | 23.6 | 28.0 | 2.0 | 9.9 | 14.2 | 25 | 18.67 | + | 0.14 | 12 24 44.97 | 5.43 | |
| | Weisse (2) 599 . . . | 18 | 11.7 | 13.5 | 16.3 | 29.2 | 30.8 | 32.5 | 34.3 | 36.0 | 49.0 | 51.7 | 53.3 | 29 | 32.57 | — | 0.05 | 12 28 58.68 | 2.35 | |
| | Lalande 23666 . . . | 19 | 19.5 | 21.3 | 24.5 | 38.8 | 40.7 | 42.7 | 44.8 | 46.7 | 1.3 | 4.2 | 6.0 | 34 | 42.77 | 0.02 | 33.84 | 12 34 8.91 | 2.65 | |
| | Weisse 668 | 20 | 57.1 | 58.6 | 1.3 | 13.4 | 14.9 | 16.5 | 18.2 | 20.7 | 31.9 | 34.5 | 35.8 | 41 | 16.63 | 0.15 | 33.83 | 12 40 42.65 | 2.02 | |
| | *—14° 18' | 21 | | 47.2 | 49.9 | 51.4 | 2.6 | 5.5 | 7.0 | 8.7 | 10.6 | 50 | 0.36 | 28.81 | 33.83 | 12 48 57.72 | 2.02 | | | |
| | Lacaille 5379 . . . | 22 | 30.8 | 32.5 | 35.4 | 48.3 | 49.9 | 51.9 | 53.5 | 55.4 | 8.3 | 11.0 | 12.8 | 57 | 51.80 | 0.21 | 33.82 | 12 57 17.77 | 2.03 | |
| | Canum Venat. . . . | 23 | | 29.0 | 30.9 | 32.9 | 34.9 | 37.0 | 51.7 | 55.0 | 56.9 | 0 | 41.04 | 8.08 | 33.82 | 12 59 59.14 | 2.76 | | | |
| | Virginis | 24 | 48.7 | 50.3 | 52.9 | 4.7 | 6.3 | 8.0 | 9.6 | 11.2 | 23.2 | 25.7 | 27.1 | 4 | 7.96 | 0.14 | 33.82 | 13 4 34.00 | — 2.13 | |
| | Polaris, S. P. . . . | 25 | | 36.0 | 44.0 | 52.0 | 1.0 | 4.0 | | | | 12 | 51.20 | 2.25 | 33.82 | | + | 65.99 | | |
| | Lamont 4068 | 26 | 4.2 | 5.9 | 8.3 | 20.4 | 21.8 | 23.4 | 25.0 | 26.7 | 38.8 | 41.0 | 42.6 | 25 | 23.46 | 0.13 | 33.81 | 13 24 49.52 | — 2.20 | |
| | Lamont 4071 | 27 | | 56.6 | 58.0 | 59.7 | 0.4 | 3.0 | 15.0 | 17.4 | 19.9 | 26 | 6.25 | 6.61 | 33.81 | 13 25 25.83 | 2.21 | | | |
| | Weisse 569 | 28 | 43.6 | 45.1 | 47.7 | 59.9 | 1.2 | 2.9 | 4.6 | 6.0 | 18.3 | 20.8 | 22.3 | 35 | 2.93 | 0.15 | 33.81 | 13 31 28.97 | 2.20 | |
| | B. A. C. 4578 . . . | 29 | 43.8 | 45.4 | 47.9 | 59.9 | 1.5 | 3.1 | 4.8 | 6.4 | 18.4 | 20.8 | 22.4 | 39 | 3.13 | 0.14 | 33.80 | 13 38 29.19 | 2.21 | |
| | Virginis | 30 | 5.6 | 7.4 | 9.9 | 21.8 | 23.3 | 25.1 | 26.7 | 28.3 | 40.3 | 42.8 | 44.2 | 42 | 25.04 | 0.14 | 33.80 | 13 41 51.10 | 2.23 | |
| | Weisse 797 | 31 | 7.3 | 8.8 | 11.5 | 23.6 | 25.0 | 26.7 | 28.4 | 30.0 | 42.2 | 44.7 | 46.2 | 48 | 26.76 | 0.09 | 33.80 | 13 47 52.87 | 2.36 | |
| | Weisse (2) 1167 . . . | 32 | 49.6 | 51.5 | 54.3 | 7.1 | 8.8 | 10.4 | 11.3 | 14.1 | 27.2 | 29.9 | 31.5 | 54 | 10.52 | 0.05 | 33.80 | 13 53 36.67 | 2.53 | |
| | Centauri | 33 | 30.1 | 33.8 | 24.1 | 35.5 | 9.57 | 7.59 | 8.1 | 7.3 | 18.5 | 21.6 | 23.3 | 59 | 59.81 | 0.28 | 33.79 | 13 59 25.74 | 2.36 | |
| | Boötis | 34 | 16.2 | 18.0 | 20.6 | 33.4 | 34.9 | 36.6 | 38.5 | 40.0 | 52.7 | 55.4 | 57.0 | 10 | 36.66 | 0.06 | 33.79 | 14 10 2.81 | 2.46 | |
| | Leonis | 35 | | 18.5 | 20.2 | 21.9 | 23.7 | 25.3 | 38.2 | 40.8 | 42.5 | 8 | 28.89 | — | 6.96 | 49.19 | 11 7 32.74 | 1.99 | | |
| | Crateris | 36 | 39.7 | 41.3 | 44.0 | 56.3 | 57.8 | 59.5 | 1.2 | 2.8 | 15.1 | 17.7 | 19.2 | 13 | 59.51 | 0.22 | 49.19 | 11 13 10.10 | 1.54 | |
| | B. A. C. 3906 . . . | 37 | | 37.0 | 47.1 | 59.0 | 10.4 | 21.0 | | | | 23 | 58.90 | + | 1.37 | 49.18 | 11 23 11.09 | 10.52 | | |
| | B. A. C. 3927 . . . | 38 | 12.4 | 14.4 | 17.7 | 33.1 | 35.0 | 37.0 | 39.1 | 41.5 | 57.0 | 0.2 | 2.4 | 27 | 37.25 | — | 0.43 | 49.18 | 11 26 47.64 | 1.42 |
| | Lacaille 4837 . . . | 39 | 17.7 | 19.9 | 23.0 | 38.0 | 40.2 | 42.0 | 44.3 | 46.2 | 1.2 | 4.2 | 6.2 | 34 | 42.08 | 0.40 | 49.18 | 11 33 52.50 | 1.49 | |
| | B. A. C. 4023 . . . | 40 | 39.9 | 42.1 | 45.1 | 0.1 | 1.9 | 1.0 | 6.0 | 8.0 | 23.0 | 26.1 | 28.0 | 49 | 4.02 | 0.40 | 49.18 | 11 48 14.41 | 1.59 | |
| | B. A. C. 4042 . . . | 41 | 5.0 | 6.9 | 9.6 | 22.9 | 24.5 | 26.4 | 28.2 | 29.9 | 43.0 | 45.8 | 47.5 | 53 | 26.34 | — | 0.29 | 49.18 | 11 52 36.87 | 1.68 |
| | Weisse (2) 1079 . . . | 42 | 24.9 | 27.0 | 30.4 | | | | | | | 56 | 27.43 | + | 24.10 | 49.18 | 11 56 2.35 | 2.81 | | |
| | Weisse (2) 1056 . . . | 43 | | 58.8 | 0.9 | 3.2 | 5.4 | 7.5 | | | | 57 | 3.16 | — | 0.14 | 49.18 | 11 56 14.12 | 2.81 | | |
| | *—27° 18' | 44 | 37.1 | 38.9 | 41.8 | | | | | | | 2 | 58.75 | — | 0.30 | 49.17 | 12 2 9.28 | 1.72 | | |
| | *—27° 16' | 45 | | 43.0 | 45.8 | 47.7 | 49.8 | 51.7 | 3 | 47.60 | 38.62 | 49.17 | 12 2 19.81 | 1.72 | | | | | | |
| | Lacaille 5066 . . . | 46 | 38.9 | 40.9 | 43.8 | 58.0 | 0.0 | 1.8 | 4.0 | 5.7 | 20.0 | 23.0 | 24.7 | 8 | 1.89 | 0.36 | 49.17 | 12 7 12.36 | 1.73 | |
| | Weisse 199 | 47 | 24.2 | 25.9 | 28.3 | 40.2 | 41.8 | 43.6 | 45.2 | 46.9 | 48.7 | 1.1 | 2.7 | 14 | 43.51 | 0.09 | 49.17 | 12 13 54.25 | 2.04 | |
| | Lalande 23270 . . . | 48 | 57.2 | 58.8 | 1.3 | 13.3 | 14.8 | 16.4 | 18.2 | 19.7 | 31.6 | 34.1 | 35.7 | 21 | 16.46 | — | 0.15 | 49.17 | 12 20 27.14 | 1.96 |
| | O. Arg. N. 12726 . . | 49 | 31.7 | 35.7 | 41.5 | 0.0 | 12.6 | 16.7 | 20.5 | 24.2 | 51.9 | 57.7 | 1.1 | 27 | 16.60 | + | 0.41 | 49.17 | 12 26 27.84 | 4.44 |
| | B. A. C. 4255 . . . | 50 | 53.0 | 54.6 | 57.2 | 9 | 2 | 10.2 | 12.4 | 14.0 | 15.6 | 27.6 | 30.0 | 31.5 | 33 | 12.30 | — | 0.14 | —49.17 | — 2.01 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|----------------------|--------------------|-----------------|--------------|--------------|
| 1876. May 6, 12.4 | s. — 49.17 | s. + 0.014 | s. + 0.33 | s. — 0.12 |

| Date and observer. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. |
|----------------------|------------------------|---------|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------|--------------|--------|---------------------------|----------------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | |
| 1876. May 6 Y. | Lalande 23711 . . . | 1 | 46.3 | 48.4 | 51.5 | 5.8 | 7.7 | 9.8 | 11.7 | 13.5 | 27.9 | 31.0 | 32.8 | m. s. | m. s. | s. | h. m. s. | s. |
| | 7 Draconis . . . | 2 | 33.1 | 37.5 | 44.1 | 15.4 | 19.0 | 23.4 | 27.8 | 31.7 | 2.9 | 9.3 | 13.3 | 37 9.67 | + | 0.08 | 12 36 20.58 | — 2.63 |
| δ | Virginis . . . | 3 | 53.7 | 55.3 | 57.8 | 9.7 | 11.2 | 12.9 | 14.5 | 16.1 | 28.1 | 30.7 | 32.0 | 43 23.41 | + | 0.48 | 12 42 34.72 | 4.97 |
| | 46 Virginis . . . | 4 | 45.1 | 46.8 | 49.3 | 1.2 | 2.7 | 4.4 | 6.0 | 7.5 | 19.5 | 21.9 | 23.5 | 50 12.91 | — | 0.10 | 12 49 23.65 | 2.14 |
| θ | Virginis . . . | 5 | 4.2 | 5.8 | 8.3 | 20.3 | 21.7 | 23.5 | 25.0 | 26.5 | 38.7 | 41.1 | 42.6 | 55 4.36 | | 0.14 | 12 54 15.06 | 2.10 |
| | | | | | | | | | | | | | | 4 23.43 | | 0.15 | 13 3 34.12 | — 2.12 |
| | Polaris, S. P. . . | 6 | . . . | . . . | 58.0 | 4.0 | 14.0 | 24.0 | 30.0 | . . . | . . . | . . . | . . . | 13 14.00 | | 8.61 | . . . | + 61.92 |
| | Lamont 4071 . . . | 7 | 55.9 | 57.5 | 0.0 | 12.0 | 13.5 | 15.0 | 16.8 | 18.4 | 30.4 | 32.7 | 34.3 | 26 15.14 | | 0.13 | 13 25 25.85 | — 2.20 |
| | Weisse 626 . . . | 8 | 7.8 | 9.4 | 12.1 | 24.2 | 25.8 | 27.5 | 29.0 | 30.7 | 12.9 | 45.5 | 47.0 | 38 27.45 | | 0.19 | 13 37 38.11 | 2.20 |
| | B. A. C. 4593 . . . | 9 | 28.9 | 30.7 | 33.0 | 45.1 | 46.6 | 48.3 | 49.9 | 51.5 | 3.5 | 5.9 | 7.5 | 41 48.26 | | 0.16 | 13 40 58.95 | 2.23 |
| | *—38° 27' . . . | 10 | 33.4 | 35.0 | 37.8 | 53.9 | 55.7 | 58.1 | 0.0 | 1.7 | 17.0 | 19.9 | 22.1 | 46 57.69 | | 0.42 | 13 46 8.12 | 2.34 |
| Σ | Lacaille 5758 . . . | 11 | 48.3 | 50.2 | 53.3 | 8.7 | 9.7 | 12.5 | 14.5 | 15.4 | 31.7 | 34.9 | 36.7 | 50 12.35 | — | 0.41 | 13 49 22.79 | 2.34 |
| | Cat. Gen. 1570, (1st*) | 12 | 53.6 | 55.6 | 58.4 | . . . | . . . | . . . | . . . | . . . | 32.0 | 34.9 | 36.7 | 54 15.20 | + | 0.04 | 13 53 26.09 | 2.58 |
| Σ | Cat. Gen. 1570, (2d*) | 13 | . . . | . . . | . . . | 11.9 | 13.6 | 15.5 | 17.2 | 19.0 | . . . | . . . | . . . | 54 15.44 | + | 0.02 | 13 53 26.31 | 2.58 |
| | *—33° 5' . . . | 14 | . . . | . . . | . . . | 41.7 | 44.3 | 46.5 | 49.4 | 2.7 | 4.6 | 6.4 | 8.6 | 59 56.78 | — | 33.49 | 13 58 34.14 | 2.34 |
| a | Bootis . . . | 15 | 31.5 | 33.0 | 36.0 | 48.7 | 50.2 | 52.0 | 53.8 | 55.3 | 8.0 | 10.6 | 12.2 | 10 51.95 | | 0.01 | 14 10 2.80 | 2.46 |
| | Weisse 254 . . . | 16 | 11.4 | 13.1 | 15.7 | 27.4 | 29.1 | 30.6 | 32.6 | 34.1 | 45.9 | 47.9 | 49.8 | 16 30.70 | | 0.15 | 14 15 41.41 | 2.31 |
| | O. Arg. S. 13626 . . . | 17 | . . . | . . . | . . . | 56.6 | 58.3 | 0.0 | 1.8 | 3.5 | . . . | . . . | . . . | 21 0.04 | | 0.32 | 14 20 10.58 | 2.37 |
| | O. Arg. S. 13629 . . . | 18 | 26.0 | 28.3 | 30.2 | 31.9 | 34.7 | . . . | 42.7 | 45.5 | 47.4 | 49.1 | 51.3 | 21 8.71 | | 0.23 | 14 20 19.34 | 2.37 |
| | O. Arg. S. 13683 . . . | 19 | . . . | . . . | . . . | . . . | . . . | . . . | 11.5 | 14.2 | 15.9 | 17.6 | 19.4 | 25 15.72 | | 37.56 | 14 23 49.02 | 2.36 |
| | O. Arg. S. 13747 . . . | 20 | 45.5 | 47.4 | 50.2 | 3.4 | 5.3 | 7.1 | 8.9 | 10.6 | 24.3 | 27.0 | 28.7 | 30 7.13 | | 0.31 | 14 29 17.68 | 2.40 |
| | B. A. C. 4842 . . . | 21 | 43.8 | 45.9 | 49.0 | 3.8 | 5.8 | 8.1 | 9.9 | 11.9 | 26.9 | 29.9 | 32.0 | 35 7.91 | | 0.40 | 14 34 18.37 | 2.54 |
| 13 | ρ Leonis . . . | 22 | 12.3 | 13.9 | 16.5 | 28.6 | 30.1 | 31.8 | 33.6 | 35.1 | 47.1 | 49.8 | 51.2 | 26 31.82 | | 0.04 | 10 26 18.46 | 1.52 |
| | ι Leonis . . . | 23 | 39.8 | 41.5 | 44.0 | 56.1 | 57.6 | 59.3 | 1.0 | 2.7 | 14.8 | 17.3 | 18.8 | 42 59.35 | — | 0.04 | 10 42 45.99 | 1.62 |
| | B. A. C. 3747 . . . | 24 | 40.6 | 49.6 | 1.7 | 1.1 | 8.8 | 16.4 | 25.3 | 33.0 | 32.5 | 44.6 | 52.4 | 50 16.91 | + | 0.71 | 10 50 4.30 | 6.52 |
| | B. A. C. 3821 . . . | 25 | 37.9 | 42.1 | 49.2 | 22.6 | 26.6 | 31.3 | 35.9 | 40.1 | 13.8 | 20.5 | 24.9 | 4 31.35 | | 0.36 | 11 4 18.39 | 4.23 |
| | B. A. C. 3864 . . . | 26 | 59.5 | 3.6 | 9.4 | 37.5 | 41.0 | 44.9 | 49.0 | 52.8 | 20.8 | 26.7 | 30.4 | 15 45.05 | | 0.30 | 11 15 32.03 | 3.82 |
| 3 | Draconis . . . | 27 | 59.1 | 3.7 | 10.5 | 41.4 | 45.4 | 49.7 | 53.4 | 57.9 | 28.9 | 35.5 | 38.9 | 35 49.49 | + | 0.34 | 11 35 36.51 | 4.30 |
| | β Leonis . . . | 28 | 39.2 | 41.0 | 43.7 | 55.9 | 57.6 | 59.2 | 1.1 | 2.7 | 15.0 | 17.6 | 19.1 | 42 59.28 | — | 0.02 | 11 42 45.94 | 1.97 |
| | B. A. C. 4036 . . . | 29 | 59.8 | 3.5 | 8.4 | 34.3 | 37.5 | 41.4 | 44.6 | 47.8 | 13.5 | 18.7 | 21.8 | 50 41.03 | + | 0.26 | 11 50 27.97 | 3.80 |
| | B. A. C. 4055 . . . | 30 | 45.4 | 47.0 | 49.3 | 1.5 | 2.7 | 4.7 | 6.4 | 7.9 | 20.0 | 22.3 | 23.8 | 55 4.64 | — | 0.06 | 11 54 51.26 | 1.89 |
| 11 | Virginis . . . | 31 | 10.2 | 41.8 | 44.3 | 56.4 | 57.9 | 59.7 | 1.2 | 2.8 | 4.9 | 17.5 | 18.7 | 3 59.58 | | 0.06 | 12 3 46.20 | 1.96 |
| η | Virginis . . . | 32 | 29.9 | 31.4 | 33.9 | 45.9 | 47.3 | 48.9 | 50.7 | 52.1 | 4.2 | 6.7 | 8.2 | 13 49.02 | — | 0.08 | 12 13 35.62 | 1.94 |
| | Lalande 23666 . . . | 33 | 58.6 | 0.6 | 3.6 | 18.1 | 20.0 | 21.9 | 24.1 | 26.1 | 40.8 | 43.7 | 45.5 | 34 22.09 | + | 0.06 | 12 34 8.83 | 2.58 |
| | B. A. C. 4282 . . . | 34 | 24.7 | 27.1 | 30.5 | 47.5 | 49.5 | 51.0 | 54.1 | 56.6 | 13.4 | 16.8 | 18.8 | 38 51.90 | | 0.12 | 12 38 38.70 | 2.92 |
| | 11 Canum Venat. . . | 35 | 46.2 | 48.7 | 52.4 | 10.5 | 13.0 | 15.5 | 17.9 | 20.3 | 38.5 | 42.4 | 44.7 | 43 15.46 | | 0.14 | 12 43 2.28 | 3.13 |
| | Lacaille 5367 . . . | 36 | 33.5 | 35.3 | 38.3 | 51.6 | 53.4 | 55.2 | 57.0 | 58.7 | . . . | . . . | . . . | 55 47.88 | + | 7.09 | 12 55 41.65 | 2.00 |
| | B. A. C. 4378 . . . | 37 | . . . | . . . | . . . | 45.5 | 47.5 | 49.8 | 51.9 | 54.1 | 9.9 | 13.1 | 14.9 | 59 58.34 | — | 8.89 | 12 59 36.13 | 2.06 |
| | B. A. C. 4407 . . . | 38 | 47.1 | 49.1 | 52.4 | 7.5 | 9.4 | 11.4 | 13.5 | 15.6 | 30.8 | 33.9 | 35.9 | 4 11.51 | + | 0.08 | 13 3 58.27 | — 2.76 |
| | Polaris, S. P. . . | 39 | . . . | . . . | . . . | 26.0 | 31.0 | 40.0 | 49.0 | 54.0 | . . . | . . . | . . . | 12 40.00 | — | 6.23 | . . . | + 60.59 |
| | Lalande 24841 . . . | 40 | 42.6 | 45.0 | 48.3 | 3.6 | 5.7 | 7.6 | 9.9 | 12.0 | 27.4 | 30.8 | 32.7 | 18 7.78 | + | 0.09 | 13 17 54.55 | — 2.86 |
| | Lamont 4071 . . . | 41 | 20.2 | 21.7 | 24.1 | 36.1 | 37.6 | 39.3 | 41.0 | 42.6 | 54.5 | 57.0 | 58.4 | 25 39.32 | — | 0.09 | 13 25 25.91 | 2.21 |
| | Weisse 626 . . . | 42 | 31.9 | 33.6 | 36.1 | 48.4 | 49.9 | 51.6 | 53.2 | 54.9 | 7.1 | 9.6 | 11.1 | 37 51.58 | | 0.13 | 13 37 38.13 | 2.21 |
| | B. A. C. 4593 . . . | 43 | . . . | . . . | . . . | 9.2 | 10.8 | 12.5 | 14.1 | 15.6 | 27.6 | 30.0 | 31.8 | 41 18.95 | | 6.63 | 13 40 59.00 | 2.24 |
| | *—38° 27' . . . | 44 | 57.5 | 59.4 | 2.6 | 18.1 | 19.8 | 21.8 | 24.0 | 26.0 | 41.2 | 44.5 | 46.2 | 46 21.92 | | 0.29 | 13 46 8.31 | 2.35 |
| | η Bootis . . . | 45 | . . . | . . . | . . . | 18.6 | 21.2 | 22.9 | 34.4 | 37.2 | 38.9 | 40.7 | 42.6 | 49 32.06 | — | 29.36 | 13 48 49.38 | 2.46 |
| | *+77° 11' . . . | 46 | . . . | . . . | . . . | 37.5 | 44.3 | 51.3 | 59.5 | 5.8 | . . . | . . . | . . . | 54 51.68 | + | 0.61 | 13 54 38.97 | 7.71 |
| θ | Centauri . . . | 47 | 15.9 | 17.8 | 21.0 | 35.5 | 37.5 | 39.5 | 41.6 | 43.5 | 58.3 | 1.1 | 3.0 | 59 39.52 | — | 0.27 | 13 59 25.93 | 2.40 |
| | a Bootis . . . | 48 | 55.7 | 57.5 | 0.2 | 12.9 | 14.4 | 16.2 | 18.0 | 19.5 | 32.3 | 34.9 | 36.4 | 10 16.18 | | 0.00 | 14 10 2.86 | — 2.48 |

CORRECTIONS, &c.

21. Clock stopped.

| Date. | Error of clock. | Hourly rate. | " | " |
|--------------------------|-----------------|--------------|--------------|--------------|
| 1876. h. May 13, 12.2 | s. — 13.32 | s. 0.00 | s. + 0.23 | s. — 0.08 |

OBSERVATIONS WITH THE MERIDIAN TRANSIT INSTRUMENT.

| Date and ob- server. | OBJECT. | Number | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. | | |
|-------------------------|-----------------------------------|--------|--------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|---------|----------|---------------------------------|-------------------------|-------------|------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | | |
| | | | | | | | | | | | | | | m. s. | m. s. | s. | | | h. m. s. | s. |
| 1876. May 20 Y. | δ Leonis | 1 | 19.4 | 21.1 | 23.9 | 36.8 | 38.3 | 40.1 | 41.8 | 43.6 | 56.3 | 59.0 | 0.6 | 7 40.08 | + | 0.05 | 7.64 | | 1.84 | |
| | δ Crateris | 2 | 57.9 | 59.7 | 2.2 | 14.6 | 16.0 | 17.8 | 19.5 | 21.1 | 33.4 | 36.1 | 37.5 | 13 17.80 | — | 0.12 | 7.64 | | 1.40 | |
| | 86 Leonis | 3 | 49.7 | 51.5 | 54.2 | 6.7 | 8.3 | 10.1 | 11.8 | 13.5 | 26.1 | 28.8 | 30.1 | 24 10.10 | + | 0.04 | 7.64 | 11 24 2.50 | 1.81 | |
| | Weisse (2) 509 | 4 | 24.3 | 26.1 | 28.7 | 41.6 | 43.2 | 45.0 | 46.8 | 48.4 | 1.1 | 3.8 | 5.4 | 28 44.95 | — | 0.06 | 7.64 | 11 28 37.37 | 1.86 | |
| | 3 Draconis | 5 | 53.0 | 57.6 | 1.2 | 35.0 | 39.0 | 43.2 | 47.5 | 51.7 | 23.0 | 29.3 | 33.0 | 35 43.34 | + | 0.54 | 7.64 | 11 35 36.24 | 4.02 | |
| | A ¹ Virginis | 6 | 22.7 | 24.4 | 26.8 | 39.0 | 40.4 | 42.1 | 43.8 | 45.4 | 57.3 | 59.8 | 1.4 | 41 42.10 | — | 0.01 | 7.64 | 11 41 34.45 | 1.83 | |
| | Weisse 758 | 7 | 41.0 | 42.5 | 45.0 | 57.2 | 58.7 | 0.4 | 2.0 | 3.6 | 15.5 | 18.2 | 19.6 | 45 0.34 | — | 0.09 | 7.64 | 11 44 52.61 | 1.60 | |
| | B. A. C. 4036 | 8 | 53.5 | 57.0 | 2.5 | 28.0 | 31.2 | 34.7 | 38.4 | 41.7 | 7.4 | 12.8 | 15.8 | 50 34.82 | + | 0.43 | 7.64 | 11 50 27.61 | 3.59 | |
| | Weisse (2) 1079 | 9 | 42.9 | 45.1 | 48.5 | | | | | | 30.6 | 33.8 | 35.9 | 56 9.47 | — | 0.21 | 7.64 | 11 56 2.04 | 2.60 | |
| | Weisse (2) 1086 | 10 | 54.9 | 57.1 | 0.4 | | | | | | 42.4 | 45.8 | 47.9 | 56 21.42 | + | 0.21 | 7.64 | 11 56 13.99 | 2.61 | |
| | *—27° 16' | 11 | 16.5 | 18.2 | 21.0 | 34.5 | 36.2 | 37.9 | 39.8 | 41.5 | 55.1 | 57.7 | 59.5 | 4 37.99 | — | 0.20 | 7.64 | 12 4 30.15 | 1.62 | |
| | η Virginis | 12 | 24.1 | 25.6 | 28.3 | 40.3 | 41.7 | 43.4 | 45.0 | 46.7 | 58.6 | 1.0 | 2.4 | 13 43.37 | — | 0.05 | 7.64 | | 1.89 | |
| | B. A. C. 4198 | 13 | 12.6 | 14.5 | 17.1 | 29.5 | 31.0 | 32.9 | 34.5 | 36.1 | 48.5 | 51.2 | 52.6 | 21 32.77 | — | 0.13 | 7.64 | 12 21 25.00 | 1.80 | |
| 23 | δ Leonis | 14 | 17.2 | 19.0 | 21.7 | 34.5 | 36.1 | 37.9 | 39.7 | 41.3 | 54.0 | 56.7 | 58.3 | 7 37.85 | + | 0.07 | 5.36 | 11 7 32.56 | 1.81 | |
| | δ Crateris | 15 | 55.5 | 57.1 | 59.8 | 12.2 | 13.8 | 15.4 | 17.1 | 18.7 | 31.1 | 33.7 | 35.2 | 13 15.42 | — | 0.12 | 5.36 | 11 13 9.94 | 1.37 | |
| | θ Crateris | 16 | 11.0 | 12.7 | 15.2 | 27.5 | 28.9 | 30.6 | 32.3 | 33.8 | 45.9 | 48.4 | 49.9 | 30 30.56 | — | 0.09 | 5.36 | 11 30 25.11 | 1.56 | |
| | 3 Draconis | 17 | 50.9 | 55.6 | 1.8 | 32.9 | 36.9 | 41.0 | 45.2 | 49.4 | 20.4 | 26.9 | 30.8 | 35 41.07 | + | 0.62 | 5.36 | 11 35 36.33 | 3.90 | |
| | B. A. C. 4036 | 18 | 51.5 | 54.9 | 0.2 | 25.8 | 29.3 | 32.1 | 36.3 | 39.4 | 5.0 | 10.3 | 13.5 | 50 32.62 | + | 0.49 | 5.35 | 11 50 27.76 | 3.49 | |
| | B. A. C. 4055 | 19 | 37.4 | 39.0 | 41.5 | 53.5 | 54.9 | 56.5 | 58.1 | 59.6 | 11.8 | 14.2 | 15.9 | 54 56.58 | — | 0.02 | 5.35 | 11 54 51.21 | 1.81 | |
| | Weisse 963 | 20 | 24.7 | 26.3 | 29.2 | | | | | | 59.5 | 1.6 | 3.2 | 57 44.08 | — | 0.01 | 5.35 | 11 57 38.72 | 1.83 | |
| | Weisse 966 | 21 | 31.9 | 33.6 | 36.6 | | | | | | 6.8 | 9.0 | 10.7 | 57 51.43 | — | 0.01 | 5.35 | 11 57 46.07 | 1.83 | |
| | *+4° 6' | 22 | 32.3 | 34.0 | 36.4 | 48.5 | 50.2 | 52.0 | 53.6 | 55.0 | 6.8 | 9.5 | 11.1 | 58 51.76 | — | 0.02 | 5.35 | 11 58 46.39 | 1.83 | |
| | η Virginis | 23 | 32.0 | 33.6 | 36.0 | 48.1 | 49.7 | 51.3 | 53.1 | 54.7 | 6.7 | 9.3 | 10.7 | 3 51.38 | — | 0.01 | 5.35 | 12 3 46.02 | 1.88 | |
| | η Virginis | 24 | 21.9 | 23.4 | 25.9 | 37.8 | 39.5 | 41.1 | 42.8 | 44.3 | 56.2 | 58.5 | 0.1 | 13 41.04 | — | 0.04 | 5.35 | 12 13 35.65 | 1.87 | |
| | Weisse (2) 348 | 25 | 35.8 | 37.7 | 40.5 | 54.0 | 55.6 | 57.5 | 59.3 | 1.0 | 14.5 | 17.1 | 18.7 | 17 57.43 | + | 0.10 | 5.35 | 12 17 52.18 | 2.24 | |
| | *—37° 45' | 26 | 38.0 | 40.3 | 42.3 | 54.5 | 57.7 | | | | 3.4 | 6.5 | 8.4 | 10.4 | 12.9 | 22 25.44 | 5.35 | 12 22 10.90 | 1.68 | |
| | Lacaille 5214 | 27 | 3.7 | 5.8 | 9.0 | 24.4 | 26.4 | 28.6 | 30.8 | 32.7 | 48.1 | 51.3 | 53.3 | 29 28.56 | — | 0.30 | 5.35 | 12 29 22.91 | 1.74 | |
| | Lalande 23666 | 28 | 50.6 | 52.6 | 55.7 | 10.1 | 11.9 | 13.9 | 15.9 | 17.8 | 32.5 | 35.6 | 37.4 | 34 14.00 | + | 0.16 | 5.34 | 12 34 8.82 | 2.48 | |
| | Polaris, S. P. | 29 | | 12.0 | 16.0 | 6.0 | | | | | | | | 0 31.33 | + | 12 1.28 | 5.34 | | + 53.88 | |
| | B. A. C. 4437 | 30 | 45.4 | 47.4 | 50.3 | 4.1 | 5.8 | 7.8 | 9.6 | 11.3 | 25.4 | 28.3 | 29.8 | 10 7.75 | — | 0.22 | 5.34 | 13 10 2.19 | 2.05 | |
| | O. Arg. S. 12800 | 31 | 20.2 | 21.9 | 24.4 | 37.1 | 38.4 | 40.8 | 42.8 | 44.3 | 57.7 | 59.7 | 1.8 | 13 40.83 | — | 0.18 | 5.34 | 13 13 35.31 | 2.06 | |
| | Lalande 24841 | 32 | 34.5 | 36.9 | 40.0 | 55.4 | 57.2 | 59.6 | 1.9 | 3.8 | 19.3 | 22.7 | 24.7 | 17 59.64 | + | 0.20 | 5.34 | 13 17 54.50 | 2.77 | |
| | *+61° 54' | 33 | 48.6 | 51.8 | 56.8 | 22.5 | 25.4 | 28.7 | 32.2 | 35.8 | 0.9 | 6.6 | 9.5 | 25 28.98 | + | 0.48 | 5.33 | 13 25 24.13 | 3.94 | |
| | ζ Virginis | 34 | | 45.3 | 47.7 | 49.2 | 50.9 | 2.7 | 4.2 | 5.9 | 7.7 | 28 57.82 | — | 27.80 | — | 0.08 | 5.33 | 13 28 21.69 | 2.20 | |
| | Weisse (2) 777 | 35 | 54.1 | 55.8 | 58.4 | 11.6 | 13.4 | 14.9 | 16.7 | 18.5 | 31.2 | 33.8 | 35.6 | 38 14.91 | + | 0.08 | 5.33 | 13 38 9.66 | 2.46 | |
| | Weisse (2) 782 | 36 | | | | | | | | | 49.3 | 51.9 | 53.6 | 38 51.60 | — | 18.60 | 5.33 | 13 38 27.67 | 2.46 | |
| | B. A. C. 4613 | 37 | 13.0 | 14.6 | 17.3 | 30.1 | 31.6 | 33.3 | 34.5 | 36.0 | 49.4 | 52.1 | 53.7 | 43 33.36 | — | 0.15 | 5.33 | 13 43 27.88 | 2.23 | |
| | Lacaille 5758 | 38 | | | | | | | | | 6.4 | 9.1 | 11.2 | 13.3 | 16.0 | 50 11.20 | 43.41 | 13 49 22.46 | 2.36 | |
| | *—37° 46' | 39 | 11.4 | 13.4 | 16.4 | 31.8 | 33.5 | 35.4 | 37.5 | 39.3 | 54.7 | 57.9 | 59.8 | 49 35.55 | — | 0.29 | 5.32 | 13 49 29.92 | 2.36 | |
| | Weisse (2) 1159 | 40 | | | | 38.2 | 40.0 | 42.0 | 43.8 | 45.9 | | | | 53 41.98 | + | 0.08 | 5.33 | 13 53 36.73 | 2.52 | |
| | *—33° 5' | 41 | | | | 35.7 | 37.5 | 39.4 | 41.2 | 42.8 | | | | 58 39.32 | — | 0.26 | 5.33 | 13 58 33.73 | 2.38 | |
| | *—24° 34' | 42 | 21.0 | 22.8 | 25.7 | 38.8 | 40.5 | 42.1 | 44.0 | 45.9 | 58.8 | 1.6 | 3.1 | 4 42.21 | — | 0.18 | 5.33 | 14 4 36.70 | 2.35 | |
| | Weisse (2) 196 | 43 | 34.2 | 36.0 | 38.7 | 51.4 | 52.9 | 54.8 | 56.3 | 58.1 | 10.8 | 13.6 | 15.4 | 10 54.75 | + | 0.07 | 5.32 | 14 10 49.50 | 2.52 | |
| | *—38° 6' | 44 | 56.9 | 58.9 | 1.5 | 17.1 | 8.7 | 21.0 | 23.2 | 25.2 | 40.5 | 43.7 | 45.8 | 14 21.14 | — | 0.29 | 5.32 | 14 14 15.53 | 2.53 | |
| 2 | Librae | 45 | | | | 50.0 | 51.6 | 53.2 | 54.8 | 56.5 | 8.7 | 11.1 | 12.7 | 16 59.83 | — | 6.70 | 5.32 | 14 16 47.81 | 2.37 | |
| | *—11° 5' | 46 | 49.3 | 51.0 | 53.5 | 5.8 | 7.2 | 8.9 | 10.6 | 12.2 | 24.3 | 26.8 | 28.4 | 18 8.91 | — | 0.10 | 5.32 | 14 18 3.49 | 2.37 | |
| | O. Arg. S. 13683 | 47 | 33.4 | 35.2 | 37.8 | 51.2 | 52.6 | 54.4 | 56.2 | 57.8 | 11.0 | 13.5 | 15.2 | 23 54.39 | — | 0.18 | 5.32 | 14 23 48.89 | 2.44 | |
| | O. Arg. S. 13747 | 48 | 1.5 | 3.2 | 6.2 | 19.7 | 21.3 | 23.2 | 25.2 | 27.1 | 40.5 | 43.2 | 44.8 | 29 23.26 | — | 0.20 | 5.32 | 14 29 17.74 | 2.50 | |
| π | Boötis, (1st *) | 49 | 22.2 | 24.2 | 26.0 | 27.8 | 30.3 | | | | 33.1 | 36.1 | 39.3 | 41.2 | 35 1.79 | + | 0.12 | 5.32 | 14 34 50.59 | 2.52 |
| π | Boötis, (2d *) | 50 | 42.3 | 44.1 | 46.6 | 58.9 | 0.4 | 2.1 | 3.9 | 5.6 | 18.2 | 20.7 | 22.2 | 35 2.27 | + | 0.05 | — 5.32 | 14 34 57.00 | — 2.52 | |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------|--------------------|-----------------|--------|--------|
| 1876. h. s. | s. | s. | s. | s. |
| May 20, 11.5 | — 7.64 | 0.00 | + 0.28 | — 0.05 |
| 23, 12.9 | — 5.34 | + 0.013 | + 0.30 | — 0.04 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction, to 1876.0. |
|-------------------------|---------------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|----------|-------------------|-------|--------------|-------------|---------------------------------|--------------------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | |
| 1876. May 23 Y. | ϵ Bootis | 1 | 20.5 | 22.3 | 25.4 | 38.6 | 40.3 | 42.2 | 44.2 | 45.9 | 59.5 | 2.2 | 3.8 | m. s. 39 42.26 | + | 0.11 | — 5.31 | h. m. s. 14 39 37.06 | — 2.65 |
| | a^2 Libræ | 2 | 49.0 | 50.8 | 53.5 | 5.8 | 7.4 | 9.2 | 10.9 | 12.5 | 57.3 | 59.0 | 0.9 | 44 2.39 | + | 6.60 | 5.31 | 14 44 3.68 | 2.48 |
| | B. A. C. 4923, (1st *) | 3 | 40.2 | 42.2 | 43.9 | 45.6 | 48.3 | 52.9 | 55.5 | 57.3 | 59.0 | 0.9 | 50 20.58 | — | 0.07 | 5.31 | 14 50 15.20 | 2.53 | |
| | B. A. C. 4923, (2d *) | 4 | 1.1 | 2.8 | 5.4 | 18.3 | 19.8 | 21.5 | 23.4 | 25.1 | 38.6 | 40.5 | 42.1 | 50 21.64 | — | 0.15 | 5.31 | 14 50 16.18 | 2.53 |
| 24 | δ Leonis | 5 | 17.3 | 18.9 | 21.5 | 34.4 | 36.0 | 37.8 | 39.7 | 41.2 | 54.0 | 56.6 | 58.4 | 7 37.80 | + | 0.15 | 5.36 | 11 7 32.59 | 1.80 |
| | δ Crateris | 6 | 55.7 | 57.1 | 59.9 | 12.0 | 13.6 | 15.3 | 16.9 | 18.6 | 30.9 | 33.5 | 35.1 | 13 15.33 | — | 0.10 | 5.36 | 11 13 9.87 | 1.36 |
| | 2 Draconis | 7 | 57.7 | 2.3 | 9.3 | 44.5 | 48.8 | 53.8 | 58.5 | 3.0 | 38.1 | 45.4 | 49.9 | 28 53.75 | + | 1.07 | 5.36 | 11 28 49.46 | 4.14 |
| | ι Crateris | 8 | .. | .. | .. | 44.7 | 47.3 | 48.9 | 0.1 | 2.7 | 4.4 | 6.0 | 8.0 | 32 57.76 | — | 28.63 | 5.36 | 11 32 23.77 | 1.50 |
| | Rumker 3727 . . . | 9 | 34.8 | 36.4 | 38.9 | 51.3 | 52.9 | 54.7 | 56.3 | 57.9 | 10.2 | 12.9 | 14.5 | 38.54.61 | + | 0.11 | 5.36 | 11 38 49.36 | 1.86 |
| | A ¹ Virginis | 10 | 20.4 | 21.8 | 24.4 | 36.5 | 38.0 | 39.8 | 41.4 | 42.8 | 55.0 | 57.5 | 59.2 | 41 39.71 | + | 0.06 | 5.36 | 11 41 34.41 | 1.79 |
| | B. A. C. 4015 . . . | 11 | 23.1 | 25.0 | 28.0 | 42.2 | 44.0 | 45.9 | 47.8 | 49.8 | 3.9 | 6.9 | 9.0 | 46 45.96 | — | 0.26 | 5.36 | 11 46 40.34 | 1.40 |
| | B. A. C. 4036 . . . | 12 | 51.1 | 54.5 | 59.6 | 25.2 | 28.6 | 32.1 | 35.8 | 38.9 | 1.6 | 10.0 | 13.5 | 50 32.17 | + | 0.74 | 5.36 | 11 50 27.55 | 3.46 |
| | Weisse (2) 1079 . . | 13 | 40.5 | 42.6 | 45.8 | .. | .. | .. | .. | .. | 27.7 | 31.3 | 33.4 | 56 6.88 | — | 0.23 | 5.36 | 11 56 1.75 | 2.54 |
| | Weisse (2) 1086 . . | 14 | 52.6 | 54.5 | 58.0 | .. | .. | .. | .. | .. | 39.8 | 43.3 | 45.6 | 56 18.97 | + | 0.23 | 5.36 | 11 56 13.84 | 2.54 |
| | O. Arg. S. 11920 . . | 15 | 1.8 | 3.5 | 6.1 | 19.2 | 21.9 | 22.7 | 24.4 | 26.1 | 39.0 | 41.9 | 43.6 | 1 22.75 | — | 0.17 | 5.36 | 12 1 17.22 | 1.59 |
| | B. A. C. 4106, (2d *) | 16 | .. | .. | .. | 42.0 | 54.3 | 7.2 | 19.6 | 30.8 | .. | .. | .. | 6 6.78 | + | 3.04 | 5.36 | 12 6 4.46 | 9.99 |
| | Weisse 114 | 17 | 0.0 | 1.4 | 4.0 | 16.4 | 17.7 | 19.5 | 21.2 | 22.8 | 34.9 | 37.4 | 39.0 | 10 19.48 | — | 0.06 | 5.36 | 12 10 14.06 | 1.75 |
| | ζ Virginis | 18 | 21.8 | 23.4 | 25.9 | 37.7 | 39.4 | 41.0 | 42.7 | 44.1 | 56.0 | 58.6 | 0.2 | 13 40.98 | — | 0.00 | 5.36 | 12 13 35.62 | 1.86 |
| | *+26° 32' | 19 | .. | .. | .. | 21.0 | 22.8 | 24.7 | 26.5 | 28.1 | .. | .. | .. | 16 24.62 | + | 0.12 | 5.36 | 12 16 19.38 | 2.22 |
| | Weisse (2) 348 . . | 20 | 36.1 | 37.7 | 40.5 | 53.8 | 55.6 | 57.5 | 59.4 | 1.1 | 14.3 | 17.2 | 19.0 | 17 57.47 | + | 0.11 | 5.36 | 12 17 52.22 | 2.23 |
| *—37° 15' | 21 | 1.3 | 3.3 | 6.1 | 21.3 | 23.4 | 25.5 | 27.7 | 29.6 | 44.3 | 47.5 | 49.6 | 22 25.42 | — | 0.30 | 5.36 | 12 22 19.76 | 1.67 | |
| O. Arg. S. 12286 . . | 22 | 27.6 | 28.9 | 31.7 | 45.0 | 46.6 | 48.7 | 51.5 | 52.1 | 5.2 | 8.0 | 9.9 | 30 48.65 | — | 0.17 | 5.36 | 12 30 43.12 | 1.78 | |
| Lacaille 5252 . . . | 23 | 33.7 | 35.3 | 38.2 | 53.5 | 55.1 | 57.4 | 59.4 | 1.3 | 16.3 | 19.4 | 21.5 | 35 57.37 | — | 0.30 | 5.36 | 12 35 51.71 | 1.79 | |
| 7 Draconis | 24 | 48.9 | 52.4 | 58.9 | 30.2 | 34.1 | 38.5 | 43.0 | 46.9 | 18.0 | 24.6 | 28.7 | 42 38.56 | + | 0.94 | 5.36 | 12 42 34.14 | 4.89 | |
| 25 | B. A. C. 4331 . . . | 25 | .. | .. | .. | 7.5 | 9.6 | 11.7 | 14.3 | 16.4 | 32.7 | 36.2 | 38.1 | 48 20.81 | — | 9.29 | 5.36 | 12 48 6.16 | 1.89 |
| | Weisse 880 | 26 | 28.7 | 30.2 | 32.8 | 44.9 | 46.5 | 48.2 | 49.9 | 51.5 | 3.5 | 6.1 | 7.6 | 52 48.17 | — | 0.06 | 5.36 | 12 52 42.75 | 1.99 |
| | Lacaille 5367 . . . | 27 | .. | .. | .. | 43.5 | 45.3 | 46.9 | 48.9 | 50.5 | 3.9 | 6.8 | 8.6 | 55 54.30 | — | 7.50 | 5.36 | 12 55 41.44 | — 1.94 |
| | Polaris, S. P. . . . | 28 | 17.0 | 22.0 | 14.0 | .. | .. | .. | .. | .. | .. | .. | .. | 0 37.67 | +11 | 55.77 | 5.36 | .. | + 53.07 |
| | B. A. C. 4437 . . . | 29 | 45.2 | 47.2 | 50.0 | 3.6 | 5.6 | 7.7 | 9.7 | 11.6 | 25.1 | 28.2 | 30.1 | 10 7.64 | — | 0.23 | 5.36 | 13 10 2.05 | — 2.04 |
| | O. Arg. S. 12800 . . | 30 | 20.3 | 21.7 | 24.5 | 37.4 | 38.9 | 41.0 | 42.9 | 44.6 | 57.6 | 0.4 | 1.9 | 13 41.02 | — | 0.17 | 5.36 | 13 13 35.49 | 2.06 |
| | Lalande 24841 . . . | 31 | 34.6 | 36.6 | 39.8 | 55.3 | 57.3 | 59.5 | 1.6 | 3.7 | 19.0 | 22.5 | 24.6 | 17 59.50 | + | 0.33 | 5.36 | 13 17 54.47 | 2.76 |
| | *—61° 54' | 32 | 47.3 | 50.8 | 55.6 | .. | 24.6 | 27.9 | 31.3 | .. | 0.0 | 5.2 | 8.5 | 25 27.91 | + | 0.73 | 5.36 | 13 25 23.28 | 3.92 |
| | ζ Virginis | 33 | 11.1 | 12.6 | 15.0 | 27.0 | 28.5 | 30.2 | 31.8 | 33.4 | 45.2 | 47.7 | 49.5 | 28 30.18 | — | 0.00 | 5.36 | 13 28 24.82 | 2.20 |
| | Weisse 569 | 34 | .. | .. | .. | 49.6 | 52.1 | 53.8 | 5.1 | 7.4 | 9.0 | 10.6 | 12.7 | 35 2.54 | — | 28.19 | 5.36 | 13 34 28.99 | 2.20 |
| | Weisse (2) 777 . . | 35 | 54.1 | 55.7 | 58.3 | 11.2 | 13.0 | 14.7 | 15.5 | 18.2 | 31.0 | 33.9 | 35.6 | 38 14.65 | + | 0.16 | 5.36 | 13 38 9.45 | 2.46 |
| | Weisse (2) 782 . . | 36 | .. | .. | .. | 49.4 | 52.0 | 53.7 | 5.7 | 8.5 | 10.0 | 12.0 | 14.1 | 39 3.18 | — | 29.99 | 5.36 | 13 38 27.83 | 2.46 |
| | B. A. C. 4613 . . . | 37 | 13.0 | 14.7 | 17.2 | 30.0 | 31.6 | 33.4 | 35.1 | 36.7 | 49.5 | 52.1 | 53.9 | 43 33.38 | — | 0.14 | 5.36 | 13 43 27.88 | 2.23 |
| | Weisse (2) 1159 . . | 38 | 21.4 | 23.0 | 25.6 | 38.7 | 40.2 | 42.1 | 44.0 | 45.5 | 58.5 | 1.2 | 3.1 | 53 42.12 | + | 0.17 | 5.36 | 13 53 36.93 | 2.51 |
| | *—33° 5' | 39 | 16.6 | 18.2 | 21.5 | 35.8 | 37.4 | 39.4 | 41.3 | 43.2 | 57.0 | 0.2 | 2.5 | 58 39.37 | — | 0.26 | 5.36 | 13 58 33.75 | 2.37 |
| | *—24° 34' | 40 | 21.2 | 22.9 | 25.6 | 38.7 | 40.3 | 42.3 | 44.0 | 45.6 | 58.8 | 1.4 | 3.3 | 4.42.19 | — | 0.18 | 5.36 | 14 4 36.65 | 2.35 |
| a Bootis | 41 | 47.7 | 49.2 | 51.9 | 4.6 | 6.3 | 8.0 | 9.8 | 11.3 | 23.9 | 26.7 | 28.5 | 10 7.99 | + | 0.14 | 5.36 | 14 10 2.77 | 2.47 | |
| 26 | δ Leonis | 42 | 16.9 | 18.6 | 21.1 | 33.9 | 35.6 | 37.4 | 39.0 | 40.7 | 53.5 | 56.2 | 58.0 | 7 37.35 | — | 0.16 | 4.96 | 11 7 32.55 | 1.77 |
| | 2 Draconis | 43 | 58.0 | 2.4 | 9.1 | 44.4 | 48.9 | 53.7 | 58.0 | 2.4 | 37.7 | 45.0 | 50.1 | 28 53.61 | — | 0.68 | 4.93 | 11 28 49.36 | 4.04 |
| | 61 Ursæ Majoris . . | 44 | 14.6 | 16.4 | 19.4 | 34.1 | 36.0 | 38.0 | 40.0 | 41.9 | 56.1 | 59.4 | 1.4 | 34 37.94 | — | 0.22 | 4.92 | 11 34 33.24 | 2.16 |
| | β Leonis | 45 | 30.7 | 32.5 | 35.0 | 47.4 | 49.0 | 50.7 | 52.4 | 54.0 | 6.4 | 8.9 | 10.5 | 42 50.68 | — | 0.13 | 4.92 | 11 42 45.89 | 1.85 |
| | B. A. C. 4037 . . . | 46 | 29.8 | 31.6 | 34.4 | 48.5 | 50.2 | 52.3 | 54.3 | 56.1 | 10.2 | 13.2 | 15.1 | 50 52.34 | — | 0.01 | 4.91 | 11 50 47.44 | 1.42 |
| | Weisse 926 | 47 | 39.8 | 41.4 | 43.9 | 56.1 | 57.7 | 59.4 | 1.0 | 2.5 | 14.9 | 17.5 | 19.0 | 54 59.38 | — | 0.13 | 4.90 | 11 54 54.61 | 1.90 |
| o | Virginis | 48 | 40.8 | 42.4 | 44.9 | 57.0 | 58.5 | 0.2 | 1.8 | 3.4 | 15.4 | 18.0 | 19.6 | 59 0.18 | — | 0.12 | 4.89 | 11 58 55.41 | 1.87 |
| | Lacaille 5044 . . . | 49 | 50.7 | 52.4 | 55.1 | 8.2 | 9.8 | 11.6 | 13.4 | 15.0 | 28.1 | 31.0 | 32.7 | 4 11.64 | + | 0.03 | — 4.89 | 12 4 6.78 | — 1.59 |

CORRECTIONS, &c.

May 26. Image west of .95. Clamp east.
Image west of .95. Clamp west.
Lengthened the focus slightly.
Image 1st.000. Clamp west.
Image of .75. Clamp east.
Changed level.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------------------|--------------------|-----------------|--------|--------|
| 1876. h. May 24, 12.4 | — 5.36 | — 0.001 | + 0.39 | 0.00 |
| 26, 13.3 | — 4.80 | + 0.072 | + 0.15 | + 0.09 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. | | | |
|-------------------------|------------------------|---------|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|-------|-------|---------------------------------|-------------------------|-----------|-------|-------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | | Clock. | | |
| | | | | | | | | | | | | | | | m. | s. | | | | m. | s. |
| 1876. May 26 Y. | Weisse 107 . . . | 1 | 34.9 | 36.4 | 39.0 | 50.8 | 52.6 | 54.2 | 56.0 | 57.3 | 9.5 | 12.0 | 13.7 | 8 54.22 | + | 0.07 | 4.88 | 12 8 49.41 | — | 1.73 | |
| K ² | *—9° 35' . . . | 2 | . . . | . . . | . . . | 20.8 | 22.4 | 24.1 | 25.8 | 27.4 | 39.5 | 41.9 | 43.5 | 9 30.68 | — | 6.49 | 4.88 | 12 9 19.31 | — | 1.73 | |
| | Centauri . . . | 3 | 33.2 | 35.0 | 38.0 | 52.5 | 54.4 | 56.4 | 58.4 | 0.1 | 14.6 | 17.8 | 19.7 | 18 56.37 | + | 0.01 | 4.87 | 12 18 51.51 | — | 1.63 | |
| | Lacaille 5192 . . | 4 | 23.2 | 24.9 | 27.6 | 41.0 | 42.7 | 44.5 | 46.4 | 48.1 | 1.4 | 4.2 | 6.0 | 25 44.55 | + | 0.02 | 4.86 | 12 25 39.71 | — | 1.72 | |
| | O. Arg. S. 12286 . | 5 | 26.8 | 28.4 | 31.2 | 44.3 | 45.8 | 47.7 | 49.6 | 51.5 | 4.5 | 7.4 | 9.0 | 30 47.84 | + | 0.03 | 4.86 | 12 30 43.01 | — | 1.77 | |
| | O. Arg. S. 12342 . | 6 | 39.8 | 41.3 | 44.0 | 57.3 | 58.9 | 0.7 | 2.5 | 4.3 | 17.3 | 20.2 | 22.0 | 35 0.75 | + | 0.03 | 4.85 | 12 34 55.93 | — | 1.80 | |
| H | Lacaille 5256 . . | 7 | 24.4 | 26.1 | 28.7 | 41.8 | 43.6 | 45.6 | 47.3 | 48.9 | 2.0 | 4.7 | 6.5 | 36 45.42 | + | 0.03 | 4.85 | 12 36 40.60 | — | 1.81 | |
| | Polaris, S. P. . . | 8 | 10.0 | 20.0 | 7.0 | 32.0 | 35.0 | 46.0 | 56.0 | 59.0 | 21.0 | 10.0 | 13.0 | 12 44.45 | — | 10.15 | 4.81 | | + | 51.54 | |
| | Boo'is . . . | 9 | 33.8 | 35.3 | 38.0 | 50.4 | 52.1 | 54.0 | 55.7 | 57.2 | 9.9 | 12.6 | 14.3 | 48 53.94 | + | 0.15 | 4.76 | 13 48 49.33 | — | 2.43 | |
| | *+77° 11' . . . | 10 | 16.4 | 23.2 | 34.0 | 27.4 | 34.7 | 42.4 | 50.0 | 56.4 | 50.0 | 1.0 | 8.2 | 54 42.16 | + | 1.07 | 4.76 | 13 54 38.47 | — | 7.05 | |
| | Weisse (2) 1314 . | 11 | 17.6 | 19.4 | 22.3 | 37.0 | 38.8 | 41.0 | 43.0 | 44.8 | 59.3 | 2.4 | 4.5 | 0 40.92 | + | 0.22 | 4.75 | 14 0 36.39 | — | 2.72 | |
| | B. A. C. 4714 . . | 12 | 35.2 | 37.1 | 40.1 | 54.1 | 55.9 | 58.0 | 59.9 | 1.8 | 16.1 | 18.9 | 20.8 | 5 57.99 | + | 0.21 | 4.74 | 14 5 53.46 | — | 2.69 | |
| | Weisse (2) 196, (1st*) | 13 | 33.8 | 35.4 | 37.9 | . . . | . . . | . . . | . . . | . . . | 10.3 | 13.1 | 14.7 | 10 51.20 | + | 0.14 | 4.74 | 14 10 49.60 | — | 2.51 | |
| | Weisse (2) 196, (2d*) | 14 | . . . | . . . | . . . | 50.8 | 52.3 | 54.2 | 56.0 | 57.6 | . . . | . . . | . . . | 10 51.18 | + | 0.16 | 4.74 | 14 10 49.60 | — | 2.51 | |
| | Weisse 254 . . . | 15 | . . . | . . . | . . . | 1.2 | 3.7 | 5.4 | 15.7 | 18.3 | 20.4 | 22.3 | 24.3 | 16 13.91 | — | 27.86 | 4.73 | 14 15 41.32 | — | 2.37 | |
| | O. Arg. S. 13626 . | 16 | 54.1 | 55.6 | 58.5 | . . . | . . . | . . . | . . . | . . . | 32.3 | 35.4 | 37.0 | 20 15.48 | + | 0.01 | 4.73 | 14 20 10.76 | — | 2.45 | |
| | O. Arg. S. 13629 . | 17 | 2.8 | 4.3 | 7.3 | . . . | . . . | . . . | . . . | . . . | 41.0 | 44.0 | 45.6 | 20 24.17 | + | 0.01 | 4.73 | 14 20 19.45 | — | 2.45 | |
| | O. Arg. S. 13747 . | 18 | 1.1 | 2.5 | 5.3 | 18.8 | 20.4 | 22.4 | 24.2 | 25.9 | 39.4 | 42.4 | 44.3 | 29 22.43 | + | 0.02 | 4.71 | 14 29 17.74 | — | 2.50 | |
| | *—27° 44' . . . | 19 | . . . | . . . | . . . | 3.2 | 4.8 | 6.9 | 8.7 | 10.5 | 23.9 | 26.9 | 28.4 | 30 14.16 | — | 7.29 | 4.71 | 14 30 2.16 | — | 2.51 | |
| | Boo'is . . . | 20 | 1.3 | 2.7 | 5.3 | 17.5 | 19.1 | 20.9 | 22.6 | 24.2 | 36.3 | 39.0 | 40.7 | 35 20.87 | + | 0.13 | 4.71 | 14 35 16.29 | — | 2.51 | |
| | Hydra . . . | 21 | 56.1 | 57.9 | 0.4 | 13.7 | 15.3 | 17.3 | 19.0 | 20.7 | 33.8 | 36.7 | 38.5 | 40 17.22 | + | 0.03 | 4.70 | 14 40 12.55 | — | 2.53 | |
| | Weisse (2) 936 . . | 22 | . . . | . . . | . . . | 6.4 | 8.2 | 10.6 | 12.5 | 14.4 | 29.1 | 32.3 | 34.4 | 44 18.49 | — | 7.84 | 4.70 | 14 44 5.95 | — | 2.82 | |
| | Weisse (2) 1127 . | 23 | 2.0 | 4.5 | 6.8 | 8.7 | 12.2 | . . . | 31.5 | 34.8 | 37.0 | 39.2 | 41.7 | 52 51.84 | + | 0.16 | 4.69 | 14 52 47.31 | — | 2.92 | |
| | Weisse (2) 1130 . | 24 | 3.7 | 29.2 | 32.7 | 48.4 | 50.5 | 52.7 | 54.8 | 56.9 | 12.5 | 16.2 | 17.9 | 52 52.65 | + | 0.25 | 4.69 | 14 52 48.21 | — | 2.92 | |
| | Weisse 1063 . . . | 25 | . . . | . . . | . . . | . . . | . . . | . . . | 11.6 | 14.3 | 15.9 | 17.5 | 19.6 | 58 15.78 | — | 34.72 | 4.68 | 14 57 36.38 | — | 2.51 | |
| | Weisse (2) 1326 . | 26 | 27.0 | 28.8 | 32.1 | 46.8 | 48.9 | 51.0 | 53.0 | 54.9 | 9.8 | 12.9 | 15.1 | 1 50.94 | + | 0.23 | 4.67 | 15 1 46.50 | — | 2.83 | |
| β | Weisse 99 . . . | 27 | 26.1 | 27.6 | 29.9 | 41.9 | 43.5 | 45.3 | 46.9 | 48.4 | 0.2 | 2.8 | 4.3 | 7 45.17 | + | 0.09 | 4.67 | 15 7 40.59 | — | 2.52 | |
| | Libra . . . | 28 | . . . | . . . | . . . | 24.1 | 25.6 | 27.1 | 28.5 | 30.2 | 42.5 | 45.0 | 46.6 | 10 33.74 | — | 6.48 | 4.66 | 15 10 22.60 | — | 2.53 | |
| | *+41° 34' . . . | 29 | 40.0 | 42.1 | 45.2 | 1.4 | 3.2 | 5.5 | 7.5 | 9.6 | 25.8 | 29.2 | 31.5 | 16 5.55 | + | 0.25 | 4.66 | 15 16 1.14 | — | 2.94 | |
| | *+38° 36' . . . | 30 | 16.1 | 17.8 | 21.0 | 36.3 | 38.2 | 40.4 | 42.2 | 44.3 | 59.5 | 2.9 | 5.0 | 19 40.34 | + | 0.23 | 4.65 | 15 19 35.92 | — | 2.87 | |
| | *—27° 44' . . . | 31 | 22.9 | 24.5 | 27.1 | 41.0 | 42.8 | 44.6 | 46.4 | 48.0 | 1.6 | 4.4 | 6.4 | 24 44.52 | + | 0.02 | 4.65 | 15 24 39.89 | — | 2.75 | |
| | O. Arg. S. 14665 . | 32 | 30.7 | 32.3 | 35.0 | 48.2 | 49.7 | 51.6 | 53.6 | 55.2 | 8.2 | 11.1 | 12.8 | 27 51.67 | — | 0.03 | 4.64 | 15 27 47.00 | — | 2.72 | |
| | *—38° 10' . . . | 33 | 45.7 | 47.6 | 50.8 | . . . | . . . | . . . | 48.3 | 51.7 | 53.8 | 55.8 | 58.3 | 32 29.00 | — | 18.90 | 4.64 | 15 32 5.46 | — | 2.99 | |
| | *+15° 47' . . . | 34 | 25.3 | 26.9 | 29.6 | 41.8 | 43.5 | 45.4 | 47.0 | 48.5 | 1.0 | 3.4 | 5.2 | 38 45.24 | + | 0.14 | 4.63 | 15 38 40.75 | — | 2.59 | |
| | Serpentis . . . | 35 | . . . | . . . | . . . | 31.8 | 33.5 | 35.2 | 36.9 | 38.5 | 50.9 | 53.4 | 55.1 | 40 41.91 | — | 6.59 | 4.63 | 15 40 30.69 | — | 2.59 | |
| | Weisse (2) 1201 . | 36 | 11.8 | 14.0 | 17.3 | 33.5 | 35.7 | 38.0 | 40.2 | 42.2 | 58.6 | 1.8 | 4.2 | 48 37.94 | + | 0.27 | 4.62 | 15 48 33.59 | — | 2.94 | |
| 27 | Coronæ Borealis . | 37 | 13.0 | 14.7 | 17.5 | 30.9 | 32.6 | 34.5 | 36.4 | 38.1 | 51.4 | 54.5 | 56.2 | 52 34.53 | + | 0.18 | 4.60 | 15 52 30.11 | — | 2.68 | |
| | Leonis . . . | 38 | 49.7 | 31.2 | 33.8 | 46.1 | 47.8 | 49.6 | 51.2 | 52.8 | 5.1 | 7.7 | 9.4 | 42 49.49 | + | 0.01 | 3.62 | 11 42 45.88 | — | 1.84 | |
| | Weisse (2) 1013 . | 39 | 37.5 | 39.2 | 42.2 | 57.6 | 58.5 | 0.5 | 2.4 | 4.3 | 18.6 | 21.7 | 23.7 | 53 0.56 | — | 0.10 | 3.61 | 11 52 56.85 | — | 2.23 | |
| | Virginis . . . | 40 | 30.3 | 31.8 | 34.4 | 46.4 | 47.9 | 49.6 | 51.2 | 52.8 | 4.8 | 7.4 | 8.9 | 3 49.59 | + | 0.06 | 3.59 | 12 3 46.06 | — | 1.85 | |
| | Lacaille 5066 . . | 41 | 52.5 | 54.3 | 57.3 | 11.4 | 13.4 | 15.4 | 17.3 | 19.2 | 33.4 | 36.5 | 38.4 | 7 15.37 | + | 0.34 | 3.59 | 12 7 12.12 | — | 1.54 | |
| H | Lacaille 5073 . . | 42 | . . . | . . . | . . . | 53.0 | 54.7 | 57.0 | 58.8 | 0.7 | 14.7 | 17.9 | 19.8 | 8 4.58 | — | 7.38 | 3.59 | 12 7 53.61 | — | 1.54 | |
| | Virginis . . . | 43 | 20.0 | 21.4 | 23.8 | 35.9 | 37.4 | 39.2 | 50.6 | 42.3 | 54.0 | 56.7 | 58.3 | 13 39.06 | + | 0.10 | 3.58 | 12 13 35.58 | — | 1.84 | |
| | Centauri . . . | 44 | 31.6 | 33.5 | 36.3 | 50.8 | 52.7 | 54.8 | 56.8 | 58.6 | 13.1 | 16.1 | 18.1 | 18 54.76 | + | 0.35 | 3.57 | 12 18 51.54 | — | 1.62 | |
| | *—15° 49' . . . | 45 | 51.9 | 54.0 | 55.8 | 57.2 | 0.0 | . . . | 2.6 | 5.3 | 6.7 | 8.5 | 10.6 | 23 31.26 | + | 6.11 | 3.56 | 12 23 27.81 | — | 1.76 | |
| | Corvi . . . | 46 | 12.3 | 13.7 | 16.4 | 28.7 | 30.4 | 32.1 | 33.9 | 35.4 | 47.7 | 50.4 | 52.0 | 23 32.09 | + | 0.19 | 3.56 | 12 23 28.72 | — | 1.76 | |
| | Weisse (2) 581 . . | 47 | 5.3 | 7.0 | 9.6 | 22.5 | 24.0 | 25.9 | 27.6 | 29.4 | 42.0 | 44.8 | 46.5 | 28 25.87 | + | 0.24 | 3.55 | 12 28 22.56 | — | 2.16 | |
| | B. A. C. 4255 . . | 48 | 7.0 | 8.6 | 11.0 | 23.0 | 24.6 | 26.1 | 27.8 | 29.4 | 41.3 | 43.8 | 45.5 | 32 26.19 | + | 0.12 | 3.55 | 12 32 22.76 | — | 1.90 | |
| | Weisse 585 . . . | 49 | 58.8 | 0.3 | 2.8 | 14.8 | 16.4 | 18.1 | 19.8 | 21.3 | 33.1 | 35.8 | 37.4 | 36 18.05 | + | 0.13 | 3.54 | 12 36 14.64 | — | 1.92 | |
| | Polaris, S. P. . . | 50 | 51.0 | 0.0 | 48.0 | 10.0 | 14.0 | 23.0 | 33.0 | 39.0 | 6.5 | 50.0 | 53.0 | 12 24.32 | + | 9.55 | — | 3.48 | | + | 50.84 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------------------|-----------------|---------------|--------------|--------------|
| 1876. h. May 27, 13.4 | s. — 3.46 | s. + 0.097 | s. — 0.33 | s. + 0.10 |

32. Northern.
33. Southern.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | |
|---------------------------|---------------------------------|---------|--------------------------------|---------|---------|---------|---------|---------|-------|-------|-------|----------|----------|---------------|-------|---------------------------------|-------------------------|-------------|--------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | |
| 1876. May 27 Y. | η Bootis | 1 | | | 49.2 | 51.0 | 52.8 | 54.6 | 56.1 | 8.8 | 11.4 | 13.0 | m. s. | m. s. | s. | h. m. s. | s. | | |
| | *-37° 10' | 2 | 19.5 | 21.1 | 24.2 | 39.4 | 41.2 | 43.5 | 45.4 | 47.3 | 2.4 | 5.6 | 7.6 | 48 59.65 | - | 6.86 | 3.42 | 13 48 49.33 | - 2 43 |
| | B. A. C. 4719 . . . | 3 | 34.2 | 36.0 | 38.9 | 53.0 | 54.9 | 56.8 | 58.8 | 0.6 | 14.6 | 17.8 | 19.8 | 56 43.38 | + | 0.38 | 3.41 | 13 56 40.35 | 2.40 |
| | ϵ Bootis | 4 | 52.4 | 55.6 | 58.4 | . . . | 5.0 | . . . | 42.2 | . . . | 49.0 | 51.5 | 54.8 | 5 56.85 | - | 0.10 | 3.39 | 14 5 53.36 | 2.68 |
| | O. Arg. N. 14432 . | 5 | 24.9 | 26.9 | 31.2 | . . . | 52.9 | 55.6 | 58.5 | . . . | 20.1 | 24.3 | 27.0 | 11 53.61 | + | 0.39 | 3.38 | 14 11 49.84 | 3.29 |
| | | | | | | | | | | | | | | | | 0.26 | 3.38 | 14 11 52.07 | 3.29 |
| | *-4° 44' | 6 | | | | | | | 27.6 | 30.0 | 31.6 | 33.3 | 35.3 | 15 31.56 | | 34.18 | 3.38 | 14 14 54.00 | 2.37 |
| | Weisse 257 | 7 | | | | | | | 24.0 | 26.6 | 23.2 | 29.6 | 31.5 | 16 27.98 | - | 34.18 | 3.38 | 14 15 50.42 | 2.37 |
| | O. Arg. S. 13616 . | 8 | 31.4 | 33.4 | 35.2 | 37.0 | 40.0 | . . . | . . . | . . . | . . . | . . . | . . . | 19 35.40 | + | 38.63 | 3.37 | 14 20 10.66 | 2.45 |
| | O. Arg. S. 13629 . | 9 | 0.8 | 2.5 | 5.3 | 18.7 | 20.4 | 22.5 | 24.1 | 25.9 | 39.3 | 42.2 | 44.0 | 20 22.34 | + | 0.29 | 3.37 | 14 20 19.26 | 2.45 |
| | O. Arg. S. 13747 . | 10 | | | 17.1 | 18.8 | 20.7 | 22.5 | 24.3 | 37.7 | 40.7 | 42.5 | 29 28.04 | - | 7.02 | 3.35 | 14 29 17.67 | 2.51 | |
| | *-27° 42' | 11 | | | 13.5 | 16.4 | 18.2 | 30.9 | 33.4 | 34.8 | 36.6 | 38.7 | 30 27.81 | - | 31.17 | 3.35 | 14 29 53.29 | 2.51 | |
| | B. A. C. 4852 . . . | 12 | 47.1 | 48.8 | 51.7 | 6.4 | 8.2 | 10.3 | 12.2 | 13.9 | 28.5 | 31.6 | 33.8 | 36 10.23 | + | 0.35 | 3.34 | 14 36 7.24 | 2.62 |
| | ϵ Bootis | 13 | | | 36.7 | 38.5 | 40.4 | 42.2 | 43.9 | . . . | . . . | . . . | . . . | 39 40.34 | - | 0.05 | 3.34 | 14 39 36.95 | 2.65 |
| | α^2 Libræ | 14 | 47.0 | 48.6 | 51.1 | 3.5 | 5.2 | 7.0 | 8.6 | 10.1 | 22.5 | 25.2 | 26.9 | 44 6.88 | + | 0.19 | 3.33 | 14 44 3.74 | 2.49 |
| | O. Arg. N. 14996 . | 15 | 53.9 | 56.9 | . . . | 25.5 | 28.8 | 31.8 | 35.0 | 38.1 | . . . | 7.1 | 10.2 | 53 31.92 | - | 0.39 | 3.31 | 14 53 28.22 | 3.77 |
| | B. A. C. 4982 . . . | 16 | | | 39.8 | 53.0 | 6.6 | 20.3 | 32.2 | . . . | . . . | . . . | . . . | 59 6.38 | - | 1.80 | 3.31 | 14 59 1.27 | 11.57 |
| | *-37° 2' | 17 | 34.4 | 36.1 | 39.3 | . . . | . . . | . . . | . . . | 17.2 | 20.1 | 22.5 | 4 8.27 | + | 0.37 | 3.30 | 15 4 5.34 | 2.83 | |
| *-37° 2' | 18 | | | 48.9 | 51.0 | 53.0 | 55.1 | 57.0 | . . . | . . . | . . . | . . . | 5 53.00 | + | 0.39 | 3.30 | 15 5 50.09 | 2.84 | |
| 29 | β Leonis | 19 | 27.5 | 29.1 | 31.6 | 44.0 | . . . | 47.2 | . . . | 50.6 | 2.9 | 5.5 | 7.2 | 42 47.29 | | 0.01 | 1.41 | 11 42 45.89 | 1.82 |
| | α Virginis | 20 | 37.4 | . . . | 41.3 | 53.5 | 54.9 | 56.8 | 58.5 | 59.9 | 12.0 | . . . | 16.2 | 58 56.72 | | 0.05 | 1.40 | 11 58 55.37 | 1.84 |
| | γ Corvi | 21 | 8.7 | 10.2 | 12.8 | 25.2 | 2.0 | 28.7 | 30.3 | 31.9 | 44.3 | 46.9 | 48.6 | 9 28.60 | | 0.23 | 1.39 | 12 9 27.44 | 1.65 |
| | Weisse 335 | 22 | 20.4 | 21.8 | 24.4 | 36.4 | 37.8 | 39.7 | 41.1 | 42.7 | 54.8 | 57.3 | 59.0 | 21 39.58 | | 0.16 | 1.39 | 12 21 38.35 | 1.81 |
| | Lacaille 5192 . . . | 23 | 19.3 | 21.0 | 23.7 | 37.3 | 39.0 | . . . | 42.6 | 44.4 | 57.7 | 0.5 | 2.3 | 25 40.78 | + | 0.31 | 1.38 | 12 25 39.71 | 1.70 |
| | B. A. C. 4243 . . . | 24 | | | 3.7 | 5.6 | 7.9 | 9.9 | 12.0 | 27.8 | 31.0 | 33.0 | 29 16.36 | - | 8.03 | 1.38 | 12 29 6.95 | 1.66 | |
| | B. A. C. 4262 . . . | 25 | 48.1 | 50.0 | 53.1 | 8.5 | 10.5 | 12.6 | 14.7 | 15.8 | 32.1 | 35.5 | 37.6 | 33 12.59 | + | 0.45 | 1.38 | 12 23 11.66 | 1.70 |
| | Lacaille 5257 . . . | 26 | 38.8 | 40.3 | 43.1 | 56.3 | . . . | 59.8 | . . . | 3.4 | 16.6 | 19.3 | 21.2 | 36 59.87 | | 0.30 | 1.37 | 12 36 58.80 | 1.78 |
| | Polaris, S. P. . . | 27 | 47.0 | 59.0 | 44.0 | 6.0 | 11.0 | 20.0 | 32.0 | 38.0 | 4.0 | 16.0 | 50.0 | 12 21.55 | + | 10.82 | 1.35 | | 50.17 |
| | η Bootis | 28 | 30.5 | 32.0 | 34.7 | . . . | 48.8 | 50.6 | 52.4 | . . . | 6.5 | 9.2 | 10.9 | 48 50.62 | - | 0.01 | 1.33 | 13 48 49.28 | 2.42 |
| | *+23° 28' | 29 | | | 51.5 | 52.9 | 55.2 | 56.9 | 58.5 | . . . | . . . | . . . | 52 55.00 | | 0.03 | 1.32 | 13 52 53.65 | 2.49 | |
| | Weisse 931 | 30 | | | 15.5 | 17.0 | 18.7 | 20.3 | 21.9 | 33.9 | 36.3 | 38.0 | 55 25.20 | | 6.38 | 1.32 | 13 55 17.50 | 2.31 | |
| | Weisse (2) 1314 . | 31 | 14.6 | 16.3 | . . . | 33.8 | 35.6 | 37.6 | 39.8 | 41.7 | . . . | 59.3 | 1.2 | 0 37.77 | | 0.14 | 1.32 | 14 0 36.31 | 2.70 |
| | B. A. C. 4714 . . . | 32 | 31.9 | 33.7 | 36.8 | 50.9 | 52.6 | 54.8 | 56.8 | 58.6 | 12.6 | 15.7 | 17.7 | 5 54.74 | | 0.11 | 1.32 | 14 5 53.31 | 2.67 |
| | ϵ Bootis | 33 | 50.2 | 53.2 | 55.9 | 58.5 | 2.9 | . . . | 40.4 | 44.5 | 47.0 | 49.8 | 52.9 | 11 51.53 | | 0.41 | 1.31 | 14 11 49.81 | 3.26 |
| | O. Arg. N. 14432 . | 34 | 22.7 | . . . | 29.0 | 48.7 | . . . | 54.0 | . . . | 59.0 | 18.4 | . . . | 24.8 | 11 53.80 | - | 0.30 | 1.31 | 14 11 52.19 | 3.26 |
| | *-11° 5' | 35 | 45.0 | 46.5 | 49.1 | 1.2 | 2.8 | 4.4 | 6.3 | 7.9 | 19.9 | 22.5 | 14.2 | 18 4.53 | + | 0.19 | 1.31 | 14 18 3.41 | 2.38 |
| | O. Arg. S. 13683 . | 36 | 29.4 | 30.8 | 33.3 | 46.6 | 47.9 | 49.9 | 51.5 | 53.2 | 6.3 | 9.3 | 10.8 | 23 49.91 | | 0.29 | 1.31 | 14 23 48.89 | 2.43 |
| *-27° 41' | 37 | | | 52.5 | 54.2 | 55.7 | 57.2 | 59.0 | . . . | . . . | . . . | 29 55.72 | + | 0.33 | 1.30 | 14 29 54.75 | 2.51 | | |
| π Bootis, (1st *) . . | 38 | 18.4 | 20.3 | 22.1 | 23.7 | 26.5 | . . . | 29.3 | 31.9 | 33.6 | 35.3 | 37.4 | 34 57.85 | - | 0.07 | 1.30 | 14 34 56.48 | 2.53 | |
| π Bootis, (2d *) . . | 39 | 38.3 | 39.7 | 42.3 | 54.9 | 6.5 | 58.2 | 59.8 | 1.5 | 14.1 | 16.7 | 18.3 | 34 58.21 | | 0.00 | 1.30 | 14 34 56.91 | 2.53 | |
| α^2 Libræ | 40 | 45.0 | 46.6 | 49.2 | 1.5 | 3.0 | 4.8 | 6.4 | 8.2 | 20.4 | 23.0 | 24.9 | 44 4.82 | + | 0.22 | 1.29 | 14 44 3.75 | 2.50 | |
| β Libræ | 41 | 4.4 | 6.0 | 8.5 | 20.5 | 22.1 | 23.8 | 25.5 | 27.0 | 39.1 | 41.7 | 43.3 | 10 23.81 | | 0.17 | 1.27 | 15 10 22.71 | 2.55 | |
| June 5 | η Virginis | 42 | 39.8 | 41.4 | 43.8 | 55.7 | 57.2 | 58.9 | 0.5 | 2.2 | 14.0 | 16.5 | 18.2 | 13 58.93 | | 0.14 | 23.50 | 12 13 35.57 | 1.77 |
| | δ Corvi | 43 | 32.0 | 33.6 | 36.2 | 48.7 | 50.3 | 52.0 | 53.6 | 55.2 | 7.6 | 10.3 | 12.0 | 23 51.96 | | 0.27 | 23.50 | 12 23 28.73 | 1.69 |
| | Polaris, S. P. . . | 44 | 15.0 | 25.0 | 12.0 | 33.0 | 38.0 | 48.0 | 59.0 | 4.0 | 28.0 | 11.0 | 15.0 | 12 48.00 | | 12.50 | 23.51 | | 43.71 |
| | η Bootis | 45 | 52.5 | 54.3 | 56.7 | 9.4 | 11.0 | 12.8 | 14.5 | 16.1 | 28.6 | 31.4 | 33.1 | 49 12.76 | - | 0.01 | 23.52 | 13 48 49.23 | 2.39 |
| | Σ Cat. Gen. 1570, (1st*) | 46 | 7.6 | 9.4 | 11.4 | 13.2 | 16.1 | . . . | 23.1 | 26.0 | 27.8 | 29.6 | 31.8 | 53 49.60 | | 0.15 | 23.52 | 13 53 25.93 | 2.49 |
| | Σ Cat. Gen. 1570, (2d*) | 47 | 28.4 | 30.1 | 32.8 | 46.1 | 47.8 | 49.6 | 51.6 | 53.2 | 6.5 | 9.3 | 11.0 | 53 49.67 | | 0.07 | 23.52 | 13 53 26.08 | 2.49 |
| | *-37° 10' | 48 | | | 59.4 | 1.3 | 3.4 | 5.6 | 7.7 | 22.2 | 25.7 | 27.7 | 57 11.62 | | 7.62 | 23.52 | 13 56 40.48 | 2.36 | |
| | Weisse (2) 1314 . | 49 | 36.7 | 38.5 | 41.4 | 56.0 | 58.0 | 59.9 | 2.0 | 3.8 | 18.4 | 21.7 | 23.6 | 1 0.00 | | 0.15 | 23.52 | 14 0 36.33 | 2.65 |
| B. A. C. 4714 . . . | 50 | 54.1 | 55.8 | 58.8 | 13.0 | 14.9 | 16.9 | 18.7 | 20.6 | 34.9 | 37.8 | 39.8 | 6 16.85 | - | 0.12 | 23.52 | 14 5 53.21 | 2.63 | |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | <i>n</i> | <i>c</i> |
|--------------|--------------------|-----------------|----------|----------|
| 1876. h. | s. | s. | s. | s. |
| May 29, 13.5 | - 1.34 | + 0.039 | - 0.37 | + 0.11 |
| June 5, 14.7 | - 23.53 | - 0.012 | - 0.45 | + 0.14 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. | | |
|-------------------------|--------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|---------------|--------------|--------|--------|---------------------------------|-------------------------|-------|------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | | | |
| | | | m. | s. | m. | s. | s. | h. | m. | s. | s. | | | | | | | | | | |
| 1876. June 5 Y. | Weisse (2) 196, (1st*) | 1 | 52.6 | 54.3 | 56.9 | 9.6 | 11.4 | 13.0 | 14.8 | 16.4 | 29.4 | 31.8 | 33.6 | 11 13.07 | — | 0.02 | —23.52 | 14 10 49.53 | — | 2.48 | |
| | Weisse (2) 196, (2d*) | 2 | | | | | | | 45.4 | 48.1 | 49.9 | 51.6 | 53.8 | 11 49.76 | — | 36.58 | 23.52 | 14 10 49.66 | | 2.48 | |
| | Weisse 236 | 3 | 56.9 | 58.4 | 0.9 | 13.0 | 14.4 | 16.2 | 17.8 | 19.2 | 31.2 | 33.7 | 35.5 | 15 16.11 | + | 0.18 | 23.53 | 14 14 52.76 | | 2.36 | |
| | Weisse 254 | 4 | 45.8 | 47.1 | 49.5 | 1.5 | 2.9 | 4.7 | 6.4 | 7.8 | 19.7 | 22.3 | 23.9 | 16 4.69 | | 0.18 | 23.53 | 14 15 41.34 | | 2.36 | |
| | Weisse 362 | 5 | 3.3 | 4.8 | 7.3 | 19.2 | 20.7 | 22.4 | 24.0 | 25.5 | 37.4 | 40.1 | 41.6 | 21 22.39 | | 0.15 | 23.53 | 14 20 59.01 | | 2.39 | |
| | Weisse 445 | 6 | 46.1 | 47.4 | 50.1 | 2.0 | 3.4 | 5.2 | 6.9 | 8.4 | 20.3 | 22.9 | 24.5 | 26 5.20 | | 0.15 | 23.53 | 14 25 41.82 | | 2.41 | |
| | *—27° 41' | 7 | 55.1 | 57.0 | 59.7 | 13.1 | 14.7 | 16.5 | 18.4 | 20.1 | 33.6 | 36.5 | 38.4 | 30 16.65 | + | 0.40 | 23.53 | 14 29 53.52 | | 2.51 | |
| | *—27° 44' | 8 | | | | | | | | 59.4 | 2.1 | 3.9 | 5.7 | 7.9 | 31 3.80 | — | 38.24 | 23.53 | 14 30 2.03 | | 2.51 |
| | π Bootis, (1st*) | 9 | 40.7 | 42.7 | 44.5 | 46.0 | 48.8 | | | 51.4 | 54.2 | 55.8 | 57.7 | 59.6 | 35 20.14 | — | 0.07 | 23.53 | 14 34 56.54 | | 2.51 |
| | π Bootis, (2d*) | 10 | 0.5 | 2.1 | 4.6 | 17.2 | 19.7 | 20.5 | 22.2 | 23.7 | 36.2 | 38.5 | 40.5 | 35 20.55 | + | 0.01 | 23.53 | 14 34 57.03 | | 2.51 | |
| | 55 Hydræ | 11 | 14.8 | 16.4 | 19.1 | 32.2 | 33.9 | 35.6 | 37.6 | 39.3 | 52.3 | 55.1 | 56.9 | 40 35.75 | | 0.37 | 23.53 | 14 40 12.59 | | 2.55 | |
| | B. A. C. 4923, (1st*) | 12 | 58.3 | 0.3 | 2.1 | 3.6 | 6.5 | | | 10.8 | 13.5 | 15.1 | 16.6 | 19.0 | 50 38.58 | | 0.24 | 23.53 | 14 50 15.29 | | 2.57 |
| | B. A. C. 4923, (2d*) | 13 | 18.9 | 20.6 | 23.3 | 36.2 | 37.7 | 39.5 | 41.0 | 42.8 | 55.6 | 58.5 | 0.0 | 50 39.46 | + | 0.32 | 23.53 | 14 50 16.25 | | 2.57 | |
| | ι Bootis, (1st*) | 14 | | | | 4.0 | 6.3 | 8.7 | 11.2 | 13.6 | | | | 0 8.76 | — | 0.28 | 23.53 | 14 59 44.95 | | 3.08 | |
| | ι Bootis, (2d*) | 15 | | | | 31.9 | 35.7 | 38.1 | 54.4 | 58.4 | 0.4 | 3.1 | 5.9 | 0 50.99 | — | 41.02 | 23.53 | 14 59 45.44 | | 3.08 | |
| | β Libræ | 16 | 26.5 | 28.0 | 30.6 | 42.7 | 44.2 | 45.8 | 47.6 | 49.2 | 1.2 | 3.8 | 5.5 | 10 45.92 | + | 0.21 | 23.54 | 15 10 22.59 | | 2.57 | |
| | *+43° 11' | 17 | 52.1 | 54.0 | 57.4 | | | | | | 38.7 | 42.0 | 44.1 | 34 18.05 | — | 0.24 | 23.54 | 15 33 54.27 | | 2.95 | |
| | β Serpentis | 18 | 31.2 | 35.7 | 38.4 | 50.7 | 52.4 | 54.2 | 55.8 | 57.4 | 9.8 | 12.4 | 14.2 | 40 54.11 | + | 0.02 | 23.54 | 15 40 30.59 | | 2.64 | |
| | Lalande 28926 | 19 | 20.8 | 22.8 | 25.8 | 11.0 | 43.0 | 45.0 | 47.1 | 48.9 | 4.3 | 7.5 | 9.3 | 46 44.05 | — | 0.18 | 23.54 | 15 46 21.33 | | 2.85 | |
| | β Scorpii | 20 | | | | 36.3 | 38.1 | 40.0 | 41.7 | 43.2 | 55.7 | 58.5 | 0.3 | 58 46.72 | — | 6.56 | 23.54 | 15 58 16.62 | | 2.83 | |
| | δ Ophiuchi | 21 | 57.9 | 59.4 | 1.9 | 13.8 | 15.4 | 16.9 | 18.7 | 20.1 | 32.1 | 34.6 | 36.3 | 8 17.01 | + | 0.17 | 23.55 | 16 7 53.63 | | 2.71 | |
| 6 | Weisse (2) 599 | 22 | 2.5 | 4.3 | 7.0 | 19.9 | 21.5 | 23.2 | 25.0 | 26.8 | 39.7 | 42.4 | 44.0 | 29 23.30 | — | 0.09 | 24.76 | 12 28 58.45 | | 2.09 | |
| | B. A. C. 4255 | 23 | 28.5 | 30.2 | 32.5 | 44.5 | 46.1 | 47.6 | 49.3 | 50.8 | 2.8 | 5.3 | 6.8 | 32 47.67 | | 0.16 | 24.77 | 12 32 22.74 | — | 1.84 | |
| | Polaris, S. P. | 24 | 40.0 | 44.0 | 26.0 | 50.0 | 54.0 | 4.0 | 15.0 | 19.0 | 41.0 | 28.0 | 38.0 | 13 5.36 | | 2.23 | | | + | 12.78 | |
| | η Bootis | 25 | 53.7 | 55.5 | 58.2 | 10.9 | 12.5 | 14.2 | 15.9 | 17.5 | 30.2 | 32.8 | 34.4 | 49 14.16 | | 0.10 | 24.82 | 13 48 49.24 | — | 2.38 | |
| | Σ Cat. Gen. 1570, (1st*) | 26 | 8.6 | 10.5 | 12.5 | 14.2 | 17.0 | | | 24.2 | 27.3 | 28.8 | 30.8 | 53 50.67 | | 0.16 | 24.82 | 13 53 25.69 | | 2.48 | |
| | Σ Cat. Gen. 1570, (2d*) | 27 | 29.7 | 31.4 | 34.2 | 47.5 | 48.9 | 50.9 | 52.8 | 54.5 | 7.9 | 10.7 | 12.5 | 53 51.00 | | 0.08 | 24.82 | 13 53 26.10 | | 2.48 | |
| | O. Arg. S. 13387 | 28 | 3.3 | 5.0 | 7.8 | 21.4 | 22.9 | 24.9 | 26.7 | 28.4 | 41.8 | 44.7 | 46.2 | 0 24.82 | | 0.30 | 24.83 | 13 59 59.69 | | 2.31 | |
| | 14 Bootis | 29 | 15.0 | 16.6 | 19.2 | 31.5 | 33.0 | 34.7 | 36.5 | 38.2 | 50.4 | 52.8 | 54.4 | 8 34.75 | | 0.12 | 24.83 | 14 8 9.80 | | 2.40 | |
| | Weisse 173 | 30 | | | | 51.2 | 52.8 | 54.4 | 56.1 | 57.7 | 9.7 | 12.2 | 13.7 | 12 0.98 | | 6.70 | 24.84 | 14 11 29.44 | | 2.34 | |
| | *—11° 5' | 31 | 9.0 | 10.6 | 13.2 | | | | | | 44.0 | 46.5 | 48.1 | 18 28.57 | — | 0.21 | 24.84 | 14 18 3.52 | | 2.37 | |
| 55 | B. A. C. 4798 | 32 | 39.4 | 41.1 | 43.6 | 55.7 | 57.2 | 58.8 | 0.4 | 1.9 | | | | 23 52.26 | + | 6.29 | 24.85 | 14 23 33.70 | | 2.40 | |
| | ζ Bootis | 33 | 21.3 | 23.0 | 25.6 | 37.9 | 39.4 | 41.0 | 42.9 | 44.5 | 56.7 | 59.3 | 1.0 | 35 41.15 | — | 0.12 | 24.85 | 14 35 16.18 | | 2.50 | |
| | Hydræ | 34 | 16.6 | 18.1 | 21.0 | 34.3 | 35.8 | 37.8 | 39.6 | 41.3 | 54.5 | 57.3 | 59.0 | 40 37.75 | | 0.29 | 24.86 | 14 40 12.60 | | 2.55 | |
| | α ² Libræ | 35 | 8.9 | 10.6 | 13.4 | 25.7 | 27.2 | 28.9 | 30.6 | 32.1 | 44.5 | 47.1 | 48.8 | 44 28.89 | | 0.24 | 24.86 | 14 44 3.79 | | 2.51 | |
| | Libræ | 36 | 41.8 | 43.5 | 46.1 | 58.6 | 0.1 | 1.8 | 3.5 | 5.2 | 17.7 | 20.3 | 21.9 | 8 1.86 | | 0.24 | 24.88 | 15 7 36.74 | | 2.62 | |
| | β Libræ | 37 | 28.4 | 30.0 | 32.7 | 44.7 | 46.2 | 47.9 | 49.6 | 50.2 | 3.2 | 5.5 | 7.2 | 10 47.78 | | 0.21 | 24.88 | 15 10 22.69 | | 2.57 | |
| | O. Arg. S. 14487 | 38 | 1.7 | 3.5 | 6.5 | | | | | | 41.7 | 44.5 | 46.1 | 15 24.00 | | 0.31 | 24.88 | 15 14 58.81 | | 2.80 | |
| | O. Arg. S. 14490 | 39 | 16.8 | 19.0 | 21.7 | | | | | | 57.2 | 59.8 | 2.0 | 15 39.42 | | 0.31 | 24.88 | 15 15 14.23 | | 2.80 | |
| | *+38° 36' | 40 | 43.2 | 45.5 | 48.5 | 3.8 | 5.5 | 8.0 | 10.2 | 12.0 | 7.2 | 30.5 | 32.3 | 20 7.88 | | 0.04 | 24.88 | 15 19 42.96 | | 2.85 | |
| | *—27° 44' | 41 | 43.5 | 45.3 | 48.2 | 1.7 | 3.2 | 4.9 | 7.0 | 8.7 | 22.2 | 25.1 | 26.7 | 25 5.14 | | 0.31 | 24 89 | 15 24 39.94 | | 2.82 | |
| β | O. Arg. S. 14648 | 42 | | | | 57.7 | 59.1 | 1.0 | 2.8 | 4.5 | 17.7 | 20.5 | 22.2 | 27 8.19 | | 7.43 | 24.89 | 15 26 35.87 | | 2.78 | |
| | O. Arg. S. 14665 | 43 | 51.1 | 53.0 | 55.6 | 8.8 | 10.5 | 12.3 | 14.0 | 15.8 | 29.1 | 31.8 | 33.4 | 28 12.31 | | 0.29 | 24.89 | 15 27 47.13 | | 2.79 | |
| | *—15° 34' | 44 | 57.6 | 59.1 | 1.6 | 13.7 | 15.3 | 16.9 | 19.0 | 20.8 | 32.9 | 35.6 | 37.7 | 34 17.29 | | 0.24 | 24.90 | 15 33 52.15 | | 2.71 | |
| | β Serpentis | 45 | 35.7 | 37.3 | 39.8 | 52.3 | 53.8 | 55.5 | 57.2 | 58.9 | 11.3 | 13.8 | 15.3 | 40 55.54 | | 0.11 | 24.90 | 15 40 30.53 | | 2.64 | |
| | Weisse 825 | 46 | 4.4 | 6.2 | 8.5 | 20.4 | 21.8 | 23.6 | 25.3 | 26.9 | 38.7 | 41.3 | 42.8 | 44 23.63 | | 0.18 | 24.90 | 15 43 58.55 | | 2.66 | |
| | Lalande 28926 | 47 | | | | 5.5 | 8.6 | 10.3 | 12.4 | 14.6 | 27.5 | 31.8 | 34.1 | 47 21.46 | | 35.22 | 24.90 | 15 46 21.34 | | 2.85 | |
| | γ Serpentis | 48 | 51.4 | 53.1 | 55.8 | 8.0 | 9.6 | 11.3 | 13.0 | 14.6 | 27.2 | 29.5 | 31.1 | 51 11.33 | | 0.11 | 24.91 | 15 50 46.31 | | 2.66 | |
| | O. Arg. S. 15108 | 49 | 38.0 | 39.9 | 42.7 | 56.0 | 57.8 | 59.6 | 1.4 | 3.2 | 16.6 | 19.4 | 21.0 | 53 59.60 | | 0.30 | 24.91 | 15 53 34.39 | | 2.93 | |
| | Lacaille 6658 | 50 | 31.6 | 36.8 | 39.8 | 55.0 | 56.8 | 58.9 | 1.0 | 2.9 | 18.0 | 21.0 | 23.1 | 56 58.90 | — | 0.38 | —24.91 | 15 56 33.61 | — | 3.18 | |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------------------|-----------------|---------------|--------------|--------------|
| 1876. h. June 6, 15.9 | s. — 24.91 | s. — 0.043 | s. + 0.22 | s. — 0.17 |

June 6. Image west of 18. Clamp east.
Image west of 56. Clamp west.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | |
|-------------------------|------------------------------|---------|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------------|-----------------|--------------|---------------------------------|-------------------------|--------|-------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | |
| 1876. June 6 Y. | *—12° 10' . . . | 1 | 50.4 | 52.1 | 54.8 | . . . | . . . | . . . | . . . | 25.5 | 28.2 | 29.4 | m. s. 0 10.07 | m. s. — 0.21 | s. —24.91 | h. m. s. 15 59 44.95 | s. — 2.76 | | |
| | ν^1 Scorpii . . . | 2 | 34.3 | 36.4 | 38.0 | 39.7 | 42.3 | . . . | 46.2 | 49.0 | 50.6 | 52.5 | 54.4 | 5 14.34 | 0.17 | 24.92 | 16 4 49.25 | 2.85 | |
| | ν^2 Scorpii . . . | 3 | 55.1 | 56.9 | 59.5 | 12.1 | 13.7 | 15.5 | 17.2 | 18.8 | 31.5 | 34.0 | 35.7 | 5 15.45 | 0.25 | 24.92 | 16 4 50.28 | 2.85 | |
| | Lacaille 6765 . . . | 4 | 28.2 | 30.0 | 33.3 | . . . | . . . | . . . | . . . | 9.6 | 13.0 | 15.0 | 9 51.52 | 0.35 | 24.92 | 16 9 26.25 | 3.16 | | |
| | Lalande 29796 . . . | 5 | 54.1 | 56.3 | 59.4 | 14.3 | 16.1 | 18.2 | 20.3 | 22.1 | 37.2 | 40.4 | 42.2 | 16 18.24 | 0.05 | 24.93 | 16 15 53.26 | 2.82 | |
| a | Normæ . . . | 6 | 22.2 | 24.2 | 27.1 | 41.7 | 43.5 | 45.5 | 47.4 | 49.4 | 3.9 | 6.9 | 8.7 | 23 45.50 | 0.36 | 24.93 | 16 23 20.21 | 3.22 | |
| | O. Arg. S. 15734 . . . | 7 | 7.2 | 8.5 | 11.6 | 23.7 | 25.2 | 27.2 | 28.9 | 30.5 | 42.9 | 45.0 | 46.7 | 27 27.04 | 0.23 | 24.93 | 16 27 1.88 | 2.86 | |
| | ζ Ophiuchi . . . | 8 | 28.4 | 30.1 | 32.6 | 44.8 | 46.2 | 48.0 | 49.6 | 51.2 | 3.4 | 5.9 | 7.4 | 30 17.96 | 0.21 | 24.94 | 16 30 22.81 | 2.81 | |
| | O. Arg. S. 15847 . . . | 9 | 43.9 | 45.7 | 48.6 | 1.7 | 3.4 | 5.2 | 7.0 | 8.5 | 21.7 | 24.5 | 26.2 | 35 5.13 | 0.29 | 24.94 | 16 34 39.90 | 3.03 | |
| | B. A. C. 5600 . . . | 10 | . . . | . . . | . . . | 21.1 | 24.0 | 25.6 | 38.0 | 40.9 | 42.7 | 44.6 | 46.6 | 37 35.42 | 31.52 | 24.94 | 16 36 38.96 | 3.08 | |
| | O. Arg. S. 15896 . . . | 11 | . . . | . . . | . . . | 53.8 | 56.2 | 58.1 | 10.5 | 13.5 | 15.3 | 17.0 | 19.2 | 38 7.95 | 31.52 | 24.94 | 16 37 11.49 | 3.09 | |
| | ρ Ophiuchi . . . | 12 | 3.3 | 5.0 | 7.5 | 19.4 | 20.9 | 22.5 | 24.1 | 25.8 | 37.7 | 40.3 | 41.7 | 41 22.56 | 0.16 | 24.94 | 16 40 57.46 | 2.75 | |
| | O. Arg. S. 16050 . . . | 13 | 22.6 | 24.3 | 27.1 | 40.6 | 42.3 | 44.2 | 46.0 | 47.7 | 1.1 | 3.8 | 5.6 | 45 44.12 | 0.30 | 24.95 | 16 45 18.87 | 3.09 | |
| | B. A. C. 5700, (1st *) . . . | 14 | 34.7 | 36.7 | 38.5 | 40.3 | 42.8 | . . . | 46.7 | 49.4 | 51.1 | 52.8 | 54.7 | 50 14.77 | 0.18 | 24.95 | 16 49 49.64 | 2.96 | |
| | B. A. C. 5700, (2d *) . . . | 15 | 54.9 | 56.4 | 59.3 | 11.6 | 13.2 | 15.1 | 16.8 | 18.3 | 31.2 | 33.8 | 35.3 | 50 15.08 | 0.26 | 24.95 | 16 49 49.87 | 2.96 | |
| 60 | Herculis . . . | 16 | 45.8 | 47.3 | 50.1 | 2.2 | 3.8 | 5.5 | 7.1 | 8.7 | 21.0 | 23.6 | 25.1 | 0 5.47 | 0.12 | 24.96 | 16 59 40.39 | 2.68 | |
| | α^1 Herculis . . . | 17 | 7.6 | 9.2 | 11.8 | 24.2 | 25.7 | 27.5 | 29.1 | 30.6 | 43.0 | 45.6 | 47.0 | 9 27.39 | 0.11 | 24.97 | 17 9 2.31 | 2.68 | |
| μ | Herculis . . . | 18 | 49.5 | 51.3 | 54.4 | 8.7 | 10.5 | 12.3 | 14.3 | 16.3 | 30.5 | 33.3 | 35.3 | 13 12.40 | 0.06 | 24.97 | 17 12 47.37 | 2.70 | |
| | B. A. C. 5875 . . . | 19 | 33.0 | 34.9 | 37.7 | 51.6 | 53.1 | 54.9 | 56.8 | 58.7 | 12.2 | 14.9 | 16.7 | 18 54.95 | — 0.31 | 24.97 | 17 18 29.67 | 3.19 | |
| | O. Arg. S. 16832 . . . | 20 | 56.0 | 57.6 | 0.3 | 12.5 | 14.4 | 16.0 | 17.6 | 19.1 | . . . | . . . | . . . | 22 9.19 | + | 6.49 | 17 21 50.71 | 2.94 | |
| | O. Arg. S. 16833 . . . | 21 | . . . | . . . | . . . | . . . | . . . | . . . | 54.3 | 57.1 | 58.8 | 0.5 | 2.4 | 22 58.62 | — 35.65 | 24.97 | 17 21 58.00 | 2.94 | |
| | O. Arg. S. 16842 . . . | 22 | . . . | . . . | . . . | . . . | . . . | . . . | 20.7 | 23.5 | 25.2 | 26.9 | 28.7 | 23 25.00 | 35.65 | 24.97 | 17 22 24.38 | 2.94 | |
| | O. Arg. S. 16856 . . . | 23 | . . . | . . . | . . . | . . . | . . . | . . . | 45.1 | 48.1 | 49.5 | 51.0 | 53.5 | 23 49.44 | 35.65 | 24.97 | 17 22 48.82 | 2.94 | |
| | O. Arg. S. 16958 . . . | 24 | 48.1 | 49.5 | 52.3 | 4.8 | 6.3 | 8.2 | 9.9 | 11.6 | 24.2 | 26.7 | 28.8 | 28 8.22 | 0.25 | 24.98 | 17 27 42.99 | 2.98 | |
| | μ Herculis . . . | 25 | 42.3 | 44.0 | 47.1 | 0.3 | 2.3 | 4.0 | 5.7 | 7.7 | 21.0 | 23.9 | 25.5 | 42 3.98 | 0.08 | 24.99 | 17 41 38.91 | 2.61 | |
| 7 | η Virginis . . . | 26 | 41.8 | 43.5 | 46.0 | 57.9 | 58.5 | 1.2 | 2.8 | 4.6 | 16.3 | 18.6 | 20.2 | 13 1.04 | 0.17 | 25.37 | . . . | — 1.75 | |
| | Polaris, S. P. . . | 27 | 43.0 | 45.0 | 31.0 | 54.0 | 59.0 | 0.0 | 20.0 | 25.0 | 45.0 | 34.0 | 42.0 | 13 9.73 | 5.23 | 25.37 | . . . | + | 41.88 |
| 8 | Polaris, S. P. . . | 28 | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | 44.0 | 31.0 | 39.0 | 25 18.00 | 25 16.44 | 21.49 | . . . | + | 41.00 |
| | B. A. C. 4593 . . . | 29 | 1.2 | 3.0 | 5.4 | 17.5 | 19.0 | 20.6 | 22.3 | 23.9 | 35.8 | 38.3 | 39.9 | 41 20.63 | 0.19 | 21.51 | 13 40 58.93 | — 2.18 | |
| | Lacaille 5710 . . . | 30 | 33.8 | 35.5 | 38.5 | 51.5 | 53.1 | 54.9 | 56.7 | 58.6 | 11.4 | 14.2 | 15.9 | 44 54.92 | 0.30 | 21.51 | 13 44 33.11 | 2.19 | |
| | η Bootis . . . | 31 | 50.2 | 52.3 | 54.8 | 7.4 | 9.0 | 10.8 | 12.6 | 14.3 | 26.8 | 29.5 | 31.1 | 49 10.80 | 0.07 | 21.52 | 13 48 49.21 | 2.37 | |
| | *+23° 28' . . . | 32 | 54.3 | 56.3 | 59.2 | 11.9 | 13.5 | 15.4 | 17.0 | 18.8 | 31.8 | 34.5 | 36.1 | 53 15.35 | 0.05 | 21.53 | 13 52 53.77 | 2.43 | |
| | Weisse 931 . . . | 33 | . . . | . . . | . . . | 54.6 | 56.7 | 58.4 | 9.2 | 11.9 | 13.4 | 15.2 | 16.9 | 56 7.04 | 27.93 | 21.53 | 13 55 17.58 | 2.28 | |
| | Weisse 942 . . . | 34 | . . . | . . . | . . . | 22.2 | 24.7 | 26.3 | 37.4 | 40.4 | 42.0 | 43.3 | 45.0 | 56 35.16 | 27.93 | 21.53 | 13 55 45.70 | 2.28 | |
| | O. Arg. S. 13387 . . . | 35 | 0.0 | 1.8 | 4.7 | 17.9 | 19.5 | 21.6 | 23.4 | 25.2 | 38.6 | 41.3 | 43.0 | 0 21.55 | — 0.33 | 21.53 | 13 59 59.69 | 2.30 | |
| | Lalande 26013 . . . | 36 | 31.0 | 33.1 | 36.3 | 51.4 | 53.3 | 55.3 | 57.5 | 59.5 | 14.6 | 17.7 | 19.5 | 4 55.38 | + | 0.02 | 14 4 33.86 | 2.69 | |
| | ϵ Bootis . . . | 37 | 9.5 | 12.8 | 15.4 | 17.7 | 22.2 | . . . | 59.5 | 3.9 | 6.2 | 9.1 | 12.0 | 12 10.83 | 0.22 | 21.55 | 14 11 49.50 | 3.12 | |
| | O. Arg. N. 14432 . . . | 38 | 42.2 | 45.0 | 48.8 | 8.4 | 10.7 | 13.4 | 16.0 | 18.7 | 37.9 | 42.1 | 44.0 | 12 13.37 | + | 0.11 | 14 11 51.93 | 3.12 | |
| | B. A. C. 4752 . . . | 39 | . . . | . . . | . . . | 45.8 | 49.7 | 52.0 | 10.0 | 14.3 | 16.7 | 19.3 | 22.4 | 14 6.28 | — 44.86 | 21.55 | 14 12 59.87 | 3.12 | |
| | B. A. C. 4778 . . . | 40 | 20.6 | 22.6 | 25.8 | 40.8 | 42.7 | 44.8 | 46.8 | 48.9 | 4.0 | 7.0 | 9.0 | 18 44.82 | + | 0.02 | 14 18 23.28 | 2.73 | |
| | δ Bootis . . . | 41 | 57.7 | 59.5 | 2.3 | 15.1 | 16.7 | 18.6 | 20.5 | 22.1 | 35.0 | 37.7 | 39.3 | 27 18.59 | — 0.05 | 21.56 | 14 26 56.98 | 2.53 | |
| | B. A. C. 4830 . . . | 42 | . . . | . . . | . . . | 39.1 | 41.6 | 44.1 | 46.7 | 49.2 | 7.6 | 11.5 | 13.6 | 30 54.18 | 9.97 | 21.57 | 14 30 22.64 | 3.08 | |
| π | Bootis, (1st *) . . . | 43 | 58.1 | 59.8 | 2.4 | 14.8 | 16.5 | 18.2 | 19.9 | 21.5 | 34.0 | 36.6 | 38.2 | 35 18.18 | 0.08 | 21.58 | 14 34 56.52 | 2.51 | |
| π | Bootis, (2d *) . . . | 44 | 38.8 | 41.0 | 42.7 | 44.3 | 47.0 | . . . | 50.0 | 52.6 | 54.3 | 56.0 | 58.0 | 35 18.47 | 0.00 | 21.58 | 14 34 56.89 | 2.51 | |
| | *—36° 52' . . . | 45 | 23.0 | 24.8 | 27.9 | 42.9 | 44.8 | 46.9 | 48.9 | 50.8 | 5.6 | 8.9 | 10.7 | 42 46.84 | — 0.42 | 21.59 | 14 42 24.83 | 2.71 | |
| | O. Arg. N. 14996 . . . | 46 | 11.1 | 14.5 | 19.5 | 43.0 | 46.1 | 49.5 | 52.6 | 55.8 | 19.6 | 24.5 | 27.4 | 53 40.42 | + | 0.18 | 14 53 28.00 | 3.59 | |
| | Weisse 1048 . . . | 47 | 15.5 | 17.2 | 19.7 | 31.9 | 33.3 | 35.2 | 36.7 | 38.2 | 50.4 | 52.9 | 54.5 | 57 35.05 | — 0.22 | 21.61 | 14 57 13.22 | 2.54 | |
| | Weisse 1063 . . . | 48 | . . . | . . . | . . . | 13.6 | 16.3 | 17.6 | 28.7 | 31.4 | 32.9 | 34.5 | 36.4 | 58 26.42 | 28.45 | 21.61 | 14 57 36.36 | 2.55 | |
| | O. Arg. S. 14294 . . . | 49 | 39.1 | 41.2 | 43.2 | 44.8 | 47.5 | . . . | 52.3 | 55.3 | 56.8 | 58.4 | 0.5 | 2 19.91 | — 0.21 | —21.61 | 15 1 58.09 | — 2.64 | |

CORRECTIONS, &c.

4. Saw but one star.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------------------|-----------------|---------------|--------------|--------------|
| 1876. h. June 8, 16.0 | s. — 21.68 | s. — 0.073 | s. + 0.29 | s. — 0.16 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | | |
|-------------------------|---|-----------------------|--------------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|--------------------------------------|---|-----------------------|--------------------------------------|--|---|-----------------------|--------------------------------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | | |
| | | | m. s. | | m. s. | | m. s. | | m. s. | | m. s. | | m. s. | | h. m. s. | | | | | |
| 1876. June 8 Y. | O. Arg. S. 14297 . Weisse 99 O. Arg. N. 15259 . *+41° 34' ζ ¹ Librae | 1 2 3 4 5 | 1.8 43.1 . . . 56.8 20.5 | 3.6 44.7 . . . 59.1 22.3 | 6.4 47.3 . . . 24.9 37.2 | 19.2 59.1 . . . 18.2 38.8 | 20.8 0.6 . . . 20.3 40.4 | 22.6 2.4 . . . 22.0 42.2 | 24.5 4.0 . . . 24.2 42.2 | 26.2 5.5 . . . 26.1 43.8 | 28.9 17.5 . . . 42.7 56.4 | 41.6 19.9 . . . 46.1 58.9 | 43.2 21.5 . . . 48.2 0.5 | 2 22.62 8 2.33 12 45.64 16 22.37 21 40.54 | — — + + — | 0.29 0.16 0.25 0.04 0.25 | —21.61 21.62 21.62 21.63 21.63 | 15 2 0.72 15 7 40.55 15 12 24.27 15 16 0.78 15 21 18.66 | — — — — — | 2.64 2.56 4.24 2.90 2.68 |
| a | Serpentis | 6 | 14.8 | 16.4 | 19.0 | 31.0 | 32.4 | 34.1 | 35.8 | 37.4 | 49.4 | 51.8 | 53.3 | 38 34.13 | 0.13 | 21.65 | 15 38 12.35 | 2.64 | | |
| ε | Serpentis | 7 | 43.4 | 45.0 | 47.4 | 59.4 | 1.0 | 2.6 | 4.4 | 5.8 | 17.8 | 20.3 | 21.8 | 45 2.63 | 0.14 | 21.66 | 15 44 40.83 | 2.66 | | |
| | Weisse (2) 1180 . | 8 | . . . | . . . | . . . | 4.9 | 7.2 | 9.3 | 11.8 | 13.7 | 30.1 | 33.3 | 35.6 | 48 18.24 | 8.81 | 21.67 | 15 47 47.76 | 2.94 | | |
| γ | Serpentis | 9 | 48.0 | 49.7 | 52.3 | 4.7 | 6.3 | 7.9 | 9.7 | 11.3 | 23.8 | 26.4 | 27.9 | 51 8.00 | — | 0.08 | 21.67 | 15 50 46.25 | 2.66 | |
| | B. A. C. 5310 . . . | 10 | 23.3 | 25.3 | 28.4 | 43.3 | 45.2 | 47.4 | 49.5 | 51.4 | 6.4 | 9.4 | 11.2 | 54 47.35 | + | 0.02 | 21.67 | 15 54 25.70 | 2.83 | |
| | Lacaille 6686 . . . | 11 | 28.5 | 30.5 | 33.7 | 48.5 | 50.5 | 52.4 | 54.5 | 56.5 | 11.3 | 14.5 | 16.4 | 58 52.48 | — | 0.41 | 21.68 | 15 58 30.39 | 3.18 | |
| ν | Scorpii, (1st *) . . | 12 | 50.7 | 52.5 | 55.0 | 7.8 | 9.3 | 11.1 | 12.8 | 14.5 | 27.2 | 29.8 | 31.4 | 5 11.10 | 0.27 | 21.68 | 16 4 49.15 | 2.87 | | |
| ν | Scorpii, (2d *) . . | 13 | 32.2 | 34.2 | 36.1 | 37.6 | 40.2 | . . . | 44.0 | 46.8 | 48.4 | 50.3 | 52.0 | 5 12.18 | 0.19 | 21.68 | 16 4 50.31 | 2.87 | | |
| | Lacaille 6765 . . . | 14 | 25.2 | 27.0 | 30.1 | 44.5 | 46.1 | 48.0 | 50.2 | 52.1 | 6.4 | 9.6 | 11.4 | 9 18.24 | 0.39 | 21.69 | 16 9 26.16 | 3.18 | | |
| 19 | Scorpii | 15 | 14.6 | 16.2 | 19.2 | 32.2 | 33.8 | 35.5 | 37.3 | 39.0 | 52.2 | 54.9 | 56.5 | 13 35.58 | 0.31 | 21.69 | 16 13 13.58 | 2.97 | | |
| ρ | Ophiuchi, (1st *) . | 16 | 53.0 | 55.1 | 56.8 | 58.5 | 1.2 | . . . | 6.8 | 9.6 | 11.2 | 13.2 | 15.1 | 18 34.05 | 0.22 | 21.70 | 16 18 12.13 | 2.97 | | |
| ρ | Ophiuchi, (2d *) . | 17 | 13.3 | 14.9 | 17.7 | . . . | . . . | . . . | . . . | . . . | 50.7 | 53.3 | 54.9 | 18 34.13 | 0.29 | 21.70 | 16 18 12.14 | 2.97 | | |
| | O. Arg. S. 15621 . | 18 | . . . | . . . | . . . | 30.6 | 32.3 | 34.3 | 36.1 | 37.8 | . . . | . . . | . . . | 18 34.22 | 0.31 | 21.70 | 16 18 12.21 | 2.97 | | |
| | Weisse 439 | 19 | 17.9 | 19.6 | 22.1 | 44.1 | 45.6 | 47.2 | 49.0 | 50.5 | 12.5 | 14.9 | 16.4 | 24 47.25 | 0.14 | 21.71 | 16 24 25.40 | 2.71 | | |
| | Weisse 544 | 20 | 52.4 | 54.0 | 56.5 | 8.7 | 10.3 | 11.9 | 13.5 | 15.0 | 27.3 | 29.7 | 31.1 | 30 11.85 | 0.21 | 21.72 | 16 29 49.92 | 2.81 | | |
| | B. A. C. 5567 . . . | 21 | 20.5 | 22.3 | 24.9 | 37.6 | 39.1 | 40.9 | 42.7 | 44.3 | 57.2 | 59.7 | 1.3 | 33 40.95 | 0.28 | 21.72 | 16 33 18.95 | 2.96 | | |
| | Lalande 30419 . . | 22 | . . . | . . . | . . . | 14.0 | 15.7 | 17.9 | 20.0 | 21.8 | 37.0 | 40.2 | 42.0 | 36 26.08 | 8.16 | 21.72 | 16 35 56.20 | 2.81 | | |
| 19 | Ophiuchi | 23 | 59.9 | 1.6 | 4.2 | 16.2 | 17.7 | 19.3 | 21.0 | 22.5 | 34.5 | 37.1 | 38.4 | 41 19.31 | 0.15 | 21.73 | 16 40 57.43 | 2.74 | | |
| | O. Arg. S. 16031 . | 24 | 11.8 | 13.5 | 16.3 | 29.0 | 30.6 | 32.3 | 34.0 | 35.7 | 48.6 | 51.2 | 52.9 | 44 32.35 | 0.29 | 21.73 | 16 44 10.33 | 3.01 | | |
| | *-31° 8' | 25 | 39.0 | 40.9 | 44.0 | 57.9 | 59.7 | 1.6 | 3.5 | 5.3 | 19.2 | 22.2 | 23.9 | 48 1.56 | 0.36 | 21.74 | 16 47 39.46 | 3.23 | | |
| | B. A. C. 5730 . . . | 26 | 1.4 | 3.0 | 5.7 | 19.0 | 20.5 | 22.4 | 24.2 | 25.9 | 38.8 | 41.6 | 43.3 | 56 22.35 | 0.31 | 21.74 | 16 56 0.30 | 3.09 | | |
| 60 | Herculis | 27 | 42.5 | 44.2 | 46.8 | 59.0 | 0.5 | 2.2 | 3.9 | 5.5 | 17.8 | 20.3 | 21.8 | 0 2.23 | 0.15 | 21.75 | 16 59 40.33 | 2.70 | | |
| a | Herculis | 28 | 4.2 | 6.0 | 8.6 | 21.0 | 22.5 | 24.2 | 25.8 | 27.5 | 39.8 | 42.4 | 43.9 | 9 24.17 | 0.09 | 21.76 | 17 9 2.32 | 2.70 | | |
| | *-24° 50' | 29 | 45.1 | 47.0 | 49.7 | 2.8 | 4.3 | 6.3 | 8.0 | 9.7 | 23.0 | 25.7 | 27.3 | 15 6.26 | 0.31 | 21.77 | 17 14 44.18 | 3.14 | | |
| | B. A. C. 5875 . . . | 30 | 29.9 | 31.6 | 34.7 | 48.2 | 49.8 | 51.8 | 53.6 | 55.4 | 9.0 | 11.8 | 13.4 | 18 51.75 | 0.34 | 21.78 | 17 18 29.63 | 3.23 | | |
| | O. Arg. S. 16833 . | 31 | . . . | . . . | . . . | . . . | . . . | . . . | 51.8 | 54.0 | 55.5 | 57.3 | 59.2 | 22 55.56 | 35.65 | 21.78 | 17 21 58.13 | 2.97 | | |
| | B. A. C. 5916 . . . | 32 | 12.3 | 14.2 | 17.1 | 30.7 | 32.3 | 34.3 | 36.3 | 37.9 | 51.7 | 54.6 | 56.3 | 25 34.34 | 0.35 | 21.78 | 17 25 12.21 | 3.27 | | |
| a | Ophiuchi | 33 | 15.6 | 17.2 | 19.9 | 31.9 | 33.5 | 35.2 | 36.8 | 38.5 | 50.7 | 53.4 | 54.9 | 29 35.24 | 0.10 | 21.79 | 17 29 13.35 | — 2.69 | | |
| 9 | Polaris, S. P. . . . | 34 | 41.0 | 44.0 | 27.0 | . . . | . . . | . . . | . . . | . . . | 45.0 | 33.0 | 42.0 | 13 8.67 | 4.95 | 22.34 | | + 39.80 | | |
| η | Bootis | 35 | 51.4 | 53.2 | 55.8 | 8.3 | 9.9 | 11.7 | 12.5 | 15.1 | 27.8 | 30.3 | 31.9 | 49 11.63 | 0.08 | 22.38 | 13 49 49.17 | — 2.36 | | |
| 11 | Bootis | 36 | 36.2 | 38.1 | 41.0 | 54.5 | 56.2 | 58.0 | 59.8 | 1.7 | 15.3 | 18.0 | 19.5 | 55 58.03 | 0.04 | 22.39 | 13 55 35.60 | 2.49 | | |
| | O. Arg. S. 13387 . | 37 | 0.8 | 2.7 | 5.5 | 18.5 | 20.6 | 22.4 | 24.3 | 26.1 | 39.4 | 42.1 | 43.8 | 0 22.41 | 6.32 | 22.40 | 13 59 59.69 | 2.30 | | |
| | O. Arg. S. 13438 . | 38 | 20.8 | 22.5 | 25.3 | 38.6 | 40.2 | 42.1 | 43.9 | 45.5 | 58.8 | 1.6 | 3.3 | 4 42.05 | 0.31 | 22.41 | 14 4 19.33 | 2.33 | | |
| a | Bootis | 39 | 5.0 | 6.7 | 9.3 | 22.0 | 23.5 | 25.3 | 27.1 | 28.7 | 41.4 | 44.1 | 45.6 | 10 25.34 | 0.07 | 22.41 | 14 10 2.86 | 2.41 | | |
| | Lamont 4429 . . . | 40 | . . . | . . . | . . . | 8.4 | 10.7 | 12.2 | 23.2 | 25.4 | 27.0 | 28.9 | 31.0 | 30 20.85 | 27.92 | 22.43 | 14 29 30.50 | 2.42 | | |
| | Weisse 608 | 41 | 42.9 | 44.5 | 47.2 | 59.3 | 0.7 | 2.4 | 4.1 | 5.7 | 17.9 | 20.5 | 21.8 | 35 2.45 | 0.21 | 22.44 | 14 34 39.80 | 2.44 | | |
| | *-36° 52' | 42 | 23.7 | 25.8 | 28.9 | 43.7 | 45.6 | 47.6 | 49.7 | 51.6 | 6.6 | 9.6 | 11.6 | 42 47.67 | 0.41 | 22.45 | 14 42 24.81 | 2.70 | | |
| | Lacaille 6135 . . . | 43 | 51.5 | 53.6 | 56.7 | 11.0 | 12.7 | 14.8 | 16.7 | 18.7 | 32.9 | 35.8 | 37.6 | 47 14.73 | — | 0.37 | 22.46 | 14 46 51.90 | 2.69 | |
| | Weisse (2) 1127 . . | 44 | 44.0 | 46.2 | 49.7 | 5.3 | 7.2 | 9.5 | 11.6 | 13.8 | 29.3 | 32.5 | 34.6 | 53 9.43 | + | 0.02 | 22.47 | 14 52 46.98 | 2.85 | |
| | Weisse (2) 1130 . . | 45 | 20.4 | 22.8 | 25.2 | 27.0 | 30.0 | . . . | 49.8 | 53.3 | 55.3 | 57.5 | 59.9 | 53 10.12 | + | 0.12 | 22.47 | 14 52 47.77 | 2.85 | |
| | Weisse 1048 | 46 | 16.5 | 18.0 | 20.6 | 32.7 | 34.2 | 36.0 | 37.6 | 39.2 | 51.2 | 53.8 | 55.3 | 57 35.92 | — | 0.21 | 22.47 | 14 57 13.24 | 2.54 | |
| | Weisse 1063 | 47 | . . . | . . . | . . . | 14.4 | 17.0 | 18.4 | 20.5 | 22.4 | 33.8 | 35.6 | 37.3 | 58 27.30 | — | 28.44 | 22.47 | 14 57 36.39 | 2.54 | |
| | B. A. C. 5026 . . . | 48 | 52.8 | 55.0 | 58.4 | 13.5 | 15.5 | 17.7 | 19.8 | 21.7 | 37.0 | 40.0 | 42.0 | 9 17.58 | + | 0.01 | 22.48 | 15 8 55.11 | 2.83 | |
| 11 | Ursæ Minoris . . . | 49 | 36.5 | 41.8 | 50.7 | 29.7 | 34.3 | 39.8 | 45.5 | 50.6 | 29.5 | 37.6 | 42.9 | 17 39.90 | + | 0.32 | 22.49 | 15 17 17.73 | 4.95 | |
| ζ ¹ | Librae | 50 | 21.5 | 23.1 | 25.8 | 38.2 | 39.8 | 41.6 | 43.2 | 44.8 | 57.3 | 59.8 | 1.3 | 21 41.49 | — | 0.24 | —22.50 | 15 21 18.75 | — 2.68 | |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------|--------------------|-----------------|--------|--------|
| 1876. h. | s. | s. | s. | s. |
| June 9, 15.4 | — 22.50 | — 0.072 | + 0.27 | — 0.16 |

14. Saw no other star.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | | |
|-------------------------|---------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|-------------------|-----------------|---------------------------------|-------------------------|--------------|--------|------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | | |
| 1876. June 9 Y. | O. Arg. S. 14648 . | 1 | 37.4 | 39.1 | 42.2 | 55.1 | 57.0 | 58.7 | 0.5 | 2.2 | 15.2 | 17.8 | 19.7 | m. s. 26 58.63 | m. s. — 0.30 | s. —22.51 | h. m. s. 15 26 35.82 | s. — 2.80 | | |
| | *+43° 11' . . . | 2 | 41.0 | 43.7 | 47.6 | .. | .. | .. | .. | .. | .. | .. | .. | 33 41.10 | + | 23.71 | 15 33 45.30 | 2.94 | | |
| | *+43° 11' . . . | 3 | .. | .. | .. | .. | .. | .. | 58.3 | 1.6 | 3.8 | 6.1 | 8.5 | 35 3.66 | — | 46.66 | 15 33 54.49 | 2.94 | | |
| | Weisse (2) 822. . | 4 | .. | .. | .. | 26.4 | 29.4 | 31.8 | 46.9 | 50.2 | 52.5 | 54.6 | 57.2 | 35 43.63 | 38.06 | 22.51 | 15 34 43.06 | 2.99 | | |
| | ε Serpentis . . . | 5 | 44.1 | 45.9 | 48.4 | 0.2 | 1.7 | 3.5 | 5.1 | 6.8 | 18.7 | 21.2 | 22.7 | 45 3.48 | 0.14 | 22.52 | 15 44 40.82 | 2.66 | | |
| | O. Arg. S. 15108 . | 6 | 35.6 | 37.5 | 40.3 | 53.4 | 55.3 | 57.1 | 58.9 | 0.7 | 14.1 | 16.9 | 18.7 | 53 57.14 | 0.32 | 22.54 | 15 53 34.28 | 2.95 | | |
| | 45 Serpentis . . . | 7 | 48.2 | 49.9 | 52.4 | 4.5 | 6.0 | 7.7 | 9.3 | 11.0 | 23.1 | 25.6 | 27.1 | 2 7.71 | — | 0.12 | 22.54 | 16 1 45.05 | 2.68 | |
| | B. A. C. 232 . . . | 8 | 34.4 | 38.6 | 45.2 | 17.5 | 21.5 | 25.9 | 30.4 | 34.5 | 7.0 | 13.3 | 17.4 | 6 25.97 | + | 0.24 | 22.55 | 16 6 3.66 | 4.20 | |
| | Weisse 221 . . . | 9 | 42.6 | 44.3 | 46.9 | 58.9 | 0.3 | 2.0 | 3.8 | 5.4 | 17.5 | 19.8 | 21.5 | 13 2.09 | — | 0.12 | 22.55 | 16 12 39.42 | 2.69 | |
| | *+37° 15' . . . | 10 | 50.3 | 52.3 | 55.5 | 10.3 | 12.2 | 14.1 | 16.3 | 18.2 | 32.9 | 35.9 | 37.8 | 17 14.16 | 0.00 | 22.56 | 16 16 51.60 | 2.83 | | |
| 14 | α Normæ | 11 | 19.8 | 21.6 | 24.5 | 39.0 | 40.7 | 42.9 | 45.0 | 46.8 | 1.3 | 4.3 | 6.3 | 23 42.93 | 0.38 | 22.56 | 16 23 19.99 | 3.25 | | |
| | ζ Ophiuchi . . . | 12 | 26.1 | 27.7 | 30.2 | 42.5 | 44.0 | 45.6 | 47.4 | 48.8 | 1.0 | 3.5 | 5.0 | 30 45.62 | — | 0.21 | 22.58 | 16 30 22.83 | 2.84 | |
| | Lalande 30419 . | 13 | 54.4 | 56.5 | 59.7 | 14.7 | 16.7 | 18.7 | 20.6 | 22.7 | 37.8 | 40.9 | 42.8 | 36 18.68 | + | 0.01 | 22.58 | 16 35 56.11 | 2.82 | |
| | η Herculis . . . | 14 | .. | .. | .. | 59.9 | 1.9 | 4.0 | 6.2 | 8.2 | 23.6 | 26.9 | 28.7 | 39 12.42 | — | 8.35 | 22.59 | 16 39 41.48 | — 2.83 | |
| | Polaris, S. P. . . | 15 | 44.0 | 46.5 | 50.0 | 56.0 | 2.0 | 13.0 | 22.0 | 26.0 | 48.0 | 36.0 | 44.5 | 13 11.64 | 3.71 | 23.03 | .. | + | 36.23 | |
| | η Bootis | 16 | 52.1 | 53.8 | 56.4 | 9.0 | 10.6 | 12.4 | 14.1 | 15.8 | 28.4 | 31.0 | 32.6 | 49 12.38 | 0.08 | 23.06 | 13 48 49.24 | — | 2.33 | |
| | B. A. C. 4671 . . | 17 | 24.1 | 26.0 | 28.6 | 42.1 | 43.8 | 45.8 | 47.5 | 49.2 | 2.6 | 5.4 | 7.0 | 55 45.65 | 0.31 | 23.07 | 13 55 22.27 | .. | 2.24 | |
| | B. A. C. 4682 . . | 18 | 34.4 | 36.0 | 38.8 | 51.2 | 52.7 | 54.5 | 56.1 | 57.8 | 10.2 | 12.7 | 14.4 | 58 54.44 | 0.24 | 23.07 | 13 58 31.13 | .. | 2.24 | |
| | *—26° 4' | 19 | 33.8 | 35.5 | 38.4 | 51.6 | 53.3 | 55.2 | 57.0 | 58.7 | 12.0 | 14.8 | 16.4 | 1 55.15 | 0.30 | 23.07 | 14 1 31.78 | .. | 2.28 | |
| | Lalande 26013 . . | 20 | 32.5 | 34.5 | 37.8 | 52.9 | 54.8 | 56.8 | 59.0 | 1.0 | 16.0 | 19.2 | 21.1 | 4 56.87 | — | 0.01 | 23.07 | 14 4 33.79 | .. | 2.63 |
| 106 | *—5° 22' | 21 | 14.1 | 15.9 | 18.5 | 30.5 | 31.9 | 33.6 | 35.3 | 36.9 | .. | .. | .. | 11 27.09 | + | 6.32 | 23.08 | 14 11 10.33 | .. | 2.31 |
| | Weisse 173 . . . | 22 | .. | .. | .. | 49.5 | 51.1 | 52.8 | 54.5 | 56.1 | 7.9 | 10.5 | 11.9 | 11 59.29 | — | 6.69 | 23.08 | 14 11 29.52 | .. | 2.31 |
| | *—4° 44' | 23 | 57.9 | 59.5 | 2.2 | 14.0 | 15.5 | 17.2 | 18.9 | 20.5 | 32.5 | 35.0 | 36.5 | 15 17.25 | 0.18 | 23.08 | 14 14 53.99 | .. | 2.33 | |
| | 106 Virginis . . . | 24 | 15.8 | 17.5 | 20.1 | 31.9 | 33.4 | 35.1 | 36.8 | 38.4 | 50.5 | 52.9 | 54.4 | 22 35.16 | 0.19 | 23.09 | 14 22 11.88 | .. | 2.37 | |
| | Weisse 445 . . . | 25 | 46.0 | 47.6 | 50.2 | 2.1 | 3.6 | 5.2 | 6.9 | 8.5 | 20.4 | 22.8 | 24.4 | 26 5.25 | — | 0.17 | 23.09 | 14 25 41.99 | .. | 2.38 |
| | *—27° 41' | 26 | 33.8 | 35.9 | 38.0 | 40.1 | 42.3 | .. | .. | .. | .. | .. | .. | 29 38.02 | + | 38.31 | 23.09 | 14 29 53.24 | .. | 2.49 |
| | *—27° 38' | 27 | 3.9 | 5.7 | 8.5 | 21.9 | 23.7 | 25.4 | 27.2 | 29.1 | 42.6 | 45.4 | 47.0 | 30 25.49 | — | 0.31 | 23.10 | 14 30 2.08 | .. | 2.49 |
| | ζ Bootis | 28 | 19.6 | 21.3 | 23.9 | 36.2 | 37.7 | 39.5 | 41.2 | 42.7 | 55.1 | 57.5 | 59.0 | 35 39.43 | 0.10 | 23.10 | 14 35 16.23 | .. | 2.47 | |
| | ε Bootis | 29 | 38.4 | 40.2 | 43.0 | 56.5 | 58.1 | 0.0 | 1.8 | 3.6 | 17.2 | 19.8 | 21.5 | 40 0.01 | 0.05 | 23.10 | 14 39 36.86 | .. | 2.59 | |
| | O. Arg. S. 14065 . | 30 | 12.7 | 14.5 | 17.0 | .. | .. | .. | .. | .. | 51.5 | 54.3 | 56.7 | 49 34.45 | 0.29 | 23.11 | 14 49 11.05 | .. | 2.61 | |
| 26 | Weisse (2) 1139 . | 31 | 59.7 | 1.8 | 5.0 | 20.7 | 22.1 | 25.1 | 27.3 | 29.3 | 45.0 | 48.1 | 50.4 | 53 24.96 | 0.00 | 23.11 | 14 53 1.85 | .. | 2.81 | |
| | b Bootis | 32 | 6.9 | 8.7 | 11.5 | 24.9 | 26.6 | 28.4 | 30.2 | 32.2 | 45.5 | 48.2 | 49.8 | 3 28.45 | 0.05 | 23.12 | 15 3 5.28 | .. | 2.63 | |
| | Libra | 33 | 39.8 | 41.8 | 44.4 | 56.9 | 58.3 | 0.2 | 1.7 | 3.5 | 16.0 | 18.6 | 20.1 | 8 0.12 | — | 0.25 | 23.12 | 15 7 36.75 | .. | 2.63 |
| | O. Arg. N. 15259 . | 34 | 57.0 | 1.4 | 8.0 | 39.1 | 42.8 | 47.2 | 51.5 | 55.7 | 26.3 | 32.6 | 36.5 | 12 47.10 | + | 0.18 | 23.13 | 15 12 24.15 | .. | 4.08 |
| | *—37° 4' | 35 | 17.7 | 19.7 | 23.0 | 38.0 | 39.8 | 41.8 | 44.0 | 45.9 | 0.8 | 4.0 | 6.0 | 16 41.88 | — | 0.39 | 23.13 | 15 16 18.36 | .. | 2.95 |
| | *—37° 2' | 36 | .. | .. | .. | 20.7 | 22.7 | 24.6 | 26.7 | 28.5 | 43.6 | 46.7 | 48.5 | 17 32.75 | 8.51 | 23.13 | 15 17 1.11 | .. | 2.96 | |
| | *—37° 2' | 37 | 59.4 | 1.5 | 4.5 | 19.4 | 21.4 | 23.4 | 25.4 | 27.4 | 42.3 | 45.3 | 47.2 | 18 23.38 | 0.39 | 23.14 | 15 17 59.85 | .. | 2.97 | |
| | *—27° 44' | 38 | 41.7 | 43.5 | 46.4 | 59.8 | 1.5 | 3.3 | 5.1 | 7.0 | 20.4 | 23.2 | 24.9 | 25 3.35 | 0.31 | 23.14 | 15 24 39.90 | .. | 2.84 | |
| | O. Arg. S. 14665 . | 39 | 49.3 | 51.2 | 53.8 | 7.1 | 8.8 | 10.5 | 12.3 | 14.1 | 27.1 | 29.8 | 31.5 | 28 10.50 | 0.29 | 23.14 | 15 27 47.07 | .. | 2.81 | |
| | O. Arg. S. 14674 . | 40 | .. | .. | .. | 58.3 | 1.0 | 2.6 | 4.5 | 6.4 | 17.4 | 19.1 | 21.1 | 23.2 | 29 12.15 | 30.82 | 23.14 | 15 28 18.19 | .. | 2.81 |
| A | *—38° 19' | 41 | 4.6 | 6.7 | 9.6 | 24.8 | 26.7 | 28.7 | 30.9 | 32.6 | 48.3 | 51.3 | 53.2 | 32 28.85 | 0.40 | 23.15 | 15 32 5.30 | .. | 3.09 | |
| | *—38° 23' | 42 | .. | .. | .. | .. | .. | .. | .. | 15.5 | 18.4 | 20.6 | 23.0 | 25.5 | 33 20.60 | 43.84 | 23.15 | 15 32 13.61 | .. | 3.10 |
| | Radcliffe 3431 . | 43 | .. | .. | .. | 3.2 | 6.5 | 8.6 | 23.5 | 27.0 | 29.2 | 31.3 | 34.0 | 36 20.41 | 38.06 | 23.15 | 15 35 19.20 | .. | 2.91 | |
| | Scorpii (1st*) . . | 44 | .. | .. | .. | 32.8 | 34.6 | 36.4 | 38.2 | 39.9 | 53.0 | 55.7 | 57.5 | 46 43.51 | 7.44 | 23.16 | 15 46 12.91 | .. | 2.91 | |
| | A Scorpii (2d*) . . | 45 | 18.1 | 19.9 | 22.7 | 35.9 | 37.5 | 39.2 | 41.0 | 42.8 | 55.9 | 58.7 | 0.4 | 47 39.28 | 0.29 | 23.16 | 15 47 15.83 | .. | 2.91 | |
| | O. Arg. S. 15108 . | 46 | 36.0 | 37.9 | 40.7 | 54.1 | 55.8 | 57.6 | 59.4 | 1.2 | 14.6 | 17.4 | 19.0 | 53 57.61 | 0.31 | 23.16 | 15 53 34.14 | .. | 2.97 | |
| | β Scorpii | 47 | 19.6 | 21.3 | 24.0 | 36.7 | 38.3 | 40.0 | 41.9 | 43.4 | 56.1 | 58.7 | 0.3 | 58 40.03 | 0.26 | 23.17 | 15 58 16.60 | .. | 2.88 | |
| | Weisse 221 . . . | 48 | 43.3 | 44.9 | 47.5 | 59.6 | 1.0 | 2.6 | 4.2 | 5.8 | 18.2 | 20.5 | 22.1 | 13 2.70 | 0.12 | 23.18 | 16 12 39.40 | .. | 2.71 | |
| | Lalande 29796 . | 49 | 52.4 | 54.4 | 57.4 | 12.5 | 14.4 | 16.4 | 18.5 | 20.4 | 35.6 | 38.6 | 40.4 | 16 16.45 | 0.01 | 23.18 | 16 15 53.26 | .. | 2.83 | |
| | α Normæ | 50 | 20.4 | 22.5 | 25.4 | 39.8 | 41.6 | 43.7 | 45.6 | 47.5 | 2.2 | 5.0 | 6.8 | 23 43.68 | — | 0.37 | —23.19 | 16 23 20.12 | — | 3.29 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--|--------------------|-----------------|--------------|--------------|
| 1876. h. June 14, 15.8 | s. — 23.16 | s. — 0.050 | s. + 0.25 | s. — 0.16 |
| June 16. Image west of α.43. Clamp west. | | | | |
| Image west of α.10. Clamp east. | | | | |

| Date and ob- servat. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. | | |
|-------------------------|------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|---------------|-------|--------|---------------------------------|-------------------------|---|-------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | | |
| | | | | | | | | | | | | | | m. s. | m. s. | s. | | | | |
| 1876. June 14 Y. | Weisse (2) 787 . . . | 1 | 36.3 | 38.4 | 41.6 | 56.6 | 58.7 | 0.8 | 2.8 | 5.0 | 20.2 | 23.3 | 25.1 | 27 0.80 | — | 0.01 | 23.19 | 16 26 37.60 | — | 2.84 |
| | *—28° 39' . . . | 2 | 49.7 | 51.8 | 54.5 | 8.4 | 10.1 | 11.9 | 13.8 | 15.6 | 29.2 | 31.9 | 34.0 | 31 11.90 | — | 0.32 | 23.20 | 16 30 48.38 | — | 3.17 |
| | O. Arg. S. 15790 . . . | 3 | .. | .. | .. | 5.0 | 7.7 | 9.5 | 21.9 | 24.8 | 26.6 | 28.6 | 30.7 | 32 19.35 | — | 31.94 | 23.20 | 16 31 24.21 | — | 3.17 |
| | *—30° 11' . . . | 4 | .. | .. | .. | 53.0 | 55.9 | 57.9 | 10.5 | 13.7 | 15.7 | 17.4 | 19.4 | 35 7.94 | — | 32.44 | 23.20 | 16 34 12.30 | — | 3.22 |
| | B. A. C. 5572 . . . | 5 | .. | .. | .. | 36.2 | 37.9 | 39.8 | 11.8 | 13.5 | .. | .. | .. | 34 39.84 | — | 0.34 | 23.20 | 16 34 16.30 | — | 3.22 |
| | O. Arg. S. 15896 . . . | 6 | 13.4 | 15.3 | 18.1 | 31.4 | 33.0 | 35.0 | 36.8 | 38.6 | 52.1 | 54.8 | 56.4 | 37 34.99 | — | 0.31 | 23.20 | 16 37 11.48 | — | 3.16 |
| | Weisse 750 . . . | 7 | 3.1 | 4.6 | 7.2 | 19.0 | 20.6 | 22.3 | 23.9 | 25.9 | 37.4 | 40.0 | 41.4 | 42 22.23 | — | 0.15 | 23.21 | 16 41 58.87 | — | 2.79 |
| | *—21° 7' . . . | 8 | .. | .. | .. | 57.5 | 59.3 | 1.2 | 3.0 | 5.0 | 17.0 | 19.6 | 21.5 | 45 8.01 | — | 7.22 | 23.21 | 16 44 37.58 | — | 3.07 |
| | *—38° 14' . . . | 9 | 35.8 | 37.7 | 40.7 | 55.9 | 57.8 | 0.0 | 1.9 | 3.7 | 19.2 | 22.5 | 24.3 | 48 59.95 | — | 0.40 | 23.21 | 16 48 36.34 | — | 3.52 |
| | Ursæ Minoris . . . | 10 | 53.0 | 5.0 | 24.0 | .. | .. | .. | .. | .. | .. | .. | .. | 57 7.33 | + 2 | 8.54 | 23.22 | .. | — | 7.94 |
| | *—37° 18' . . . | 11 | 27.5 | 29.5 | 32.5 | 47.5 | 49.5 | 51.3 | 53.2 | 54.5 | 10.5 | 13.7 | 15.8 | 4 51.45 | — | 0.39 | 23.22 | 17 4 27.84 | — | 3.55 |
| | Herculis . . . | 12 | 5.8 | 7.5 | 10.2 | 22.3 | 23.9 | 25.6 | 27.3 | 29.0 | 41.3 | 43.9 | 45.4 | 9 25.65 | — | 0.10 | 23.23 | 17 9 2.32 | — | 2.75 |
| | O. Arg. S. 16676 . . . | 13 | 4.9 | 6.9 | 9.6 | 23.0 | 24.7 | 26.6 | 28.5 | 30.2 | 43.8 | 46.5 | 48.2 | 15 26.63 | — | 0.31 | 23.23 | 17 15 3.09 | — | 3.28 |
| | B. A. C. 5888 . . . | 14 | 11.4 | 13.0 | 15.6 | 27.7 | 29.3 | 31.0 | 32.6 | 34.3 | 46.4 | 49.0 | 50.5 | 20 30.98 | — | 0.22 | 23.24 | 17 20 7.52 | — | 2.99 |
| | B. A. C. 5916 . . . | 15 | 13.7 | 15.6 | 18.6 | 32.2 | 34.0 | 35.9 | 37.7 | 39.5 | 53.2 | 56.1 | 57.9 | 25 35.85 | — | 0.33 | 23.24 | 17 25 12.28 | — | 3.36 |
| | Ophiuchi . . . | 16 | 17.0 | 18.8 | 21.5 | 33.6 | 35.1 | 36.9 | 38.5 | 40.1 | 52.4 | 54.8 | 56.4 | 29 36.83 | — | 0.11 | 23.24 | 17 29 13.48 | — | 2.75 |
| 20 | 7 Bootis . . . | 17 | 54.6 | 56.3 | 58.8 | 11.4 | 13.0 | 14.9 | 16.6 | 18.3 | 30.8 | 33.5 | 35.1 | 49 14.85 | + | 0.18 | 25.84 | .. | — | 2.28 |
| | O. Arg. S. 13438 . . . | 18 | 23.8 | 25.4 | 28.1 | 11.3 | 13.0 | 14.9 | 16.7 | 18.5 | 1.7 | 4.5 | 6.2 | 4 44.92 | — | 0.06 | 25.86 | 14 4 19.12 | — | 2.27 |
| 14 | Bootis . . . | 19 | 15.6 | 17.2 | 19.7 | 31.9 | 33.6 | 35.4 | 37.0 | 38.5 | 50.8 | 53.5 | 55.2 | 8 35.32 | — | 0.09 | 25.86 | 14 8 9.55 | — | 2.33 |
| | *—38° 6' . . . | 20 | 17.2 | 18.9 | 22.0 | .. | .. | .. | .. | .. | 0.5 | 3.7 | 5.7 | 14 41.33 | — | 0.02 | 25.86 | 14 14 15.49 | — | 2.33 |
| | Rumker 4697 . . . | 21 | 46.1 | 47.6 | 50.1 | 2.1 | 3.5 | 5.2 | 6.9 | 8.4 | 20.3 | 22.7 | 24.5 | 20 5.22 | — | 0.12 | 25.87 | 14 19 39.47 | — | 2.33 |
| | *+38° 7' . . . | 22 | 8.9 | 11.0 | 14.0 | 29.2 | 30.9 | 33.0 | 35.0 | 37.1 | 52.2 | 55.5 | 57.6 | 23 33.13 | — | 0.27 | 25.87 | 14 23 7.53 | — | 2.62 |
| | Bootis . . . | 23 | 1.7 | 3.4 | 6.0 | 19.0 | 20.6 | 22.5 | 24.1 | 26.0 | 38.9 | 41.6 | 43.3 | 27 22.49 | — | 0.19 | 25.87 | 14 26 56.81 | — | 2.46 |
| 26 | B. A. C. 4838 . . . | 24 | 34.5 | 36.2 | 38.9 | 52.2 | 53.9 | 55.9 | 57.6 | 59.3 | 12.6 | 15.5 | 17.2 | 32 55.80 | — | 0.21 | 25.88 | 14 32 30.13 | — | 2.51 |
| | Lamont 4482 . . . | 25 | 25.5 | 27.0 | 29.5 | 41.4 | 42.9 | 44.6 | 46.2 | 47.8 | 59.6 | 2.1 | 3.7 | 39 44.57 | — | 0.12 | 25.88 | 14 39 18.81 | — | 2.42 |
| | Weisse (2) 932 . . . | 26 | 51.7 | 53.6 | 56.8 | .. | .. | .. | .. | .. | 34.3 | 37.2 | 39.4 | 44 15.50 | — | 0.25 | 25.89 | 14 43 49.86 | — | 2.66 |
| | Weisse (2) 936 . . . | 27 | 7.6 | 9.5 | 12.7 | .. | .. | .. | .. | .. | 50.2 | 53.1 | 55.5 | 44 31.43 | — | 0.25 | 25.89 | 14 44 5.79 | — | 2.66 |
| | *+38° 28' . . . | 28 | 56.6 | 58.4 | 1.6 | 16.8 | 19.0 | 21.1 | 23.2 | 25.0 | 40.1 | 43.5 | 45.5 | 51 20.98 | — | 0.27 | 25.90 | 14 50 55.35 | — | 2.70 |
| | *+10° 24' . . . | 29 | 35.8 | 37.4 | 39.8 | 52.2 | 54.1 | 56.2 | 58.4 | 0.2 | 11.2 | 14.0 | 15.7 | 56 55.91 | — | 0.15 | 25.90 | 14 56 30.16 | — | 2.51 |
| | Weisse (2) 1326 . . . | 30 | 48.0 | 49.8 | 53.0 | 7.8 | 9.6 | 11.9 | 14.0 | 15.9 | 30.5 | 33.7 | 36.0 | 2 11.84 | — | 0.26 | 25.91 | 15 1 46.19 | — | 2.71 |
| 26 | Libræ . . . | 31 | 42.5 | 43.9 | 46.5 | 59.1 | 0.6 | 2.4 | 4.2 | 5.6 | .. | .. | .. | 7 55.60 | — | 6.87 | 25.91 | 15 7 36.56 | — | 2.63 |
| | β Libræ . . . | 32 | 29.1 | 30.5 | 33.2 | 45.2 | 46.8 | 48.5 | 50.3 | 51.8 | 3.7 | 6.3 | 8.0 | 10 48.49 | — | 0.10 | 25.91 | .. | — | 2.59 |
| | *—37° 4' . . . | 33 | 20.4 | 22.3 | 25.2 | 40.3 | 42.0 | 43.9 | 46.2 | 48.2 | 3.0 | 6.4 | 8.4 | 16 44.21 | + | 0.04 | 25.92 | 15 16 18.33 | + | 2.95 |
| | *—37° 2' . . . | 34 | .. | .. | .. | 22.7 | 24.8 | 26.6 | 28.7 | 30.9 | 45.9 | 49.1 | 51.0 | 17 34.96 | — | 8.07 | 25.92 | 15 17 0.97 | — | 2.95 |
| | *—37° 2' . . . | 35 | 1.8 | 3.7 | 6.8 | 21.2 | 23.3 | 25.3 | 27.3 | 29.3 | 44.7 | 47.6 | 50.0 | 18 25.55 | + | 0.04 | 25.92 | 15 17 59.67 | — | 2.96 |
| | a Serpentis . . . | 36 | 18.8 | 20.4 | 22.9 | 34.9 | 36.5 | 38.2 | 39.9 | 41.3 | 53.4 | 55.9 | 57.5 | 38 38.15 | + | 0.14 | 25.94 | .. | — | 2.65 |
| 21 | Polaris . . . | 37 | 54.0 | 2.5 | 50.5 | 14.0 | 19.0 | 29.0 | 40.0 | 45.0 | 12.0 | 53.0 | 57.0 | 13 28.73 | — | 10.01 | 27.03 | .. | + | 29.40 |
| | 7 Bootis . . . | 38 | 55.8 | 57.6 | 0.0 | 12.6 | 14.2 | 16.1 | 17.8 | 19.4 | 31.9 | 34.6 | 36.4 | 49 16.04 | + | 0.17 | 27.07 | 13 48 49.14 | — | 2.27 |
| | B. A. C. 4680 . . . | 39 | 57.3 | 58.9 | 1.3 | 13.4 | 14.9 | 16.7 | 18.4 | 19.9 | 31.8 | 34.5 | 36.1 | 58 16.65 | — | 0.10 | 27.08 | 13 57 49.67 | — | 2.20 |
| | Lalande 26013 . . . | 40 | 36.3 | 38.2 | 41.3 | .. | .. | .. | .. | .. | 19.6 | 23.0 | 25.0 | 5 0.57 | — | 0.24 | 27.08 | 14 4 33.73 | — | 2.54 |
| 14 | Bootis . . . | 41 | 16.8 | 18.4 | 20.9 | 33.3 | 35.0 | 36.7 | 38.3 | 39.8 | .. | .. | .. | 8 29.90 | + | 6.81 | 27.09 | 14 8 9.62 | — | 2.32 |
| | a Bootis . . . | 42 | .. | .. | .. | 45.7 | 48.2 | 49.9 | 1.7 | 4.4 | 6.6 | 7.9 | 10.0 | 10 59.22 | — | 29.44 | 27.09 | 14 10 2.69 | — | 2.32 |
| | Lacaille 5925 . . . | 43 | 33.0 | 35.0 | 38.1 | 53.1 | 55.0 | 57.0 | 59.2 | 1.0 | 15.9 | 19.0 | 21.1 | 17 57.04 | + | 0.05 | 27.10 | 14 17 29.99 | — | 2.44 |
| | Lacaille 5999 . . . | 44 | 44.7 | 46.8 | 49.8 | 5.1 | 7.1 | 9.5 | 11.3 | 13.3 | 28.7 | 31.8 | 34.0 | 29 9.28 | — | 0.05 | 27.11 | 14 28 42.22 | — | 2.57 |
| | B. A. C. 4852 . . . | 45 | 11.3 | 12.9 | 16.1 | 30.4 | 32.2 | 34.2 | 36.2 | 38.1 | 2.6 | 5.6 | 57.7 | 36 34.39 | — | 0.06 | 27.12 | 14 36 7.24 | — | 2.58 |
| | 7 Bootis . . . | 46 | 42.2 | 44.0 | 46.7 | 0.2 | 1.8 | 3.7 | 5.6 | 7.4 | 20.7 | 23.6 | 25.5 | 40 3.76 | — | 0.20 | 27.12 | 14 39 36.84 | — | 2.54 |
| | Lacaille 6135 . . . | 47 | 56.1 | 57.7 | 0.4 | 14.6 | 16.0 | 18.8 | 20.7 | 22.5 | 36.6 | 39.8 | 41.8 | 47 18.75 | — | 0.05 | 27.13 | 14 46 51.68 | — | 2.65 |
| | Lacaille 6186 . . . | 48 | 27.5 | 29.2 | 32.4 | 47.6 | 49.6 | 51.6 | 53.5 | 55.4 | 10.6 | 13.9 | 16.0 | 54 51.57 | — | 0.05 | 27.14 | 14 54 24.48 | — | 2.77 |
| | Lacaille 6219 . . . | 49 | 11.2 | 13.0 | 15.7 | 29.5 | 31.4 | 33.4 | 35.2 | 37.0 | 50.8 | 53.6 | 55.5 | 58 33.30 | — | 0.06 | 27.14 | 14 58 6.22 | — | 2.69 |
| | β Libræ . . . | 50 | 30.5 | 32.0 | 34.4 | 46.5 | 48.0 | 49.8 | 51.5 | 52.9 | 5.1 | 7.6 | 9.2 | 10 49.77 | + | 0.10 | —27.15 | 15 10 22.72 | — | 2.58 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|---------------|--------------------|-----------------|--------|--------|
| 1876. h. | s. | s. | s. | s. |
| June 20, 14.9 | — 25.90 | — 0.052 | + 0.15 | + 0.12 |
| 21, 15.3 | — 27.16 | — 0.063 | + 0.13 | + 0.12 |

6. Preceded by a larger star.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. |
|---------------------------------|--------------------|---------|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------------|-----------------|--------------|---------------------------------|-------------------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | |
| 1876. June 21 Y. | *-27° 44' . . . | 1 | 45.4 | 46.8 | 49.8 | 3.2 | 4.9 | 6.9 | 8.6 | 10.3 | 23.9 | 26.8 | 28.7 | m. s. 25 6.85 | m. s. + 0.07 | s. -27.17 | h. m. s. 15 24 39.75 | s. - 2.84 |
| | O. Arg. S. 14665 . | 2 | 53.2 | 54.8 | 57.3 | 10.7 | 12.3 | 14.1 | 15.8 | 17.5 | 30.6 | 33.5 | 35.2 | 28 14.09 | + 0.07 | 27.17 | 15 27 46.99 | 2.81 |
| | O. Arg. S. 14674 . | 3 | . . . | . . . | . . . | 1.6 | 4.5 | 6.5 | 18.5 | 21.2 | 22.9 | 24.8 | 26.8 | 29 15.85 | - 30.57 | 27.17 | 15 28 18.11 | 2.82 |
| | *+43° 11' . . . | 4 | 45.5 | 47.5 | 51.0 | . . . | . . . | . . . | . . . | . . . | 31.2 | 35.2 | 37.5 | 34 11.32 | + 0.28 | 27.18 | 15 33 44.42 | 2.85 |
| | Weisse (2) 822 . | 5 | 55.1 | 57.3 | 0.5 | . . . | . . . | . . . | . . . | . . . | 41.6 | 45.2 | 47.7 | 34 21.23 | 0.28 | 27.18 | 15 33 54.33 | 2.85 |
| | Weisse (2) 822 . | 6 | . . . | . . . | . . . | 5.0 | 7.5 | 9.8 | 11.9 | 14.0 | . . . | . . . | . . . | 35 9.64 | 0.30 | 27.18 | 15 34 42.76 | 2.86 |
| | Radcliffe 3431 . | 7 | . . . | . . . | . . . | 41.7 | 43.5 | 46.0 | 48.3 | 50.3 | . . . | . . . | . . . | 35 45.96 | 0.30 | 27.18 | 15 35 19.08 | 2.86 |
| | B. A. C. 5215 . | 8 | 55.2 | 56.7 | 59.5 | 13.1 | 14.9 | 16.9 | 18.9 | 20.4 | 34.0 | 36.6 | 38.7 | 41 16.81 | + 0.07 | 27.18 | 15 40 49.70 | 2.95 |
| | Weisse 818 . | 9 | . . . | . . . | . . . | 28.3 | 30.9 | 32.5 | 43.5 | 45.9 | 47.6 | 49.2 | 51.2 | 43 41.14 | - 27.78 | 27.19 | 15 42 46.17 | 2.69 |
| | *-2° 56' . . . | 10 | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | 20.7 | 23.4 | 25.0 | 44 23.03 | - 17.19 | 27.19 | 15 43 38.65 | 2.69 |
| θ | Weisse (2) 1201 . | 11 | 33.9 | 35.9 | 39.5 | 56.0 | 57.8 | 0.3 | 2.4 | 4.4 | 20.6 | 24.3 | 26.3 | 49 0.13 | + 0.29 | 27.19 | 15 48 33.23 | 2.87 |
| | B. A. C. 5310 . | 12 | 28.5 | 30.4 | 33.5 | 48.4 | 50.4 | 52.5 | 54.5 | 56.4 | 11.4 | 14.6 | 16.7 | 54 52.48 | 0.25 | 27.20 | 15 54 25.53 | 2.79 |
| | Lupi . . . | 13 | 33.8 | 35.6 | 38.7 | 53.3 | 55.3 | 57.4 | 59.5 | 1.3 | 16.2 | 19.4 | 21.4 | 58 57.45 | 0.05 | 27.20 | 15 58 30.30 | 3.23 |
| | O. Arg. S. 15303 . | 14 | 34.8 | 36.3 | 38.9 | 51.2 | 53.0 | 54.7 | 56.4 | 57.9 | 10.5 | 13.2 | 14.7 | 2 54.69 | 0.09 | 27.20 | 16 2 27.58 | 2.89 |
| | B. A. C. 5403 . | 15 | 31.7 | 33.4 | 36.0 | 49.2 | 50.9 | 52.8 | 54.6 | 56.4 | 9.5 | 12.2 | 14.0 | 7 52.79 | 0.07 | 27.21 | 16 7 25.65 | 3.03 |
| | B. A. C. 5430 . | 16 | 45.3 | 46.9 | 49.5 | 3.1 | 5.0 | 6.9 | 8.6 | 10.3 | 23.9 | 26.4 | 28.4 | 11 6.75 | 0.07 | 27.22 | 16 10 39.60 | 3.10 |
| | B. A. C. 5457 . | 17 | 22.3 | 24.1 | 27.2 | 42.1 | 44.0 | 46.3 | 48.3 | 50.2 | 5.0 | 8.4 | 10.5 | 16 46.22 | 0.05 | 27.22 | 16 16 19.05 | 3.37 |
| | Ophiuchi . . . | 18 | 16.5 | 18.0 | 20.5 | 32.4 | 34.0 | 35.6 | 37.4 | 38.8 | 50.9 | 53.4 | 55.0 | 21 35.68 | 0.10 | 27.22 | 16 21 8.56 | 2.86 |
| | Weisse 439 . | 19 | 33.2 | 34.7 | 37.2 | 49.2 | 50.7 | 52.3 | 54.0 | 55.6 | 7.5 | 10.2 | 11.8 | 24 52.40 | 0.13 | 27.23 | 16 24 25.30 | 2.77 |
| | O. Arg. S. 15788 . | 20 | 13.4 | 15.0 | 17.5 | 30.6 | 32.3 | 34.1 | 35.9 | 37.6 | 50.7 | 53.3 | 55.1 | 31 34.14 | 0.07 | 27.24 | 16 31 6.97 | 3.12 |
| κ ε α ¹ | Weisse 780 . . . | 21 | 6.9 | 8.4 | 10.9 | 22.9 | 24.2 | 25.9 | 27.6 | 29.1 | 40.9 | 43.4 | 45.2 | 42 25.95 | 0.12 | 27.25 | 16 41 58.82 | 2.83 |
| | Weisse 873 . . . | 22 | 54.8 | 56.2 | 58.8 | 10.7 | 12.1 | 13.8 | 15.5 | 17.1 | 28.8 | 31.4 | 33.0 | 47 13.84 | 0.12 | 27.25 | 16 46 46.71 | 2.85 |
| | Ophiuchi . . . | 23 | 58.5 | 0.0 | 2.5 | 14.6 | 16.1 | 17.8 | 19.5 | 21.0 | 33.2 | 35.8 | 37.3 | 52 17.84 | 0.14 | 27.26 | 16 51 50.72 | 2.79 |
| | Ursæ Minoris . | 24 | 57.0 | 7.0 | 26.0 | 54.0 | 5.0 | 18.0 | 30.0 | 41.0 | 9.0 | 27.0 | 38.0 | 59 17.45 | 1.83 | 27.27 | . . . | 7.53 |
| | Herculis . . . | 25 | 9.8 | 11.3 | 13.9 | 26.2 | 27.9 | 29.5 | 31.2 | 32.8 | 45.0 | 47.6 | 49.4 | 9 29.51 | 0.16 | 27.28 | 17 9 2.39 | 2.80 |
| 21 β 11 ζ ³ | B. A. C. 5001 . | 26 | 47.5 | 49.4 | 52.3 | 5.9 | 7.8 | 9.6 | 11.6 | 13.3 | 26.8 | 30.0 | 31.7 | 6 9.63 | 0.17 | 26 29 | 15 5 43.51 | 2.60 |
| | Libræ . . . | 27 | 29.6 | 31.1 | 33.6 | 15.6 | 17.1 | 18.8 | 20.6 | 22.1 | 4.2 | 6.7 | 8.4 | 10 48.89 | 0.10 | 26 29 | 15 10 22.70 | 2.57 |
| | Ursæ Minoris . | 28 | 39.5 | 44.6 | 52.5 | 31.9 | 36.7 | 42.5 | 47.9 | 53.0 | 31.9 | 40.2 | 45.6 | 17 42.39 | 0.61 | 26 29 | 15 17 16.71 | 4.32 |
| | Libræ . . . | 29 | 49.7 | 51.3 | 53.8 | 6.3 | 7.9 | 9.5 | 11.2 | 12.8 | 25.2 | 27.8 | 29.5 | 24 9.55 | 0.09 | 26 29 | 15 23 43.35 | 2.69 |
| | *+43° 11' . . . | 30 | 44.8 | 46.7 | 50.2 | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | 34 47.23 | 23.90 | 26 29 | 15 33 44.84 | 2.82 |
| | *+43° 11' . . . | 31 | 54.5 | 56.2 | 59.6 | . . . | . . . | . . . | . . . | . . . | 41.1 | 44.2 | 46.7 | 31 20.38 | + 0.22 | 26 29 | 15 33 54.31 | 2.82 |
| | Weisse (2) 822 . | 32 | . . . | . . . | . . . | 29.4 | 32.7 | 35.1 | 50.2 | 53.6 | 55.7 | 57.9 | 0.9 | 35 46.94 | - 37.99 | 26 29 | 15 34 42.66 | 2.83 |
| | Radcliffe 3431 . | 33 | . . . | . . . | . . . | 5.8 | 9.4 | 11.5 | 26.4 | 29.9 | 32.0 | 34.5 | 36.9 | 36 23.30 | - 38.00 | 26 29 | 15 35 19.01 | 2.83 |
| | Weisse 792 . . . | 34 | 59.3 | 0.8 | 2.9 | 15.8 | 16.9 | 18.3 | 19.6 | 21.1 | 33.4 | 36.6 | 38.2 | 43 18.45 | + 0.09 | 26 30 | 15 42 52.24 | 2.77 |
| | Weisse (2) 1180 . | 35 | 22.1 | 24.7 | 27.1 | 29.2 | 32.7 | . . . | 55.3 | 58.4 | 0.6 | 2.8 | 5.6 | 48 13.85 | 0.13 | 26 30 | 15 47 47.68 | 2.84 |
| θ | *+43° 0' . . . | 36 | . . . | . . . | . . . | 14.3 | 16.5 | 19.0 | 21.2 | 23.1 | . . . | . . . | . . . | 48 18.82 | 0.24 | 26 30 | 15 47 52.76 | 2.84 |
| | B. A. C. 5310 . | 37 | 27.7 | 29.8 | 32.9 | 47.8 | 49.6 | 51.7 | 53.8 | 55.6 | 10.6 | 13.8 | 15.7 | 54 51.73 | 0.20 | 26 30 | 15 54 25.63 | 2.77 |
| | Lupi . . . | 38 | 32.8 | 35.0 | 37.7 | 52.6 | 54.6 | 56.8 | 58.8 | 0.7 | 15.4 | 18.7 | 20.6 | 58 56.70 | + 0.08 | 26 30 | 15 58 30.48 | 3.24 |
| | Lacaille 6686 . | 39 | . . . | . . . | . . . | 32.6 | 34.3 | 36.4 | 38.5 | 40.5 | 55.2 | 58.3 | 0.3 | 59 44.51 | - 7.96 | 26 30 | 15 59 10.25 | 3.24 |
| | *-36° 24' . . . | 40 | . . . | . . . | . . . | 14.2 | 17.1 | 19.0 | 33.0 | 35.9 | 37.8 | 40.1 | 42.5 | 0 29.95 | - 34.52 | 26 30 | 15 59 29.13 | 3.24 |
| | Ophiuchi . . . | 41 | 0.7 | 2.2 | 4.8 | 16.8 | 18.3 | 19.9 | 21.5 | 23.1 | 35.0 | 37.6 | 39.3 | 8 19.93 | + 0.11 | 26 30 | 16 7 53.74 | 2.78 |
| | Scorpii . . . | 42 | . . . | . . . | . . . | 36.2 | 38.1 | 39.9 | 41.7 | 43.3 | 56.4 | 59.1 | 0.8 | 13 46.94 | - 7.00 | 26 30 | 16 13 13.64 | 3.05 |
| | Ophiuchi, (1st *) | 43 | 17.6 | 19.1 | 21.8 | . . . | . . . | . . . | . . . | . . . | 55.0 | 57.4 | 59.2 | 18 38.35 | + 0.08 | 26 30 | 16 18 12.13 | 3.06 |
| | Ophiuchi, (2d *) | 44 | 57.4 | 59.3 | 1.1 | 2.9 | 5.7 | . . . | 11.3 | 13.9 | 15.8 | 17.5 | 19.7 | 18 38.46 | 0.01 | 26 30 | 16 18 12.17 | 3.06 |
| | O. Arg. S. 15619 . | 45 | . . . | . . . | . . . | 34.9 | 36.7 | 38.4 | 40.3 | 42.0 | . . . | . . . | . . . | 18 38.46 | 0.10 | 26 30 | 16 18 12.26 | 3.06 |
| 33 | O. Arg. S. 15712 . | 46 | 52.4 | 54.1 | 55.7 | 57.5 | 59.9 | . . . | . . . | . . . | . . . | . . . | . . . | 24 55.92 | 26.45 | 26 31 | 16 25 0.06 | 3.04 |
| | O. Arg. S. 15714 . | 47 | 16.4 | 18.3 | 20.7 | . . . | . . . | . . . | . . . | . . . | 53.0 | 55.5 | 57.4 | 25 36.88 | 0.08 | 26 31 | 16 25 10.65 | 3.04 |
| | Herculis . . . | 48 | 59.9 | 1.4 | 3.9 | 15.9 | 17.6 | 19.2 | 20.8 | 22.2 | 34.3 | 36.9 | 38.5 | 31 19.15 | 0.12 | 26 31 | 16 30 52.96 | 2.78 |
| | Lacaille 6931 . | 49 | 49.7 | 51.4 | 54.6 | 8.5 | 10.3 | 12.4 | 13.9 | 16.0 | 30.4 | 33.0 | 35.0 | 34 12.29 | + 0.06 | 26 31 | 16 33 46.04 | 3.34 |
| | B. A. C. 5600 . | 50 | . . . | . . . | . . . | 1.6 | 3.3 | 5.3 | 7.3 | 9.9 | 22.3 | 25.0 | 26.7 | 37 12.67 | - 7.20 | -26 31 | 16 36 39.16 | - 3.23 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|---------------------------|--------------------|-----------------|--------------|--------------|
| 1876. h. June 24, 16.8 | s. - 26.31 | s. - 0.013 | s. + 0.08 | s. + 0.11 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. |
|-------------------------|-------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|---------------|-------|--------------|-------------|---------------------------------|-------------------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | |
| 1876. June 24 Y. | O. Arg. S. 15896 . | 1 | .. | .. | .. | 34.0 | 35.8 | 37.8 | 39.7 | 41.4 | 54.7 | 57.5 | 59.5 | m. s. | m. s. | s. | h. m. s. | s. | |
| | *-24° 5' | 2 | .. | .. | .. | 42.4 | 44.1 | 45.7 | 47.4 | 49.5 | .. | .. | .. | 42 45.82 | + | 0.10 | 26.31 | 16 37 11.54 | 3.23 |
| | Weisse 873 | 3 | 53.9 | 55.4 | 57.8 | 9.8 | 11.2 | 13.0 | 14.6 | 16.2 | 28.0 | 30.6 | 32.3 | 47 12.98 | 0.12 | 26.31 | 16 46 46.79 | 2.86 | |
| | B. A. C. 5700, (1st*) | 4 | 36.0 | 38.0 | 39.7 | 41.4 | 44.3 | .. | 47.9 | 50.5 | 52.3 | 54.0 | 56.1 | 50 16.02 | 0.01 | 26.31 | 16 49 49.72 | 3.12 | |
| | B. A. C. 5700, (2d*) | 5 | 56.0 | 57.5 | 0.1 | 12.9 | 14.3 | 16.1 | 17.9 | 19.5 | 32.3 | 34.9 | 36.6 | 50 16.19 | 0.09 | 26.31 | 16 49 49.97 | 3.12 | |
| | ε Ursæ Minoris. . | 6 | 54.0 | 6.0 | 24.0 | 53.0 | 5.0 | 15.0 | 29.0 | 41.0 | 8.0 | 27.0 | 38.0 | 59 16.36 | 1.78 | 26.31 | .. | 7.31 | |
| | α Herculis | 7 | 8.9 | 10.4 | 13.0 | 25.3 | 26.7 | 28.6 | 30.3 | 31.7 | 44.2 | 46.8 | 48.5 | 9 28.58 | 0.13 | 26.31 | 17 9 2.40 | 2.81 | |
| | η Herculis | 8 | 50.9 | 52.5 | 55.6 | 9.7 | 11.5 | 13.5 | 15.6 | 17.3 | 31.6 | 34.6 | 36.6 | 13 13.58 | 0.18 | 26.32 | 17 12 47.44 | 2.80 | |
| | B. A. C. 5887 . . . | 9 | .. | .. | .. | 28.6 | 33.1 | 38.8 | 44.3 | 49.2 | .. | .. | .. | 18 38.80 | 0.63 | 26.32 | 17 18 13.11 | 5.68 | |
| | α Ophiuchi | 10 | 20.0 | 21.5 | 24.1 | 36.5 | 38.0 | 39.7 | 41.5 | 42.9 | 55.0 | 57.7 | 59.4 | 29 39.66 | 0.13 | 26.32 | 17 29 13.47 | 2.84 | |
| | *-35° 27' | 11 | 39.4 | 41.3 | 44.4 | 58.4 | 0.3 | 2.2 | 4.2 | 6.0 | 20.8 | 23.7 | 25.6 | 36 2.39 | 0.08 | 26.32 | 17 35 36.15 | 3.70 | |
| | Lacaille 7414 . . . | 12 | 49.5 | 51.3 | 54.3 | 9.2 | 10.9 | 13.0 | 14.9 | 16.9 | 31.5 | 34.5 | 36.5 | 37 12.95 | 0.08 | 26.32 | 17 36 46.71 | 3.70 | |
| | *-30° 55' | 13 | 42.5 | 44.5 | 47.8 | .. | .. | .. | .. | .. | 24.2 | 26.6 | 28.5 | 42 5.68 | 0.07 | 26.32 | 17 41 39.43 | 3.56 | |
| | *-30° 56' | 14 | 57.6 | 59.7 | 2.3 | .. | .. | .. | .. | .. | 37.6 | 40.5 | 42.4 | 43 20.02 | 0.07 | 26.32 | 17 42 53.77 | 3.56 | |
| | *-30° 57' | 15 | 12.1 | 13.8 | 16.5 | .. | .. | .. | .. | .. | 51.8 | 54.7 | 56.7 | 43 34.27 | + | 0.07 | 26.32 | 17 43 8.02 | 3.56 |
| | *-34° 26' | 16 | .. | .. | .. | 59.0 | 0.6 | 2.7 | 4.7 | 6.4 | 21.1 | 24.0 | 25.9 | 47 10.55 | - | 7.77 | 26.32 | 17 46 36.46 | 3.69 |
| | *-28° 4' | 17 | .. | .. | .. | 45.2 | 46.9 | 48.7 | 50.5 | 52.4 | .. | .. | .. | 50 48.74 | + | 0.09 | 26.32 | 17 50 22.51 | 3.49 |
| | *-28° 2' | 18 | .. | .. | .. | 6.6 | 9.5 | 11.3 | 24.0 | 26.6 | 28.5 | 30.6 | 32.5 | 51 21.20 | - | 31.47 | 26.32 | 17 50 23.41 | 3.49 |
| | μ Sagittarii . . . | 19 | 29.9 | 31.6 | 34.3 | 46.9 | 48.7 | 50.5 | 52.2 | 54.0 | 6.6 | 9.3 | 11.1 | 6 50.46 | + | 0.09 | 26.33 | 18 6 24.22 | 3.33 |
| | δ Ursæ Minoris. . | 20 | .. | .. | .. | 3.0 | 28.0 | 56.0 | 24.0 | 49.0 | .. | .. | .. | 12 56.00 | 2.60 | 26.33 | .. | 12.32 | |
| 26 | α Bootis | 21 | 9.3 | 10.9 | 13.4 | 26.3 | 27.9 | 29.7 | 31.5 | 33.1 | 45.7 | 48.5 | 50.2 | 10 29.68 | 0.17 | 27.23 | 14 10 2.62 | 2.28 | |
| | Lacaille 5945 . . . | 22 | 7.7 | 9.5 | 12.5 | 27.1 | 28.8 | 31.0 | 33.0 | 34.8 | 49.4 | 52.5 | 54.4 | 20 30.97 | + | 0.03 | 27.23 | 14 20 3.77 | 2.40 |
| | Lacaille 5967 . . . | 23 | .. | .. | .. | 29.0 | 31.9 | 34.0 | 47.2 | 50.5 | 52.3 | 54.4 | 56.7 | 26 44.50 | - | 33.62 | 27.23 | 14 25 43.65 | 2.45 |
| | Lacaille 6015 . . . | 24 | 40.9 | 42.7 | 45.9 | 1.1 | 2.9 | 5.0 | 7.2 | 9.0 | 24.4 | 27.7 | 29.5 | 31 5.13 | + | 0.02 | 27.23 | 14 30 37.92 | 2.54 |
| | B. A. C. 4842 . . . | 25 | 21.5 | 23.5 | 26.4 | 41.4 | 43.4 | 45.6 | 47.6 | 49.4 | 4.4 | 7.5 | 9.4 | 34 45.46 | 0.02 | 27.23 | 14 34 18.25 | 2.56 | |
| | Weisse (2) 788 . . | 26 | 44.1 | 46.0 | 49.1 | 4.0 | 6.0 | 8.0 | 10.1 | 12.0 | 27.0 | 30.2 | 32.3 | 38 8.07 | 0.25 | 27.23 | 14 37 41.09 | 2.58 | |
| | *+37° 27' | 27 | 8.4 | 10.2 | 13.4 | 28.4 | 30.4 | 32.4 | 34.5 | 36.5 | 51.5 | 54.6 | 56.5 | 41 32.44 | 0.25 | 27.23 | 14 41 5.46 | 2.59 | |
| | ε² Libræ | 28 | 11.0 | 12.6 | 15.1 | 27.4 | 29.0 | 30.8 | 32.6 | 34.2 | 46.5 | 49.2 | 50.8 | 44 30.84 | 0.07 | 27.23 | 14 44 3.68 | 2.46 | |
| | Lacaille 6162 . . . | 29 | 57.9 | 59.6 | 2.2 | 16.0 | 17.8 | 19.6 | 21.4 | 23.2 | 36.7 | 39.7 | 41.4 | 50 19.59 | + | 0.04 | 27.23 | 14 49 52.40 | 2.59 |
| | *+10° 24' | 30 | .. | .. | .. | .. | .. | .. | 27.3 | 29.8 | 31.2 | 32.9 | 35.1 | 57 31.26 | - | 34.63 | 27.22 | 14 56 29.41 | 2.48 |
| | Weisse 1091 . . . | 31 | 31.8 | 33.5 | 36.0 | 48.1 | 49.5 | 51.1 | 52.5 | 54.3 | 6.5 | 9.2 | 11.0 | 59 51.23 | + | 0.08 | 27.22 | 14 59 24.09 | 2.53 |
| | *-37° 2' | 32 | 41.1 | 43.0 | 46.0 | 1.0 | 2.8 | 4.7 | 6.8 | 8.8 | 23.8 | 26.7 | 28.8 | 4 4.66 | 0.02 | 27.22 | 15 3 37.66 | 2.82 | |
| | *-37° 2' | 33 | 19.5 | 21.9 | 24.5 | 39.4 | 41.5 | 43.3 | 45.5 | 47.7 | 2.4 | 5.8 | 7.8 | 8 43.57 | 0.02 | 27.22 | 15 8 16.37 | 2.85 | |
| | O. Arg. N. 15259 . | 34 | 0.8 | 4.7 | 10.9 | 42.1 | 46.1 | 50.4 | 54.5 | 58.4 | 29.6 | 35.9 | 40.1 | 12 50.32 | 0.64 | 27.22 | 15 12 23.74 | 3.68 | |
| | *-37° 2' | 35 | 4.4 | 6.1 | 9.3 | 24.3 | 26.1 | 28.3 | 30.5 | 32.3 | 47.2 | 50.4 | 52.4 | 17 28.30 | 0.03 | 27.22 | 15 17 1.11 | 2.91 | |
| | *-37° 2' | 36 | 3.0 | 5.0 | 8.0 | 21.0 | 24.8 | 27.0 | 29.0 | 31.0 | 45.7 | 49.0 | 50.9 | 18 26.05 | 0.03 | 27.22 | 15 17 59.76 | 2.92 | |
| | Weisse (2) 518 . . | 37 | 59.8 | 1.7 | 4.9 | 20.3 | 22.3 | 24.4 | 26.5 | 28.4 | 43.7 | 47.0 | 49.2 | 24 24.38 | 0.26 | 27.22 | 15 23 57.42 | 2.73 | |
| | *-36° 2' | 38 | 59.5 | 0.9 | 4.2 | 19.0 | 20.7 | 22.7 | 25.1 | 27.0 | 41.9 | 44.7 | 46.7 | 32 22.95 | 0.03 | 27.22 | 15 31 55.76 | 3.03 | |
| | α Serpentis . . . | 39 | 20.2 | 21.7 | 24.1 | 36.2 | 37.7 | 39.5 | 41.1 | 42.6 | 54.6 | 57.2 | 58.7 | 38 39.42 | 0.12 | 27.22 | 15 38 12.32 | 2.63 | |
| | *-2° 51' | 40 | 54.4 | 55.9 | 58.4 | 10.2 | 11.8 | 13.5 | 15.2 | 16.6 | 28.5 | 31.2 | 32.8 | 43 13.50 | 0.10 | 27.22 | 15 42 46.38 | 2.69 | |
| τ | Weisse 818 | 41 | 46.7 | 48.3 | 50.8 | .. | .. | .. | .. | .. | 21.1 | 23.5 | 25.1 | 44 5.92 | 0.09 | 27.22 | 15 43 38.79 | 2.69 | |
| | *-16° 53' | 42 | 34.7 | .. | 38.8 | 50.7 | 52.3 | 53.8 | 55.6 | 57.6 | 9.9 | .. | 14.2 | 48 54.18 | 0.07 | 27.22 | 15 48 27.03 | 2.83 | |
| | B. A. C. 5299 . . . | 43 | 14.2 | 15.9 | 18.7 | 32.7 | 34.6 | 36.5 | 38.4 | 40.0 | 53.9 | 56.8 | 58.7 | 52 36.40 | + | 0.06 | 27.22 | 15 52 9.22 | 3.06 |
| | Lacaille 6657 . . . | 44 | 8.8 | 11.3 | 13.3 | 15.2 | 18.7 | .. | 34.5 | 37.7 | 39.6 | 41.8 | 44.3 | 56 56.52 | - | 0.06 | 27.22 | 15 56 29.24 | 3.25 |
| | Lacaille 6658 . . . | 45 | 36.7 | 38.6 | 41.7 | 56.8 | 58.7 | 0.8 | 2.9 | 4.8 | 19.8 | 22.9 | 25.0 | 57 0.79 | + | 0.03 | 27.22 | 15 56 33.60 | 3.25 |
| | *-12° 10' | 46 | 52.6 | 54.1 | 56.5 | 8.9 | 10.4 | 12.0 | 13.8 | 15.3 | 27.5 | 30.0 | 31.6 | 0 12.06 | 0.08 | 27.22 | 15 59 44.92 | 2.83 | |
| | Cor. Borealis . . | 47 | 32.0 | 34.0 | 37.0 | 52.0 | 54.0 | 56.1 | 58.2 | 0.0 | 14.9 | 18.0 | 20.0 | 4 56.02 | 0.20 | 27.22 | 16 4 29.05 | 2.77 | |
| | 6 Cor. Borealis, (1st*) | 48 | 46.2 | 48.6 | 50.6 | 52.4 | 55.7 | .. | 8.3 | 11.3 | 13.4 | 15.3 | 17.7 | 10 31.95 | 0.15 | 27.22 | 16 10 4.88 | 2.76 | |
| | 6 Cor. Borealis, (2d*) | 49 | 8.9 | 10.6 | 13.6 | 28.1 | 29.9 | 32.0 | 34.1 | 35.9 | 50.2 | 53.2 | 55.2 | 10 31.97 | 0.24 | 27.22 | 16 10 4.99 | 2.76 | |
| | *-24° 9' | 50 | .. | .. | .. | 17.4 | 18.8 | 20.6 | 22.0 | 23.7 | .. | .. | .. | 18 20.50 | + | 0.06 | -27.22 | 16 17 53.34 | 3.08 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|---------------------------|--------------------|-----------------|--------------|--------------|
| 1876. h. June 26, 15.8 | s. - 27.22 | s. + 0.006 | s. + 0.15 | s. + 0.11 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | | | |
|-------------------------|----------------------------------|----------------------------------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|---------------|-------|---------------------------------|-------------------------|-------------|-------------|-------------|------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | | | |
| 1876. June 26 Y. | O. Arg. S. 15612 . | 1 | . | . | . | . | 42.0 | 44.6 | 46.3 | 58.3 | 0.0 | 3.0 | 4.6 | 6.8 | m. s. | m. s. | s. | h. m. s. | s. | | |
| | Weisse (2) 787 . | 2 | 40.3 | 42.4 | 45.3 | 0.4 | 2.3 | 4.5 | 6.5 | 8.6 | 23.8 | 27.2 | 29.2 | 27 | 4.59 | + | 0.34 | 27.22 | 16 17 58.03 | — 3.08 | |
| | O. Arg. S. 15788 . | 3 | 13.4 | 14.9 | 17.8 | 30.6 | 32.3 | 34.2 | 36.0 | 37.5 | 50.6 | 53.5 | 55.3 | 31 | 34.19 | + | 0.05 | 27.22 | 16 26 37.71 | 2.81 | |
| | O. Arg. S. 15886 . | 4 | 44.6 | 46.3 | 49.0 | 3.7 | 4.4 | 6.0 | 8.0 | 9.8 | 23.3 | 26.2 | 27.9 | 37 | 6.29 | + | 0.05 | 27.22 | 16 31 7.02 | 3.14 | |
| | O. Arg. S. 15896 . | 5 | . | . | . | . | 55.7 | 58.6 | 0.5 | 12.7 | 15.7 | 17.5 | 19.2 | 21.3 | 37 | 6.29 | + | 0.05 | 27.22 | 16 36 39.12 | 3.23 |
| | *—24° 26' | 6 | . | . | . | . | 28.8 | 30.4 | 32.4 | 34.3 | 36.1 | . | . | . | 38 | 10.15 | — | 31.27 | 27.22 | 16 37 11.66 | 3.23 |
| | 18 Ophiuchi | 7 | . | . | . | . | 38.5 | 40.2 | 42.1 | 44.0 | 45.6 | . | . | . | 42 | 32.40 | + | 0.06 | 27.21 | 16 42 5.25 | 3.20 |
| | κ Ophiuchi | 8 | 58.3 | 0.0 | 2.5 | 14.5 | 16.1 | 17.8 | 19.5 | 20.9 | 33.1 | 35.6 | 37.3 | 52 | 17.78 | + | 0.06 | 27.21 | 16 42 14.93 | 3.20 | |
| | ε Ursæ Minoris . . | 9 | 55.5 | 7.0 | 25.0 | 53.0 | 5.0 | 17.0 | 30.0 | 41.0 | 9.0 | 27.5 | 39.0 | 59 | 17.18 | + | 0.14 | 27.21 | 16 51 50.71 | 2.80 | |
| | O. Arg. S. 16503 . | 10 | 42.2 | 44.0 | 46.8 | 0.6 | 2.3 | 4.5 | 6.2 | 8.0 | 21.6 | 24.6 | 26.5 | 8 | 4.30 | + | 1.70 | 27.21 | . | 7.17 | |
| | *—24° 50' | 11 | 50.6 | 52.1 | 54.7 | 8.0 | 9.6 | 11.5 | 13.4 | 15.0 | 28.3 | 31.0 | 32.7 | 8 | 4.30 | + | 0.04 | 27.21 | 17 7 37.13 | 3.44 | |
| | | | | | | | | | | | | | | 15 | 11.54 | + | 0.05 | 27.21 | 17 14 44.38 | 3.33 | |
| | B. A. C. 5888 . . . | 12 | 15.2 | 16.6 | 19.3 | 31.4 | 33.0 | 34.8 | 36.4 | 38.0 | 50.3 | 52.8 | 54.4 | 20 | 34.75 | + | 0.08 | 27.21 | 17 20 7.62 | 3.10 | |
| | B. A. C. 5916 . . . | 13 | 17.6 | 19.3 | 22.1 | 35.9 | 37.7 | 39.7 | 41.5 | 43.2 | 57.0 | 59.8 | 1.6 | 25 | 39.58 | + | 0.04 | 27.21 | 17 25 12.41 | 3.49 | |
| | 52 Ophiuchi | 14 | 0.7 | 2.2 | 4.8 | 18.0 | 19.5 | 21.3 | 23.1 | 24.8 | 37.6 | 40.4 | 42.0 | 28 | 21.31 | + | 0.06 | 27.21 | 17 27 54.16 | 3.30 | |
| | *—20° 35' | 15 | . | . | . | . | 34.6 | 36.3 | 38.0 | 40.0 | 41.6 | 54.4 | 57.0 | 30 | 45.10 | — | 6.85 | 27.21 | 17 30 11.04 | 3.28 | |
| | *—34° 23' | 16 | 40.2 | 41.8 | 44.5 | 59.7 | 1.2 | 3.3 | 5.4 | 7.3 | 21.5 | 24.8 | 26.7 | 36 | 3.31 | + | 0.03 | 27.21 | 17 35 36.13 | 3.68 | |
| μ Herculis | 17 | 44.5 | 46.3 | 48.9 | 2.4 | 4.2 | 6.1 | 8.0 | 9.8 | 23.1 | 26.2 | 27.9 | 42 | 6.13 | + | 0.21 | 27.21 | 17 41 39.13 | 2.78 | | |
| 30 | ε Bootis | 18 | 43.5 | 45.3 | 47.9 | 1.4 | 3.1 | 5.0 | 6.9 | 8.6 | 21.8 | 24.8 | 26.7 | 40 | 5.00 | + | 0.18 | 28.40 | . | 2.48 | |
| | α ² Libræ | 19 | 12.1 | 13.7 | 16.3 | 28.5 | 30.3 | 32.0 | 33.7 | 35.2 | 47.8 | 50.3 | 52.0 | 44 | 31.99 | + | 0.09 | 28.40 | . | 2.41 | |
| | Weisse (2) 1127 . | 20 | 49.9 | 51.9 | 55.0 | . | . | . | . | . | 35.0 | 38.3 | 40.4 | 53 | 15.08 | + | 0.22 | 28.41 | 14 52 46.89 | 2.61 | |
| | Weisse (2) 1130 . | 21 | . | . | . | . | 11.7 | 13.6 | 16.0 | 18.1 | 20.2 | . | . | 53 | 15.92 | + | 0.24 | 28.41 | 14 52 47.75 | 2.61 | |
| | Weisse (2) 1147 . | 22 | . | . | . | . | 10.4 | 14.0 | 16.2 | 30.7 | 33.8 | 36.2 | 38.2 | 54 | 27.56 | — | 36.53 | 28.41 | 14 53 22.62 | 2.62 | |
| | B. A. C. 4982 . . . | 23 | . | . | . | . | 56.6 | 10.0 | 23.5 | 37.3 | 50.1 | . | . | 59 | 23.50 | + | 1.80 | 28.41 | 14 58 56.89 | 7.39 | |
| | B. A. C. 5026, (1st*) | 24 | . | . | . | . | 19.0 | 20.8 | 23.1 | 25.1 | 27.2 | . | . | 9 | 23.04 | + | 0.23 | 28.41 | 15 8 54.86 | 2.54 | |
| | B. A. C. 5026, (2d*) | 25 | 58.8 | 0.4 | 3.6 | . | . | . | . | . | 42.5 | 45.6 | 47.8 | 9 | 23.12 | + | 0.21 | 28.41 | 15 8 54.92 | 2.54 | |
| | Lacaille 6372 . . . | 26 | 16.8 | 18.2 | 21.4 | 36.3 | 38.2 | 40.2 | 42.2 | 44.2 | 59.0 | 1.9 | 3.9 | 18 | 40.21 | + | 0.06 | 28.41 | 15 18 11.86 | 2.90 | |
| | ζ ³ Libræ | 27 | 51.8 | 53.5 | 56.0 | 8.4 | 10.0 | 11.7 | 13.4 | 14.9 | 27.4 | 30.0 | 31.9 | 24 | 11.73 | + | 0.09 | 28.41 | 15 23 43.41 | 2.68 | |
| | O. Arg. S. 14674 . | 28 | 54.2 | 55.9 | 58.5 | 11.7 | 13.5 | 15.2 | 17.0 | 18.8 | 31.9 | 34.7 | 36.6 | 28 | 15.27 | + | 0.08 | 28.42 | 15 27 46.93 | 2.79 | |
| | δ Coronæ Borealis . | 29 | 33.3 | 34.7 | 37.6 | 51.0 | 52.6 | 54.6 | 56.2 | 58.1 | 11.4 | 14.0 | 16.0 | 44 | 54.50 | + | 0.17 | 28.42 | 15 44 26.25 | 2.63 | |
| | β ¹ Scorpii | 30 | 24.7 | 26.3 | 28.9 | 41.5 | 43.0 | 44.9 | 46.8 | 48.4 | 1.0 | 3.6 | 5.4 | 58 | 44.95 | + | 0.08 | 28.42 | . | 2.91 | |
| | July 3 | ε Coronæ Borealis . | 31 | 26.8 | 28.5 | 31.2 | 44.7 | 46.4 | 48.2 | 50.2 | 51.9 | 5.2 | 8.0 | 9.7 | 52 | 48.25 | + | 0.15 | 18.46 | 15 52 29.94 | 2.65 |
| | | β ¹ Scorpii | 32 | 14.8 | 16.5 | 19.0 | 31.6 | 33.2 | 35.0 | 36.8 | 38.5 | 50.9 | 53.7 | 55.4 | 58 | 35.04 | + | 0.10 | 18.47 | 15 58 16.67 | 2.90 |
| | | 45 Serpents | 33 | . | . | . | 0.0 | 1.6 | 3.4 | 5.0 | 6.6 | 18.7 | 21.2 | 22.9 | 2 | 9.92 | — | 6.16 | 18.47 | 16 1 44.99 | 2.68 |
| | | τ Coronæ Borealis . | 34 | . | . | . | 43.0 | 45.1 | 47.4 | 49.2 | 51.2 | 5.9 | 9.0 | 11.2 | 4 | 55.25 | — | 7.90 | 18.47 | 16 4 28.88 | 2.72 |
| B. A. C. 5430 . . . | | 35 | 36.5 | 38.1 | 40.9 | 54.5 | 56.2 | 58.2 | 59.9 | 1.5 | 15.1 | 18.0 | 19.8 | 10 | 58.06 | + | 0.10 | 18.48 | 16 10 39.68 | 3.10 | |
| Lacaille 6806 . . . | | 36 | 4.9 | 6.8 | 9.6 | 24.1 | 26.0 | 28.0 | 29.9 | 31.9 | 46.4 | 49.4 | 51.5 | 15 | 28.05 | + | 0.10 | 18.48 | 16 15 9.67 | 3.29 | |
| O. Arg. S. 15671 . | | 37 | 7.3 | 9.3 | 11.3 | 12.9 | 15.8 | . | 22.2 | 24.9 | 26.6 | 28.4 | 30.5 | 22 | 48.92 | + | 0.02 | 18.48 | 16 22 30.46 | 3.12 | |
| 22 Scorpii | | 38 | 20.5 | 22.5 | 24.8 | 26.2 | 29.0 | . | 35.4 | 38.1 | 39.8 | 41.7 | 43.6 | 23 | 2.19 | + | 0.02 | 18.48 | 16 22 43.73 | 3.12 | |
| *—28° 39' | | 39 | 45.2 | 46.7 | 49.6 | 3.2 | 4.9 | 6.8 | 8.6 | 10.4 | 24.3 | 26.9 | 28.7 | 31 | 6.85 | + | 0.10 | 18.49 | 16 30 48.46 | 3.24 | |
| *—30° 13' | | 40 | 17.8 | 19.7 | 22.5 | . | . | . | . | . | 57.4 | 0.2 | 2.2 | 35 | 39.73 | + | 0.09 | 18.49 | 16 35 21.33 | 3.31 | |
| *—24° 26' | | 41 | 42.0 | 44.0 | 45.9 | 47.7 | 50.7 | . | 56.6 | 59.3 | 0.9 | 2.6 | 4.8 | 42 | 23.45 | + | 0.02 | 18.50 | 16 42 4.97 | 3.21 | |
| 18 Ophiuchi | | 42 | 51.9 | 54.0 | 55.7 | 57.5 | 0.2 | . | 6.2 | 9.2 | 11.2 | 12.8 | 14.7 | 42 | 33.34 | + | 0.02 | 18.50 | 16 42 14.86 | 3.21 | |
| *—31° 8' | | 43 | 35.7 | 37.4 | 40.3 | 54.3 | 55.9 | 58.0 | 0.0 | 1.9 | 15.6 | 18.7 | 20.5 | 47 | 58.03 | + | 0.10 | 18.50 | 16 47 39.63 | 3.40 | |
| B. A. C. 5690 . . . | | 44 | . | . | . | 38.0 | 39.8 | 41.7 | 43.7 | 45.4 | 59.4 | 2.4 | 4.4 | 48 | 49.35 | — | 7.46 | 18.50 | 16 48 23.39 | 3.41 | |
| *—32° 9' | | 45 | 40.6 | 42.3 | 45.0 | 59.5 | 1.3 | 3.4 | 5.2 | 7.1 | 21.1 | 23.9 | 25.9 | 54 | 3.21 | + | 0.10 | 18.51 | 16 53 44.80 | 3.46 | |
| B. A. C. 5721 . . . | | 46 | . | . | . | 43.8 | 45.8 | 47.7 | 49.6 | 51.4 | 5.5 | 8.5 | 10.4 | 54 | 55.34 | — | 7.53 | 18.51 | 16 54 29.30 | 3.46 | |
| Iacaille 7160 . . . | | 47 | 43.3 | 45.1 | 48.3 | 3.7 | 5.7 | 7.7 | 9.8 | 11.8 | 27.0 | 30.4 | 32.4 | 4 | 7.75 | + | 0.10 | 18.51 | 17 3 49.34 | 3.74 | |
| O. Arg. S. 16503 . | 48 | 33.5 | 35.0 | 38.0 | 51.8 | 53.6 | 55.5 | 57.4 | 59.2 | 13.0 | 15.8 | 17.7 | 7 | 55.50 | + | 0.10 | 18.52 | 17 7 37.08 | 3.48 | | |
| B. A. C. 5809 . . . | 49 | . | . | . | 35.4 | 38.3 | 40.3 | 53.0 | 55.8 | 57.8 | 59.7 | 2.0 | 8 | 50.29 | — | 32.09 | 18.52 | 17 7 59.68 | 3.48 | | |
| Lalande 31492 . . | 50 | 44.4 | 46.0 | 48.3 | 0.3 | 1.8 | 3.5 | 5.1 | 6.7 | 18.7 | 21.3 | 22.9 | 14 | 3.55 | + | 0.11 | —18.52 | 17 13 45.14 | — 3.02 | | |

CORRECTIONS, &c.

24. Northward.
25. Southward and larger.

| Date. | Error of clock. | Hourly rate. | <i>n</i> | <i>c</i> |
|---------------|-----------------|--------------|----------|----------|
| 1876. h. | s. | s. | s. | s. |
| June 30, 15.1 | — 28.41 | — 0.015 | + 0.10 | + 0.11 |
| July 3, 17.2 | — 18.52 | — 0.043 | + 0.05 | + 0.11 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | | | |
|-------------------------|----------------------------|----------------|--------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|---------------|---------|---------------------------------|-------------------------|-------------|-------------|------|------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | | | |
| 1876. July 3 Y. | *+2° 12' . . . | 1 | 24.5 | 26.3 | 28.0 | 29.6 | 32.2 | . . . | 32.5 | 35.0 | 36.6 | 38.3 | 40.1 | m. s. | + | 0.04 | -18.52 | 17 19 43.83 | - | 2.99 | |
| | *+2° 12' . . . | 2 | 40.9 | 42.8 | 44.5 | 46.0 | 48.7 | . . . | 48.7 | 51.3 | 52.9 | 54.6 | 56.8 | 20 18.72 | | 0.04 | 18.52 | 17 20 0.24 | | 2.94 | |
| | B. A. C. 5916 . . . | 3 | 9.0 | 10.6 | 13.7 | 27.2 | 29.0 | 30.9 | 32.8 | 34.6 | 48.2 | 51.1 | 53.0 | 25 30.92 | | 0.10 | 18.53 | 17 25 12.49 | | 3.54 | |
| a | Ophiuchi . . . | 4 | 12.5 | 14.0 | 16.5 | 28.6 | 30.4 | 32.0 | 33.7 | 35.3 | 47.4 | 50.0 | 51.7 | 29 32.01 | | 0.12 | 18.53 | 17 29 13.60 | | 2.87 | |
| | O. Arg. S. 17091 . . . | 5 | 49.8 | 51.4 | 54.0 | 7.1 | 8.7 | 10.5 | 12.2 | 14.0 | 27.0 | 29.7 | 31.5 | 35 10.54 | | 0.10 | 18.54 | 17 34 52.10 | | 3.40 | |
| | Weisse 713 . . . | 6 | 52.7 | 54.2 | 56.7 | 8.7 | 10.3 | 12.0 | 13.7 | 15.2 | 27.2 | 29.7 | 31.4 | 38 11.98 | | 0.10 | 18.54 | 17 37 53.54 | | 3.11 | |
| | *-34° 44' . . . | 7 | 35.7 | 37.7 | 40.7 | 55.3 | 56.9 | 59.1 | 1.0 | 3.0 | 17.3 | 20.3 | 22.3 | 43 59.03 | + | 0.10 | 18.54 | 17 43 40.59 | | 3.78 | |
| | B. A. C. 6029 . . . | 8 | | 37.8 | 41.2 | 43.2 | 56.5 | 59.5 | 1.4 | 3.2 | 5.7 | 44 53.56 | | - | 33.80 | 18.54 | 17 44 1.22 | | 3.78 | | |
| | *-28° 4' . . . | 9 | 58.4 | 0.4 | 2.3 | 1.0 | 6.9 | . . . | 15.0 | 18.0 | 19.8 | 21.6 | 24.0 | 50 41.04 | + | 0.02 | 18.55 | 17 50 22.51 | | 3.58 | |
| | *-28° 3' . . . | 10 | 20.0 | 21.8 | 24.7 | 38.2 | 39.9 | 41.9 | 43.8 | 45.4 | 59.1 | 2.0 | 3.7 | 50 41.86 | | 0.10 | 18.55 | 17 50 23.41 | | 3.58 | |
| | *-21° 15' . . . | 11 | 39.8 | 41.3 | 44.2 | | | | | 17.0 | 19.9 | 21.5 | 57 0.62 | | 0.09 | 18.55 | 17 56 42.16 | | 3.49 | | |
| | *-21° 11' . . . | 12 | | | 58.0 | 59.6 | 1.5 | 3.4 | 5.0 | | | | 57 1.50 | | 0.11 | 18.55 | 17 56 43.06 | | 3.49 | | |
| | B. A. C. 6145 (1st*) . . . | 13 | 5.9 | 7.5 | 10.5 | | | | | 45.5 | 48.4 | 50.5 | 2 28.05 | | 0.09 | 18.56 | 18 2 9.58 | | 3.70 | | |
| | B. A. C. 6145 (2d*) . . . | 14 | | | 24.5 | 26.1 | 28.3 | 30.0 | 31.8 | | | | 2 28.11 | | 0.11 | 18.56 | 18 2 9.69 | | 3.70 | | |
| μ | Sagittarii . . . | 15 | 22.3 | 23.8 | 26.4 | 39.2 | 41.0 | 42.8 | 44.5 | 46.1 | 58.8 | 1.6 | 3.3 | 6 42.71 | | 0.10 | 18.56 | 18 6 24.25 | | 3.43 | |
| δ | Ursæ Minoris . . . | 16 | | | 53.0 | 18.0 | 47.5 | 15.0 | 42.0 | | | | 12 47.10 | | 2.79 | 18.56 | | | 11.46 | | |
| | O. Arg. S. 18198 . . . | 17 | 15.7 | 17.3 | 19.8 | 32.8 | 34.4 | 36.2 | 37.9 | 39.7 | 52.4 | 55.1 | 56.9 | 18 36.20 | | 0.10 | 18.57 | 18 18 17.73 | | 3.53 | |
| | *-31° 38' . . . | 18 | 16.4 | 18.0 | 20.8 | 35.1 | 36.7 | 38.5 | 40.5 | 42.4 | 56.4 | 59.2 | 1.2 | 21 38.65 | | 0.10 | 18.57 | 18 21 20.18 | | 3.78 | |
| ι | Aquilæ . . . | 19 | 30.0 | 31.3 | 33.9 | 45.9 | 47.4 | 49.2 | 50.9 | 52.4 | 4.4 | 6.9 | 8.7 | 28 49.18 | | 0.10 | 18.58 | 18 28 30.70 | | 3.19 | |
| 8 | η | Herculis . . . | 20 | 35.8 | 37.9 | 41.1 | 56.4 | 58.3 | 0.5 | 2.7 | 4.7 | 19.9 | 23.3 | 25.4 | 39 0.55 | | 0.23 | 19.40 | 16 38 41.38 | | 2.75 |
| | Lacaille 7011 . . . | 21 | 13.1 | 14.6 | 17.7 | 33.4 | 34.9 | 37.1 | 39.2 | 41.0 | 56.0 | 59.2 | 1.2 | 44 37.04 | | 0.04 | 19.40 | 16 44 17.68 | | 3.57 | |
| | B. A. C. 5704 . . . | 22 | 39.5 | 41.1 | 43.7 | 57.2 | 58.9 | 0.6 | 2.4 | 4.1 | 17.6 | 20.4 | 22.2 | 51 0.70 | | 0.05 | 19.41 | 16 50 41.34 | | 3.29 | |
| | B. A. C. 5775 . . . | 23 | 14.0 | 16.0 | 19.4 | 36.2 | 38.2 | 40.4 | 42.9 | 44.9 | 1.4 | 4.0 | 7.2 | 1 40.59 | + | 0.26 | 19.42 | 17 1 21.34 | | 2.81 | |
| | B. A. C. 5818 (1st*) . . . | 24 | 37.9 | 39.9 | 41.6 | 43.5 | 46.7 | . . . | 56.2 | 59.0 | 0.8 | 3.0 | 5.1 | 9 21.37 | - | 0.03 | 19.42 | 17 9 1.92 | | 3.50 | |
| | B. A. C. 5818 (2d*) . . . | 25 | 4.9 | 6.5 | 9.4 | 23.1 | 25.2 | 26.9 | 28.8 | 30.6 | 44.3 | 47.7 | 49.3 | 9 26.97 | + | 0.05 | 19.42 | 17 9 7.60 | | 3.50 | |
| | *-35° 14' . . . | 26 | 30.1 | 32.1 | 35.1 | 50.0 | 51.7 | 53.5 | 55.6 | 57.5 | 12.3 | 15.1 | 17.2 | 13 53.65 | + | 0.04 | 19.42 | 17 13 34.27 | | 3.68 | |
| | *-35° 15' . . . | 27 | | | 36.5 | 38.2 | 40.3 | 42.4 | 44.2 | 58.8 | 1.7 | 3.7 | 14 48.22 | - | 7.89 | 19.42 | 17 14 20.91 | | 3.68 | | |
| | B. A. C. 5888 . . . | 28 | 7.6 | 9.1 | 11.6 | 23.9 | 25.4 | 27.2 | 28.7 | 30.2 | 42.5 | 45.1 | 46.9 | 20 27.11 | + | 0.08 | 19.43 | 17 20 7.76 | | 3.15 | |
| | O. Arg. S. 16952 . . . | 29 | 21.0 | 22.6 | 25.0 | 37.7 | 39.3 | 41.2 | 42.9 | 44.4 | 57.0 | 59.6 | 1.4 | 27 41.10 | | 0.06 | 19.43 | 17 27 21.73 | | 3.28 | |
| | O. Arg. S. 17091 . . . | 30 | 51.0 | 52.5 | 55.3 | 8.2 | 9.7 | 11.5 | 13.4 | 15.0 | 28.0 | 30.7 | 32.5 | 35 11.62 | | 0.06 | 19.44 | 17 34 52.24 | | 3.42 | |
| | Weisse 713 . . . | 31 | 53.8 | 55.3 | 57.8 | 9.7 | 11.5 | 13.0 | 14.8 | 16.4 | 28.3 | 30.9 | 32.6 | 38 13.10 | | 0.08 | 19.44 | 17 37 53.74 | | 3.13 | |
| μ | Herculis . . . | 32 | 37.0 | 38.6 | 41.5 | 54.9 | 56.5 | 58.5 | 0.3 | 2.0 | 15.5 | 18.4 | 20.3 | 41 58.50 | + | 0.18 | 19.44 | 17 41 39.24 | | 2.80 | |
| | *-34° 47' . . . | 33 | | | 26.2 | 28.1 | 30.2 | 32.1 | 33.8 | 48.4 | 51.0 | 53.5 | 45 37.99 | - | 7.84 | 19.45 | 17 45 10.70 | | 3.82 | | |
| | *-34° 47' . . . | 34 | | | 0.0 | 3.0 | 5.1 | 8.5 | 21.6 | 23.5 | 25.5 | 27.9 | 46 15.64 | | 33.87 | 19.45 | 17 45 22.32 | | 3.82 | | |
| | *-34° 47' . . . | 35 | | | | | | 41.8 | 44.9 | 46.8 | 48.8 | 51.3 | 46 46.72 | | 41.60 | 19.45 | 17 45 45.67 | | 3.82 | | |
| | *-34° 47' . . . | 36 | | | | | | 56.8 | 59.9 | 1.9 | 3.7 | 6.2 | 47 1.70 | - | 41.60 | 19.45 | 17 46 0.65 | | 3.82 | | |
| | *-31° 25' . . . | 37 | 14.0 | 15.4 | 17.8 | 32.1 | 34.0 | 36.0 | 38.1 | 39.8 | 54.0 | 57.1 | 58.8 | 51 36.10 | + | 0.04 | 19.45 | 17 51 16.69 | | 3.72 | |
| | *-24° 15' . . . | 38 | 40.9 | 42.5 | 45.2 | 58.5 | 59.7 | 1.5 | 3.4 | 5.1 | 18.4 | 21.1 | 22.7 | 57 1.73 | + | 0.06 | 19.45 | 17 56 42.34 | | 3.52 | |
| | *-24° 11' . . . | 39 | 21.4 | 23.4 | 25.0 | 26.9 | 29.8 | . . . | 35.7 | 38.5 | 40.0 | 41.9 | 44.3 | 52 2.69 | - | 0.02 | 19.45 | 17 56 43.22 | | 3.52 | |
| | B. A. C. 6145 . . . | 40 | 7.0 | 8.8 | 11.6 | 25.5 | 27.3 | 29.3 | 31.2 | 32.9 | 46.9 | 49.7 | 51.6 | 2 29.25 | + | 0.05 | 19.46 | 18 2 9.84 | | 3.74 | |
| δ | Ursæ Minoris . . . | 41 | | | 51.5 | 18.0 | 46.0 | 15.0 | 40.0 | | | | 12 46.10 | | 3.97 | 19.16 | | | 10.61 | | |
| ι | Aquilæ . . . | 42 | 30.8 | 32.4 | 34.9 | 46.9 | 48.5 | 50.2 | 51.9 | 53.4 | 5.4 | 8.0 | 9.7 | 28 50.19 | + | 0.08 | 19.47 | 18 28 30.86 | | 3.23 | |
| | O. Arg. S. 18525 . . . | 43 | | | 29.2 | 30.8 | 32.9 | 34.4 | 36.2 | 49.0 | 51.9 | 53.9 | 33 39.79 | - | 7.10 | 19.48 | 18 33 13.21 | | 3.64 | | |
| | *-1° 6' . . . | 44 | 0.5 | 1.9 | 4.3 | | | | | 34.7 | 37.0 | 38.8 | 37 19.53 | + | 0.09 | 19.48 | 18 37 0.14 | | 3.12 | | |
| | O. Arg. S. 18683 . . . | 45 | 2.5 | 3.8 | 6.5 | 18.8 | 21.0 | 22.6 | 24.5 | 26.4 | 39.0 | 41.8 | 43.7 | 41 22.78 | | 0.06 | 19.48 | 18 41 3.36 | | 3.57 | |
| β | Lyrae . . . | 46 | 29.5 | 31.1 | 34.2 | 48.3 | 50.3 | 52.2 | 54.3 | 56.0 | 10.3 | 13.3 | 15.3 | 45 52.25 | | 0.19 | 19.49 | 18 45 32.95 | | 2.81 | |
| | *-22° 8' . . . | 47 | 2.5 | 3.8 | 6.6 | 19.4 | 20.8 | 22.6 | 24.5 | 26.1 | 39.1 | 41.8 | 43.5 | 51 22.79 | | 0.06 | 19.49 | 18 51 3.36 | | 3.58 | |
| 12 | Aquilæ . . . | 48 | 6.9 | 8.5 | 10.9 | 22.9 | 24.5 | 26.2 | 27.9 | 29.4 | 41.4 | 43.9 | 45.6 | 55 26.19 | | 0.09 | 19.49 | 18 55 6.79 | | 3.21 | |
| | Lamont 6587 . . . | 49 | 53.5 | 54.9 | 57.5 | 9.5 | 11.0 | 12.5 | 14.2 | 15.7 | 27.6 | 30.3 | 31.8 | 0 12.59 | | 0.10 | 19.50 | 18 59 53.19 | | 3.13 | |
| | B. A. C. 6554 . . . | 50 | 28.6 | 30.3 | 33.0 | 46.8 | 48.4 | 50.3 | 52.3 | 54.0 | 7.8 | 10.6 | 12.7 | 3 50.44 | + | 0.05 | 19.50 | 19 3 30.99 | - | 3.83 | |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------------------|-----------------|---------------|--------------|--------------|
| 1876. h. July 8, 18.6 | s. - 19.48 | s. - 0.041 | s. + 0.12 | s. + 0.10 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | | |
|---------------------------------|------------------------------|------------------------------------|--------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|--------------|--------|---------------------------------|-------------------------|-------------|-------------|------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |
| 1876. July 8 Y. | O. Arg. S. 19202 | 1 | | | | 44.5 | 47.4 | 49.1 | 1.9 | 4.7 | 6.6 | 8.6 | 10.7 | 4 | 59.19 | — | 32.00 | —19.50 | 19 4 7.69 | — | 3.83 |
| ρ^2 | *—22° 15' | 2 | 34.3 | 35.9 | 38.2 | 51.1 | 52.6 | 54.5 | 56.3 | 57.9 | 10.5 | 13.7 | 15.4 | 8 | 54.58 | + | 0.06 | 19.50 | 19 8 35.14 | | 3.59 |
| | Sagittarii | 3 | 39.6 | 41.0 | 43.8 | 56.4 | 58.0 | 59.8 | 1.4 | 3.0 | 15.6 | 18.3 | 20.0 | 14 | 59.72 | | 0.06 | 19.51 | 19 14 40.27 | | 3.49 |
| | Lalande 36732 | 4 | 5.0 | 6.6 | 9.8 | 24.8 | 26.6 | 28.8 | 30.8 | 32.7 | 47.7 | 50.8 | 52.9 | 20 | 28.77 | + | 0.22 | 19.51 | 19 20 9.48 | | 2.76 |
| | Lalande 36774 | 5 | | | | 12.3 | 13.3 | 16.3 | 18.4 | 20.3 | 35.2 | 38.5 | 40.3 | 21 | 24.32 | — | 7.88 | 19.51 | 19 20 56.93 | | 2.76 |
| | *+36° 56' | 6 | 7.5 | 9.3 | 12.3 | 27.4 | 29.4 | 31.5 | 33.5 | 35.2 | 50.2 | 53.5 | 55.3 | 23 | 31.37 | + | 0.22 | 19.51 | 19 23 12.08 | | 2.76 |
| | B. A. C. 6700 | 7 | 18.0 | 19.6 | 22.2 | 35.0 | 36.6 | 38.3 | 40.0 | 41.7 | 54.5 | 57.4 | 58.8 | 28 | 38.37 | + | 0.06 | 19.51 | 19 28 18.92 | | 3.56 |
| | *—27° 39' | 8 | | | | 23.0 | 25.8 | 27.8 | 40.1 | 42.8 | 44.9 | 46.6 | 48.7 | 31 | 37.46 | — | 31.39 | 19.52 | 19 30 46.55 | | 3.77 |
| | O. Arg. S. 19809 | 9 | | | | 56.0 | 59.3 | 1.2 | 1.3 | 16.5 | 18.3 | 20.0 | 22.3 | 32 | 10.86 | — | 31.39 | 19.52 | 19 31 19.95 | | 3.77 |
| | *+36° 45' | 10 | 35.4 | 37.1 | 40.2 | 55.2 | 56.9 | 59.2 | 1.3 | 3.2 | 18.1 | 21.1 | 23.2 | 35 | 59.17 | + | 0.22 | 19.52 | 19 35 39.87 | | 2.74 |
| | γ | Aquilæ | 11 | 24.8 | 26.3 | 28.9 | 41.0 | 42.5 | 44.2 | 45.9 | 47.4 | 59.5 | 2.0 | 3.7 | 40 | 44.20 | | 0.12 | 19.52 | 19 40 24.80 | |
| O. Arg. S. 20024 | | 12 | 13.6 | 15.0 | 17.8 | 31.3 | 32.8 | 34.9 | 36.9 | 38.6 | 52.0 | 54.7 | 56.7 | 45 | 34.94 | | 0.05 | 19.53 | 19 45 15.46 | | 3.74 |
| *—22° 43' | | 13 | 22.1 | 23.6 | 26.2 | 39.1 | 40.8 | 42.7 | 44.5 | 46.0 | 59.0 | 1.7 | 3.4 | 49 | 42.65 | | 0.06 | 19.53 | 19 49 23.18 | | 3.60 |
| B. A. C. 6855 | | 14 | 38.0 | 39.5 | 42.2 | 54.5 | 56.1 | 57.8 | 59.5 | 0.1 | 13.5 | 16.1 | 17.9 | 52 | 57.75 | | 0.11 | 19.53 | 19 52 38.36 | | 2.86 |
| *+34° 59' | | 15 | 20.5 | 22.3 | 25.4 | 39.8 | 41.8 | 43.8 | 45.7 | 47.6 | 2.2 | 5.3 | 7.3 | 57 | 43.79 | + | 0.21 | 19.54 | 19 57 24.46 | | 2.70 |
| *+34° 59' | | 16 | | | | 23.5 | 26.6 | 28.5 | 42.0 | 45.0 | 46.9 | 48.9 | 51.3 | 58 | 39.09 | — | 33.79 | 19.54 | 19 57 45.76 | | 2.70 |
| *—9° 15' | | 17 | 49.9 | 51.2 | 53.8 | 6.0 | 7.3 | 9.3 | 11.0 | 12.5 | 24.4 | 27.1 | 28.6 | 4 | 9.18 | + | 0.08 | 19.54 | 20 3 49.72 | | 3.24 |
| *+38° 18' | | 18 | 7.5 | 9.4 | 12.5 | 27.8 | 29.7 | 31.7 | 33.8 | 35.8 | 50.9 | 54.5 | 55.4 | 8 | 31.73 | | 0.22 | 19.54 | 20 8 12.41 | | 2.66 |
| α^2 Capricorni | | 19 | 13.4 | 15.0 | 17.6 | 29.7 | 31.4 | 33.1 | 34.9 | 36.4 | 48.5 | 51.1 | 52.9 | 11 | 33.09 | + | 0.07 | 19.54 | 20 11 13.62 | | 3.31 |
| 15 | | α Coronæ Borealis | 20 | 27.3 | 29.2 | 32.0 | 45.4 | 46.9 | 48.9 | 50.8 | 52.6 | 6.0 | 8.7 | 10.4 | 29 | 48.93 | — | 0.17 | 20.14 | 15 29 23.62 | |
| | α Serpentis | 21 | 13.1 | 14.7 | 17.3 | 29.2 | 30.8 | 32.5 | 34.1 | 35.8 | 47.7 | 50.1 | 51.7 | 38 | 32.45 | | 0.13 | 20.14 | 15 38 12.18 | | 2.53 |
| | Weisse (2) 1201 | 22 | | | | 48.9 | 50.8 | 53.2 | 55.4 | 57.6 | | | | 48 | 53.18 | | 0.22 | 20.14 | 15 48 32.82 | | 2.56 |
| | Lacaille 6657 | 23 | 25.2 | 27.4 | 30.6 | 45.7 | 47.5 | 49.5 | 51.6 | 53.7 | 8.6 | 11.6 | 13.5 | 56 | 49.54 | | 0.10 | 20.14 | 15 56 29.30 | | 3.16 |
| | Lacaille 6658 | 24 | 6.1 | 8.6 | 10.8 | 12.8 | 16.0 | | 31.8 | 35.1 | 37.0 | 39.1 | 41.4 | 56 | 53.87 | | 0.01 | 20.14 | 15 56 33.72 | | 3.16 |
| | Weisse (2) 1561 | 25 | 10.0 | 12.2 | 15.7 | 31.7 | 33.9 | 36.0 | 38.2 | 40.3 | 56.6 | 59.8 | 1.9 | 1 | 36.03 | | 0.23 | 20.14 | 16 1 15.66 | | 2.59 |
| | ν^1 Scorpii | 26 | 29.4 | 31.4 | 33.3 | 34.8 | 37.5 | | 41.1 | 43.9 | 45.6 | 47.4 | 49.4 | 5 | 9.38 | | 0.02 | 20.14 | 16 4 49.22 | | 2.88 |
| | ν^2 Scorpii | 27 | 50.3 | 52.0 | 54.7 | 7.2 | 8.7 | 10.5 | 12.4 | 13.9 | 26.6 | 29.2 | 30.8 | 5 | 10.57 | | 0.10 | 20.14 | 16 4 50.33 | | 2.88 |
| | δ Ophiuchi | 28 | | | | 10.8 | 12.3 | 14.0 | 15.6 | 17.3 | 29.0 | 31.7 | 33.0 | 8 | 20.46 | | 6.61 | 20.14 | 16 7 53.71 | | 2.72 |
| | ν^9 Scorpii | 29 | | | | 50.5 | 53.3 | 54.9 | 6.4 | 8.6 | 11.2 | 13.1 | 15.3 | 14 | 4.16 | | 30.45 | 20.14 | 16 13 13.57 | | 3.01 |
| γ^2 | Coronæ Borealis | 30 | 48.6 | 50.5 | 53.5 | 7.9 | 9.7 | 11.6 | 13.6 | 15.5 | 30.0 | 32.9 | 34.8 | 18 | 11.69 | — | 0.19 | 20.14 | 16 17 51.36 | | 2.61 |
| | O. Arg. S. 15734 | 31 | 2.5 | 4.1 | 6.6 | | | | | | | | | 27 | 4.40 | + | 17.80 | 20.14 | 16 27 2.06 | | 2.96 |
| | Weisse 539 | 32 | 50.8 | 52.4 | 54.9 | 7.0 | 8.4 | 10.1 | 11.8 | 13.5 | 25.5 | 28.0 | 29.5 | 30 | 10.17 | — | 0.11 | 20.14 | 16 29 49.92 | | 2.89 |
| | Weisse 544 | 33 | | | | 49.7 | 52.3 | 53.8 | 4.8 | 7.6 | 9.0 | 10.8 | 12.5 | 31 | 2.56 | | 28.18 | 20.14 | 16 30 14.24 | | 2.89 |
| | O. Arg. S. 15847 | 34 | 39.2 | 41.0 | 43.5 | 57.0 | 58.5 | 0.2 | 1.9 | 2.8 | 17.0 | 19.7 | 21.3 | 35 | 0.19 | | 0.10 | 20.14 | 16 34 39.95 | | 3.16 |
| | O. Arg. S. 15886 | 35 | | | | 55.6 | 57.3 | 59.3 | 1.2 | 3.0 | | | | 36 | 59.28 | | 0.11 | 20.14 | 16 36 39.03 | | 3.22 |
| | O. Arg. S. 15896 | 36 | 10.2 | 12.2 | 14.9 | 28.3 | 30.0 | 31.9 | 33.7 | 35.5 | 49.0 | 51.7 | 53.4 | 37 | 31.89 | — | 0.10 | 20.14 | 16 37 11.65 | | 3.23 |
| | *—29° 7' | 37 | 55.1 | 56.8 | 59.7 | 13.1 | 14.9 | 17.0 | 18.8 | 20.5 | | | | 47 | 9.49 | + | 7.31 | 20.14 | 16 46 56.66 | | 3.33 |
| | O. Arg. S. 16090 | 38 | | | | 54.7 | 57.3 | 59.0 | 11.4 | 14.5 | 16.3 | 18.1 | 20.3 | 48 | 8.95 | — | 31.86 | 20.14 | 16 47 16.95 | | 3.34 |
| | B. A. C. 5704 | 39 | 40.3 | 42.2 | 44.9 | 58.1 | 59.8 | 1.7 | 3.5 | 5.2 | 18.4 | 21.3 | 22.9 | 51 | 1.67 | | 0.12 | 20.14 | 16 50 41.43 | | 3.28 |
| 38 | B. A. C. 5721 | 40 | 27.0 | 29.0 | 31.8 | 46.0 | 47.8 | 49.8 | 51.8 | 53.5 | 7.8 | 10.7 | 13.3 | 54 | 49.86 | | 0.10 | 20.14 | 16 54 29.62 | | 3.46 |
| | B. A. C. 5756 | 41 | 37.2 | 39.3 | 42.0 | 55.9 | 57.7 | 59.5 | 1.4 | 3.4 | 17.1 | 20.0 | 21.5 | 58 | 59.55 | | 0.10 | 20.14 | 16 58 39.31 | | 3.43 |
| | Ophiuchi | 42 | | | | 17.5 | 19.3 | 21.2 | 22.8 | 24.7 | 37.9 | 40.6 | 42.4 | 10 | 28.30 | | 7.33 | 20.14 | 17 10 0.83 | | 3.40 |
| | *—35° 14' | 43 | 31.2 | 33.2 | 36.3 | 50.8 | 52.6 | 54.8 | 56.7 | 58.6 | 13.5 | 18.3 | 18.2 | 13 | 54.75 | | 0.10 | 20.14 | 17 13 34.51 | | 3.68 |
| | Weisse 322 | 44 | 20.6 | 22.5 | 24.2 | 25.8 | 28.1 | | 28.4 | 31.1 | 32.6 | 34.4 | 36.2 | 19 | 58.39 | | 0.05 | 20.14 | 17 19 38.20 | | 2.95 |
| | *+2° 12' | 45 | 42.8 | 44.3 | 46.2 | 47.6 | 50.3 | | 50.6 | 53.2 | 54.7 | 56.4 | 58.4 | 20 | 20.45 | | 0.05 | 20.14 | 17 20 0.26 | | 2.95 |
| | *—32° 32' | 46 | 49.8 | 51.7 | 54.0 | 56.1 | | | 19.0 | 20.7 | 22.7 | 24.9 | 26 | 7.36 | | 0.02 | 20.14 | 17 25 47.20 | | 3.66 | |
| | *—32° 32' | 47 | 17.0 | 19.4 | 22.1 | 36.5 | 38.4 | 40.1 | 41.9 | 43.9 | 58.0 | 0.6 | 2.5 | 26 | 40.04 | | 0.10 | 20.14 | 17 26 19.80 | | 3.66 |
| | B. A. C. 5925 | 48 | | | | | | | 35.7 | 38.9 | 40.8 | 43.0 | 45.0 | 27 | 40.68 | | 40.49 | 20.14 | 17 26 40.05 | | 3.66 |
| | B. A. C. 5968 | 49 | 34.9 | 36.7 | 39.7 | 53.7 | 55.5 | 57.5 | 59.3 | 0.1 | 15.2 | 18.4 | 20.1 | 33 | 57.37 | | 0.10 | 20.14 | 17 33 37.13 | | 3.69 |
| 58 | Ophiuchi | 50 | | | | 20.3 | 21.9 | 23.7 | 25.5 | 27.1 | 40.0 | 42.7 | 44.3 | 36 | 30.69 | — | 7.07 | —20 14 | 17 36 3.48 | — | 3.41 |

CORRECTIONS, &c.

July 13. Image west of 20. Clamp east.
Image west of 50. Clamp west.

| Date. | Error of clock. | Hourly rate. | <i>n</i> | <i>c</i> |
|---------------------------|--------------------|-----------------|--------------|--------------|
| 1876. h. July 15, 17.7 | s. — 20.14 | s. + 0.002 | s. — 0.07 | s. — 0.12 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. | | |
|-------------------------|---------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|----------------|-------|--------|---------------------------------|-------------------------|------|------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | | |
| 1876. July 15 Y. | O. Arg. S. 17349 . | 1 | 54.7 | 56.4 | 59.3 | 12.6 | 14.3 | 16.2 | 18.0 | 19.6 | 33.0 | 35.9 | 37.6 | m. s. 48 16.15 | — | 0.10 | —20.14 | 17 47 55.91 | — | 3.60 |
| | *—15° 40' . . . | 2 | 25.8 | 27.1 | 29.1 | 41.9 | 43.5 | 45.3 | 46.8 | 48.5 | 55.5 | 58.4 | 0.0 | 53 38.50 | + | 6.61 | 20.14 | 17 53 24.97 | | 3.34 |
| | *—23° 36' . . . | 3 | 18.4 | 19.9 | 22.6 | 35.7 | 37.3 | 38.9 | 40.8 | 42.5 | 55.5 | 58.4 | 0.0 | 57 39.09 | — | 0.10 | 20.14 | 17 57 18.85 | | 3.54 |
| δ | Ursæ Minoris . | 4 | .. | .. | .. | 58.5 | 25.0 | 52.0 | 21.0 | 48.5 | .. | .. | .. | 12 53.00 | .. | 3.41 | 20.14 | .. | | 9.45 |
| | B. A. C. 6256 . . | 5 | .. | .. | .. | .. | .. | .. | .. | 15.2 | 18.0 | 19.6 | 20 | 17.60 | .. | 20.37 | 20.14 | 18 19 37.09 | | 3.87 |
| e | Serpentis . . . | 6 | 37.0 | 38.6 | 41.2 | 53.1 | 54.6 | 56.3 | 57.8 | 59.4 | 11.4 | 13.9 | 15.4 | 25 56.25 | 0.12 | 20.14 | 18 25 35.99 | | 3.15 | |
| ι | Aquilæ . . . | 7 | .. | .. | .. | .. | .. | .. | 21.4 | 24.1 | 25.7 | 27.3 | 29.3 | 29 25.56 | 34.53 | 20.14 | 18 28 30.89 | | 3.28 | |
| | Lalande 34581 . | 8 | 57.8 | .. | 3.2 | .. | 20.2 | 22.4 | 24.5 | .. | 41.5 | .. | 46.5 | 32 22.30 | 0.21 | 20.14 | 18 32 1.95 | | 2.81 | |
| | O. Arg. S. 18683 . | 9 | 3.0 | 4.4 | 7.7 | 20.2 | 21.7 | 23.4 | 25.3 | 27.1 | 39.9 | 42.4 | 44.0 | 41 23.55 | 0.10 | 20.14 | 18 41 3.31 | | 3.62 | |
| | Weisse 1277 . . | 10 | 33.9 | 35.6 | 38.2 | 50.2 | 51.7 | 53.2 | 55.0 | 56.8 | 8 8 | 11.2 | 12.8 | 51 53.40 | 0.11 | 20.14 | 18 51 33.15 | | 3.34 | |
| | B. A. C. 6483 . . | 11 | 32.0 | 33.6 | 36.3 | 48.8 | 50.3 | 52.1 | 53.7 | 55.3 | 7.7 | 10.3 | 11.8 | 54 51.99 | 0.11 | 20.14 | 18 54 31.74 | | 3.48 | |
| | Lamont 6587 . . | 12 | 54.3 | 56.0 | 58.4 | 10.3 | 11.8 | 13.5 | 15.2 | 16.7 | 28.5 | 31.1 | 32.6 | 0 13.49 | 0.12 | 20.14 | 18 59 53.23 | | 3.19 | |
| | B. A. C. 6554 . . | 13 | .. | .. | .. | .. | .. | .. | .. | 9.0 | 11.6 | 13.7 | 4 | 11.53 | 19.97 | 20.14 | 19 3 31.42 | | 3.91 | |
| | *+2° 4' . . . | 14 | 21.5 | 23.0 | 25.6 | 37.5 | 39.0 | 40.8 | 42.4 | 44.0 | 55.0 | 58.4 | 59.8 | 7 40.72 | 0.12 | 20.14 | 19 7 20.46 | | 3.15 | |
| 21 | Aquilæ . . . | 15 | .. | .. | .. | 5.9 | 8.6 | 10.1 | 20.9 | 23.5 | 25.0 | 26.7 | 28.6 | 8 18.66 | 27.89 | 20.14 | 19 7 30.63 | | 3.15 | |
| | Weisse 224 . . . | 16 | 0.3 | 2.1 | 4.5 | 16.4 | 17.9 | 19.4 | 21.2 | 22.7 | 34.7 | 37.2 | 38.6 | 11 19 55 | 0.12 | 20.14 | 19 10 59.29 | | 3.17 | |
| 23 | Aquilæ . . . | 17 | 18.1 | 19.7 | 22.2 | 34.1 | 35.6 | 37.3 | 39.0 | 40.5 | 52.5 | 55.0 | 56.4 | 12 37.31 | 0.12 | 20.14 | 19 12 17.05 | | 3.17 | |
| | B. A. C. 6663 . . | 18 | 5.9 | 7.6 | 10.2 | 22.8 | 24.5 | 26.3 | 28.0 | 29.8 | 42.5 | 45.0 | 46.5 | 21 26.28 | 0.15 | 20.14 | 19 21 5.99 | | 2.93 | |
| | *+29° 31' . . . | 19 | 7.4 | 9.2 | 12.2 | 25.9 | 27.6 | 29.5 | 31.1 | 33.2 | 46.9 | 49.5 | 51.4 | 30 29.45 | 0.18 | 20.14 | 19 30 9.13 | | 2.84 | |
| | *+36° 45' . . . | 20 | 21.8 | 24.3 | 26.6 | 28.3 | 31.7 | .. | 16.8 | 50.0 | 52.0 | 53.9 | 54.6 | 35 9.00 | 0.12 | 20.14 | 19 34 48.75 | | 2.80 | |
| | *+36° 45' . . . | 21 | 42 9 | 45.2 | 47.2 | 49.3 | 52.4 | .. | 7.5 | 10.7 | 12.9 | 14.9 | 17.2 | 35 30.02 | 0.11 | 20.14 | 19 35 9.77 | | 2.80 | |
| | Lalande 37597 . | 22 | 22.2 | 24.3 | 27.4 | 42.6 | 44.5 | 46.4 | 48.5 | 50.8 | 5.7 | 9.0 | 10.9 | 39 46.57 | 0.22 | 20.14 | 19 39 26.21 | | 2.79 | |
| | Lalande 37785 . | 23 | 24.6 | 26.3 | 30.0 | 45.0 | 46.5 | 48.7 | 50.6 | 52.6 | 7.1 | 10.0 | 11.7 | 43 48.46 | 0.21 | 20.14 | 19 43 28.11 | | 2.79 | |
| ξ | Aquilæ . . . | 24 | 18.2 | 19.8 | 22.3 | 34.5 | 36.0 | 37.7 | 39.3 | 40.8 | 53.0 | 55.4 | 56.8 | 48 37.62 | 0.13 | 20.14 | 19 48 17.35 | | 3.05 | |
| | Weisse (2) 1753 . | 25 | 46.6 | 48.7 | 51.9 | 7.4 | 9.0 | 11.0 | 13.3 | 15.5 | 30.9 | 34.2 | 35.9 | 54 11.31 | 0.21 | 20.14 | 19 53 50.96 | | 2.77 | |
| 64 | Aquilæ . . . | 26 | 41.8 | 43.5 | 46.0 | 58.0 | 59.3 | 0.9 | 2.6 | 4.1 | 16.2 | 18.6 | 20.2 | 2 1.02 | 0.12 | 20.14 | 20 1 40.76 | | 3.19 | |
| ζ ¹ | Capricorni . . | 27 | 9.5 | 11.1 | 13.7 | 26.0 | 27.5 | 29.2 | 30.8 | 32.5 | 44.6 | 47.3 | 48.7 | 5 29.18 | 0.11 | 20.14 | 20 5 8.83 | | 3.42 | |
| 25 | Vulpeculæ . . | 28 | 45.4 | 47.5 | 50.1 | 3.1 | 4.7 | 6.5 | 8.3 | 10.1 | 23.1 | 25.8 | 27.4 | 17 6.55 | 0.16 | 20.14 | 20 16 46.25 | | 2.84 | |
| π | Capricorni . . | 29 | 16.9 | 18.4 | 21.1 | 33.9 | 35.5 | 37.2 | 38.8 | 40.5 | 53.1 | 55.5 | 57.4 | 20 37.12 | 0.10 | 20.13 | 20 20 16.89 | | 3.56 | |
| ε | Delphini . . . | 30 | 20.8 | 22.6 | 25.0 | 37.2 | 38.7 | 40.4 | 42.1 | 43.7 | 55.9 | 58.4 | 59.8 | 27 40.42 | 0.14 | 20.13 | 20 27 20.15 | | 2.97 | |
| 17 | a Coronæ Borealis . | 31 | 27.4 | 29.3 | 32.0 | 45.5 | 47.2 | 49.0 | 50.9 | 52.7 | 6.0 | 8.8 | 10.5 | 29 49.03 | 0.12 | 20.21 | 15 29 28.70 | | 2.44 | |
| γ ¹ | Coronæ Borealis . | 32 | 40.7 | 42.9 | 45.8 | .. | .. | .. | .. | .. | 23.8 | 26.7 | 28.7 | 35 4.77 | 0.11 | 20.21 | 15 34 44.45 | | 2.47 | |
| γ ² | Coronæ Borealis . | 33 | .. | .. | .. | 1.2 | 3.3 | 5.7 | 7.4 | 9.3 | .. | .. | .. | 35 5.38 | 0.13 | 20.21 | 15 34 45.04 | | 2.47 | |
| a | Serpentis . . . | 34 | 13.2 | 14.9 | 17.4 | 29.4 | 30.9 | 32.5 | 34.1 | 35.8 | 47.8 | 50.3 | 51.8 | 38 32.55 | 0.13 | 20.21 | 15 38 12.21 | | 2.52 | |
| δ | Coronæ Borealis . | 35 | 25.0 | 26.9 | 29.6 | 41.9 | 43.7 | 46.4 | 48.3 | 50.1 | 3.4 | 6.1 | 7.7 | 44 46.28 | 0.12 | 20.22 | 15 44 25.94 | | 2.49 | |
| 4 | Scorpii . . . | 36 | 2.5 | 4.4 | 7.3 | 20.4 | 22.1 | 23.9 | 25.8 | 27.5 | 40.0 | 43.4 | 45.2 | 48 23.95 | 0.17 | 20.22 | 15 48 3.56 | | 2.85 | |
| | B. A. C. 5299 . . | 37 | 7.4 | 9.3 | 12.2 | 26.0 | 27.9 | 29.9 | 31.8 | 33.6 | 47.4 | 50.4 | 52.0 | 52 29.81 | 0.19 | 20.22 | 15 52 9.40 | | 2.96 | |
| | B. A. C. 5333 . . | 38 | 35.6 | 37.4 | 40.0 | 52.7 | 54.2 | 56.0 | 57.6 | 59.3 | 12.1 | 14.7 | 16.3 | 58 55.99 | 0.16 | 20.22 | 15 58 35.61 | | 2.83 | |
| | Weisse (2) 1561 . | 39 | 10.0 | 12.3 | 15.7 | 31.7 | 33.8 | 36.0 | 38.3 | 40.5 | 56.6 | 59.9 | 1.0 | 1 36.06 | 0.12 | 20.23 | 16 1 15.71 | | 2.56 | |
| | B. A. C. 5406 . . | 40 | 31.6 | 35.8 | 42.4 | 14.4 | 18.6 | 22.8 | 27.6 | 31.6 | 3.8 | 10.1 | 14.5 | 6 23.02 | 0.12 | 20.23 | 16 6 2.67 | | 2.98 | |
| | B. A. C. 5430 . . | 41 | 38.4 | 40.3 | 43.2 | 56.5 | 58.3 | 0.2 | 2.1 | 3.8 | 17.2 | 20.0 | 21.7 | 11 0.15 | 0.20 | 20.23 | 16 10 39.72 | | 3.05 | |
| | Lalande 29796 . | 42 | 49.2 | 51.3 | 54.4 | 9.4 | 11.3 | 13.4 | 15.4 | 17.4 | 32.4 | 35.5 | 37.3 | 16 13.36 | 0.12 | 20.23 | 16 15 53.01 | | 2.59 | |
| v | Ophiuchi . . . | 43 | 9.7 | 11.3 | 13.9 | 25.8 | 27.4 | 29.0 | 30.6 | 32.4 | 44.4 | 49.9 | 48.4 | 21 29.07 | — | 0.14 | 20.24 | 16 21 8.60 | | 2.83 |
| | O. Arg. S. 15712 . | 44 | 49.2 | 47.9 | 49.5 | 51.5 | 54.0 | .. | .. | .. | .. | .. | .. | 24 49.82 | + | 36.35 | 20.24 | 16 25 5.93 | | 3.02 |
| | O. Arg. S. 15713 . | 45 | 10.3 | 12.2 | 14.7 | 27.7 | 29.2 | 30.9 | 32.7 | 34.4 | 47.2 | 49.7 | 51.2 | 25 30.93 | — | 0.16 | 20.24 | 16 25 10.53 | | 3.02 |
| | *—28° 40' . . . | 46 | 47.0 | 48.7 | 51.6 | .. | .. | .. | .. | .. | 25.9 | 28 7 | 30.7 | 31 8.77 | 0.17 | 20.24 | 16 30 48.36 | | 3.21 | |
| | O. Arg. S. 15790 . | 47 | .. | .. | .. | 41.2 | 42.9 | 44.7 | 46.6 | 48.4 | 2.2 | 4 8 | 6.6 | 31 52.18 | 7.56 | 20.24 | 16 31 24.38 | | 3.21 | |
| | *—30° 9' . . . | 48 | 20.0 | 21.8 | 24.6 | 38.5 | .. | 41.8 | .. | 45.6 | 59 6 | 2.6 | 4.2 | 35 42.08 | 0.19 | 20.24 | 16 35 21.65 | | 3.27 | |
| | *—38° 12' . . . | 49 | .. | .. | .. | 23.3 | 26.5 | 28.2 | 42.4 | 45.7 | 47.5 | 49.7 | 52.0 | 47 39.41 | 35.53 | 20.25 | 16 46 43.63 | | 3.59 | |
| | *—38° 12' . . . | 50 | .. | .. | .. | 16.4 | 19.5 | 21.3 | 35.4 | 38.8 | 40.5 | 42.7 | 45.1 | 49 32.46 | — | 35.53 | —20.25 | 16 48 36.68 | — | 3.60 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|---------------------------|-----------------|---------------|--------------|--------------|
| 1876. h. July 17, 0.00 | s. — 20.27 | s. — 0.032 | s. + 0.06 | s. — 0.13 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | |
|-------------------------|------------------------------|-----------------|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|--------------|--------|---------------------------------|-------------------------|-------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | |
| 1876. July 17 Y. | | | | | | | | | | | | | | m. s. | m. s. | s. | h. m. s. | s. | |
| | *-36° 59' . . . | 1 | 43.2 | 45.1 | 46.9 | 48.8 | 51.9 | . . . | . . . | . . . | . . . | . . . | . . . | 54 47.18 | + | 42.60 | -20.25 | 16 55 9.53 | - 3.60 |
| a | *-36° 59' . . . | 2 | 53.2 | 55.7 | 58.3 | 0.4 | 3.1 | . . . | . . . | . . . | . . . | . . . | . . . | 51 58.14 | + | 42.60 | 20.25 | 16 55 20.49 | 3.61 |
| | *-37° 18' . . . | 3 | . . . | . . . | . . . | 7.5 | 11.0 | 12.4 | 25.0 | 29.7 | 31.5 | 33.8 | 36.1 | 5 23.50 | - | 35.10 | 20.26 | 17 4 28.14 | 3.69 |
| | Herculis . . . | 4 | 3.0 | 4.6 | 7.3 | 19.4 | 21.0 | 22.7 | 24.5 | 26.1 | 38.3 | 41.0 | 42.5 | 9 22.76 | | 0.12 | 20.26 | 17 9 2.38 | 2.80 |
| | *-35° 14' . . . | 5 | 31.3 | 33.1 | 36.1 | 50.9 | 52.8 | 54.9 | 57.1 | 58.2 | 13.3 | 16.3 | 18.2 | 13 54.75 | - | 0.20 | 20.26 | 17 13 34.29 | 3.68 |
| | *-31° 31' . . . | 6 | 19.9 | 21.7 | 24.6 | 38.9 | 40.4 | 42.4 | 44.3 | 46.1 | . . . | . . . | . . . | 17 34.79 | + | 7.40 | 20.27 | 17 17 21.92 | 3.58 |
| | O. Arg. S. 16832 . . . | 7 | . . . | . . . | . . . | . . . | . . . | . . . | 42.8 | 45.5 | 47.0 | 48.5 | 50.2 | 22 46.80 | - | 35.56 | 20.27 | 17 21 50.97 | 3.23 |
| | Ophiuchi . . . | 8 | 54.0 | 55.7 | 58.4 | 11.3 | 12.9 | 14.7 | 16.5 | 18.3 | 30.9 | 33.7 | 35.5 | 28 14.72 | | 0.16 | 20.27 | 17 27 54.29 | 3.38 |
| | *-32° 9' . . . | 9 | . . . | . . . | . . . | 16.3 | 18.3 | 20.4 | 22.3 | 24.2 | . . . | . . . | . . . | 32 20.30 | | 0.20 | 20.27 | 17 31 59.83 | 3.68 |
| | *-32° 12' . . . | 10 | 45.5 | 47.8 | 49.6 | 51.7 | 54.5 | . . . | 5.7 | 8.8 | 10.6 | 12.4 | 14.8 | 32 30.14 | | 0.10 | 20.27 | 17 32 9.77 | 3.68 |
| | 52 | *-32° 12' . . . | 11 | 55.9 | 58.2 | 0.1 | 1.8 | 4.8 | . . . | 16.1 | 19.0 | 21.1 | 23.0 | 25.3 | 32 40.53 | | 0.10 | 20.27 | 17 32 20.16 |
| O. Arg. S. 17361 . . . | | 12 | 23.6 | 25.2 | 27.9 | 41.5 | 43.0 | 44.8 | 46.6 | 48.5 | 1.8 | 5.2 | 7.0 | 48 45.01 | | 0.18 | 20.28 | 17 48 24.55 | 3.60 |
| *-23° 36' . . . | | 13 | 18.2 | 20.1 | 21.7 | 35.5 | 37.3 | 39.2 | 41.1 | 42.7 | 55.8 | 58.6 | 0.2 | 57 39.13 | | 0.17 | 20.29 | 17 57 18.67 | 3.54 |
| O. Arg. S. 17809 . . . | | 14 | 58.7 | 0.3 | 3.0 | . . . | . . . | . . . | . . . | . . . | 35.1 | 37.6 | 39.3 | 5 19.00 | | 0.15 | 20.29 | 18 4 58.56 | 3.46 |
| *-18° 35' . . . | | 15 | 36.3 | 37.7 | 40.5 | 53.0 | 54.4 | 56.2 | 58.2 | 59.8 | 12.4 | 14.9 | 16.5 | 9 56.35 | | 0.16 | 20.29 | 18 9 35.90 | 3.46 |
| O. Arg. S. 18074 . . . | | 16 | 28.5 | 30.2 | 32.9 | 45.5 | 46.9 | 48.7 | 50.3 | 52.1 | 4.5 | 7.1 | 8.7 | 13 48.67 | | 0.16 | 20.30 | 18 13 28.21 | 3.45 |
| Ursæ Minoris . . . | | 17 | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | 6.0 | 48.0 | 12.0 | 17 42.00 | 4 | 52.83 | 20.30 | . . . | 8.98 |
| B. A. C. 6301 . . . | | 18 | 14.9 | 16.7 | 19.4 | 31.9 | 33.6 | 35.1 | 37.0 | 38.7 | 51.3 | 53.0 | 55.4 | 25 35.26 | | 0.16 | 20.30 | 18 25 14.80 | 3.51 |
| Lalande 34412 . . . | | 19 | . . . | . . . | . . . | 56.4 | 58.3 | 0.3 | 2.5 | 4.7 | 19.7 | 22.7 | 24.6 | 29 8.65 | | 8.27 | 20.31 | 18 28 40.07 | 2.81 |
| Lalande 34581 . . . | | 20 | 58.0 | 0.0 | 3.3 | 18.4 | 20.3 | 22.3 | 24.5 | 26.4 | 41.5 | 44.6 | 46.7 | 32 22.36 | | 0.12 | 20.31 | 18 32 1.93 | 2.81 |
| 6 | B. A. C. 6363 . . . | 21 | 55.8 | 58.2 | 0.4 | 2.3 | 5.5 | . . . | 23.9 | 27.2 | 29.2 | 31.5 | 34.1 | 36 44.81 | | 0.13 | 20.31 | 18 36 24.37 | 4.30 |
| | Lacaille 7831 . . . | 22 | 22.0 | 24.0 | 27.5 | 42.8 | 44.9 | 46.9 | 49.0 | 51.1 | 6.7 | 9.9 | 12.0 | 36 46.98 | | 0.22 | 20.31 | 18 36 26.45 | 4.30 |
| | Aquilæ . . . | 23 | 40.0 | 41.8 | 44.2 | 56.1 | 57.7 | 59.2 | 1.0 | 2.5 | 14.4 | 17.0 | 18.4 | 40 59.30 | | 0.15 | 20.31 | 18 40 38.84 | 3.25 |
| | Sagittarii . . . | 24 | 44.6 | 46.5 | 49.1 | 2.3 | 3.7 | 5.5 | 7.2 | 8.0 | 21.9 | 24.5 | 26.4 | 45 5.49 | | 0.17 | 20.31 | 18 44 45.01 | 3.64 |
| | Lacaille 7926 . . . | 25 | 28.1 | 30.3 | 32.4 | 34.2 | 37.3 | . . . | 49.4 | 52.5 | 54.4 | 56.4 | 58.6 | 49 13.36 | | 0.11 | 20.32 | 18 48 52.93 | 4.04 |
| | Lacaille 7926 . . . | 26 | . . . | 53.0 | 56.0 | 10.2 | 12.2 | 14.0 | 16.1 | 17.9 | 32.1 | 34.7 | . . . | 49 14.06 | | 0.21 | 20.32 | 18 48 53.53 | 4.04 |
| | *-8° 21' . . . | 27 | 7.0 | 8.7 | 12.4 | . . . | . . . | . . . | . . . | . . . | 11.9 | 44.3 | 45.8 | 52 26.68 | | 0.13 | 20.32 | 18 52 6.23 | 3.33 |
| | *-8° 21' . . . | 28 | 23.2 | 24.9 | 27.4 | . . . | . . . | . . . | . . . | . . . | 58.0 | 0.4 | 2.0 | 52 42.65 | | 0.13 | 20.32 | 18 52 22.20 | 3.33 |
| | *-15° 4' . . . | 29 | 3.3 | 4.9 | 7.5 | 19.8 | 21.4 | 23.1 | 24.7 | 26.4 | 38.9 | 41.3 | 42.9 | 56 23.11 | | 0.15 | 20.32 | 18 56 2.64 | 3.48 |
| | *-18° 56' . . . | 30 | 26.3 | 27.7 | 30.3 | 43.0 | 44.5 | 46.0 | 47.9 | 49.6 | 2.3 | 5.0 | 6.9 | 0 46.32 | | 0.16 | 20.32 | 18 59 25.84 | 3.58 |
| 21 | Aquilæ . . . | 31 | 31.8 | 33.5 | 36.0 | 47.8 | 49.5 | 51.0 | 52.7 | 54.3 | 6.2 | 8.8 | 10.2 | 7 51.07 | | 0.13 | 20.32 | 19 7 30.62 | 3.16 |
| | 23 Aquilæ, (1st *) . . . | 32 | 18.2 | 19.7 | 22.3 | . . . | . . . | . . . | . . . | . . . | 52.6 | 55.0 | 56.6 | 12 37.49 | | 0.12 | 20.33 | 19 12 16.95 | 3.18 |
| | 23 Aquilæ, (2d *) . . . | 33 | . . . | . . . | . . . | 34.4 | 36.0 | 37.5 | 39.1 | 40.8 | . . . | . . . | . . . | 12 37.56 | | 0.14 | 20.33 | 19 12 17.09 | 3.18 |
| | Sagittarii . . . | 34 | . . . | . . . | . . . | 10.7 | 19.3 | 20.7 | 32.5 | 35.3 | 36.9 | 38.7 | 40.6 | 15 30.09 | 29.44 | | 20.33 | 19 14 10.32 | 3.59 |
| | Aquilæ . . . | 35 | 19.1 | 20.8 | 23.3 | 35.2 | 36.7 | 38.4 | 40.0 | 41.5 | 53.5 | 55.9 | 57.4 | 19 38.35 | | 0.13 | 20.33 | 19 19 17.89 | 3.16 |
| | Aquilæ . . . | 36 | 21.4 | 23.0 | 25.7 | 37.6 | 39.2 | 40.9 | 42.6 | 44.4 | 56.5 | 59.0 | 0.5 | 28 40.98 | | 0.15 | 20.34 | 19 28 20.49 | 3.41 |
| | Aquilæ . . . | 37 | 17.6 | 19.3 | 21.7 | 33.8 | 35.3 | 37.0 | 38.6 | 40.3 | 52.1 | 54.8 | 56.1 | 30 36.96 | | 0.14 | 20.34 | 19 30 16.48 | 3.34 |
| | α Cor. Borealis . . . | 38 | 27.5 | 29.3 | 32.2 | 45.6 | 47.3 | 49.1 | 51.0 | 52.7 | 6.2 | 8.9 | 10.7 | 29 49.14 | | 0.15 | 20.37 | 15 29 28.62 | 2.39 |
| | Cor. Borealis, (1st *) . . . | 39 | 40.6 | 42.8 | 45.9 | 0.5 | 2.8 | 4.9 | 7.0 | 8.9 | 23.9 | 27.0 | 28.6 | 35 4.84 | | 0.16 | 20.38 | 15 34 44.30 | 2.40 |
| | Cor. Borealis, (2d *) . . . | 40 | 17.8 | 20.2 | 22.4 | 24.4 | 27.4 | . . . | 42.9 | 46.2 | 48.1 | 50.1 | 52.5 | 35 5.20 | | 0.07 | 20.38 | 15 34 44.75 | 2.40 |
| 4 | Serpentis . . . | 41 | 13.4 | 15.0 | 17.5 | 29.5 | 31.0 | 32.7 | 34.4 | 35.9 | 47.9 | 50.4 | 52.0 | 38 32.70 | | 0.13 | 20.38 | 15 38 12.19 | 2.48 |
| | Cor. Borealis . . . | 42 | 25.0 | 27.0 | 29.7 | 43.0 | 44.8 | 46.6 | 48.4 | 50.1 | 3.4 | 6.2 | 8.0 | 41 46.56 | | 0.14 | 20.38 | 15 44 26.04 | 2.44 |
| | Scorpii . . . | 43 | . . . | . . . | . . . | . . . | . . . | . . . | 57.5 | 0.2 | 2.0 | 3.9 | 6.0 | 49 1.92 | | 37.99 | 20.39 | 15 48 3.54 | 2.82 |
| | B. A. C. 5352 . . . | 44 | 6.1 | 20.5 | 41.8 | 23.7 | 37.1 | 50.8 | 5.2 | 18.4 | 1.7 | 21.8 | 34.8 | 56 51.08 | | 1.12 | 20.40 | 15 56 29.56 | 4.44 |
| | O. Arg. S. 15305 . . . | 45 | 27.9 | 29.6 | 32.2 | 44.8 | 46.2 | 47.9 | 49.7 | 51.2 | 3.9 | 6.4 | 8.0 | 2 47.98 | | 0.14 | 20.40 | 16 2 27.44 | 2.80 |
| | B. A. C. 5406 . . . | 46 | . . . | . . . | . . . | 14.2 | 18.4 | 22.5 | 26.9 | 31.1 | . . . | . . . | . . . | 6 22.62 | | 0.38 | 20.41 | 16 6 1.83 | 2.80 |
| | B. A. C. 5430 . . . | 47 | 38.5 | 40.3 | 43.2 | 56.7 | 58.3 | 0.4 | 2.2 | 4.0 | 17.4 | 20.3 | 21.9 | 11 0 29 | | 0.15 | 20.41 | 16 10 39.73 | 3.02 |
| | Weisse (2) 457 . . . | 48 | 1.2 | 3.4 | 6.6 | 22.2 | 24.3 | 26.5 | 28.7 | 30.9 | 46.5 | 49.6 | 51.8 | 16 26.52 | | 0.17 | 20.42 | 16 16 5.93 | 2.51 |
| | Ophiuchi . . . | 49 | 9.8 | 11.4 | 14.0 | 26.0 | 27.6 | 29.2 | 30.9 | 32.4 | 44.5 | 47.0 | 48.5 | 21 29.21 | | 0.13 | 20.42 | 16 21 8.66 | 2.80 |
| | Weisse 439 . . . | 50 | 26.5 | 28.3 | 30.7 | 42.6 | 44.2 | 45.8 | 47.5 | 49.1 | 1.0 | 2.5 | 5.1 | 24 45.75 | | 0.13 | 20.42 | 16 24 25.20 | 2.70 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|---------------------------|--------------------|-----------------|------------|--------------|
| 1876. h. July 21, 17.8 | s. - 20.50 | s. - 0.055 | s. 0.00 | s. - 0.13 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | |
|-------------------------|---------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|---------------|--------------|--------|---------------------------------|-------------------------|---|------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | | |
| | | | m. | s. | m. | s. | s. | h. | m. | s. | s. | | | | | | | | | |
| 1876. July 21 Y. | Lacaille 6931 . . . | 1 | 43.7 | 45.6 | 48.9 | 3.0 | 4.6 | 6.6 | 8.4 | 10.5 | 24.7 | 27.5 | 29.4 | 34 6.63 | — | 0.16 | 20.43 | 16 33 46.04 | — | 3.30 |
| | *—32° 34' . . . | 2 | 29.4 | 30.8 | 32.4 | 33.7 | 36.4 | .. | 50.1 | 53.3 | 55.1 | 57.0 | 59.2 | 34 13.74 | — | 0.07 | 20.43 | 16 33 53.24 | | 3.30 |
| | *—38° 12' . . . | 3 | 6.7 | 8.3 | 10.7 | 27.0 | 28.6 | 30.8 | 32.8 | 34.8 | 50.7 | 53.7 | 55.8 | 46 30.90 | — | 0.17 | 20.44 | 16 46 10.39 | | 3.56 |
| | *—29° 58' . . . | 4 | 48.8 | 46.5 | 49.7 | 3.3 | 4.9 | 6.8 | 8.5 | 10.2 | .. | .. | .. | 50 59.34 | + | 7.32 | 20.45 | 16 50 46.21 | | 3.35 |
| | *—20° 17' . . . | 5 | 29.7 | 31.5 | 34.2 | 46.8 | 48.4 | 50.3 | 51.9 | 53.5 | 6.5 | 9.1 | 10.5 | 56 50.22 | — | 0.14 | 20.45 | 16 56 29.63 | | 3.17 |
| | B. A. C. 5775 . . . | 6 | 15.1 | 17.4 | 20.6 | 37.2 | 39.3 | 41.6 | 43.9 | 46.0 | 2.8 | 6.1 | 8.2 | 1 41.65 | | 0.18 | 20.46 | 17 1 21.01 | | 2.65 |
| | B. A. C. 5818 . . . | 7 | 0.3 | 2.1 | 5.0 | 19.2 | 20.6 | 22.4 | 24.5 | 26.3 | 40.1 | 43.5 | 44.9 | 9 22.63 | | 0.15 | 20.46 | 17 9 2.02 | | 3.48 |
| | B. A. C. 5839 . . . | 8 | 44.2 | 45.8 | 48.5 | 0.7 | 2.4 | 4.1 | 5.8 | 7.6 | 20.2 | 22.7 | 24.2 | 13 4.20 | | 0.14 | 20.47 | 17 12 43.59 | | 3.21 |
| W | Herculis . . . | 9 | 1.5 | 3.4 | 6.4 | 20.5 | 22.4 | 24.4 | 26.4 | 28.2 | 42.5 | 45.3 | 47.2 | 16 24.35 | | 0.16 | 20.47 | 17 16 3.75 | | 2.70 |
| | B. A. C. 5888 . . . | 10 | 8.7 | 10.3 | 12.8 | 25.1 | 26.7 | 28.3 | 30.0 | 31.6 | 43.8 | 46.4 | 47.9 | 20 28.33 | | 0.13 | 20.47 | 17 20 7.73 | | 3.15 |
| | Weisse 409 . . . | 11 | 58.9 | 0.7 | 3.1 | 15.2 | 16.6 | 18.3 | 20.0 | 21.5 | 33.5 | 36.0 | 37.5 | 24 18.30 | | 0.13 | 20.48 | 17 23 57.69 | | 3.06 |
| | Ophiuchi . . . | 12 | 14.5 | 16.2 | 18.7 | 30.9 | 32.5 | 34.2 | 35.9 | 37.4 | 49.7 | 52.3 | 53.8 | 29 34.19 | | 0.13 | 20.48 | 17 29 13.58 | | 2.86 |
| f | Draconis . . . | 13 | .. | .. | .. | 43.0 | 47.0 | 51.4 | 55.7 | 0.0 | .. | .. | .. | 32 51.42 | | 0.38 | 20.48 | 17 32 30.56 | | 2.99 |
| | *+68° 27' . . . | 14 | 40.4 | 44.9 | 51.9 | .. | .. | .. | .. | .. | 13.8 | 20.9 | 24.8 | 37 2.78 | | 0.33 | 20.49 | 17 36 41.96 | | 3.01 |
| | O. Arg. N. 17419 . | 15 | .. | .. | .. | 32.5 | 36.8 | 41.5 | 45.6 | 50.4 | .. | .. | .. | 37 41.36 | — | 0.38 | 20.49 | 17 37 20.49 | | 3.01 |
| | *—34° 44' . . . | 16 | 38.3 | 40.3 | 43.4 | 57.8 | 59.5 | 1.2 | 3.0 | 5.4 | .. | .. | .. | 43 53.61 | + | 7.72 | 20.50 | 17 43 40.83 | | 3.83 |
| | B. A. C. 6029 . . . | 17 | .. | .. | .. | 40.5 | 43.5 | 45.4 | 58.6 | 1.8 | 3.8 | 6.1 | 8.0 | 44 55.96 | — | 33.93 | 20.50 | 17 44 1.53 | | 3.84 |
| | *—31° 25' . . . | 18 | 15.0 | 17.1 | 19.7 | 33.8 | 35.5 | 37.3 | 39.5 | 41.6 | 55.5 | 58.3 | 0.0 | 51 37.57 | | 0.15 | 20.50 | 17 51 16.92 | | 3.76 |
| | *+36° 18' . . . | 19 | .. | .. | .. | 42.2 | 44.0 | 46.0 | 48.2 | 50.1 | 5.0 | 8.2 | 9.8 | 54 54.19 | | 8.20 | 20.51 | 17 54 25.48 | | 2.77 |
| d | Ursæ Minoris . . | 20 | .. | .. | .. | 56.0 | 23.0 | 51.0 | 18.0 | 45.0 | .. | .. | .. | 12 50.60 | | 2.31 | 20.52 | .. | | 7.92 |
| | B. A. C. 6256 . . . | 21 | 35.4 | 37.2 | 40.2 | 54.1 | 55.8 | 57.6 | 59.8 | 1.7 | 15.7 | 18.6 | 20.3 | 19 57.85 | | 0.15 | 20.53 | 18 19 37.17 | | 3.89 |
| | *—31° 38' . . . | 22 | 18.7 | 20.6 | 23.5 | 37.6 | 39.3 | 41.3 | 43.3 | 45.1 | 59.2 | 2.1 | 3.8 | 21 41.32 | | 0.15 | 20.53 | 18 21 20.64 | | 3.90 |
| | *—36° 51' . . . | 23 | 49.9 | 52.4 | 54.5 | 56.3 | 59.3 | .. | 14.9 | 17.9 | 19.9 | 21.9 | 24.3 | 25 37.13 | | 0.07 | 20.53 | 18 25 16.53 | | 4.12 |
| | *—36° 47' . . . | 24 | 16.3 | 18.3 | 21.6 | 36.3 | 38.4 | 40.3 | 42.4 | 44.2 | 59.2 | 2.1 | 4.0 | 25 40.28 | | 0.16 | 20.53 | 18 25 19.59 | | 4.12 |
| | *—25° 8' . . . | 25 | .. | .. | .. | .. | .. | .. | .. | .. | 30.0 | 32.5 | 34.1 | 33 32.20 | | 19.21 | 20.54 | 18 32 52.45 | | 3.72 |
| | *—1° 6' . . . | 26 | .. | .. | .. | 4.8 | 6.3 | 7.9 | 9.6 | 11.1 | 23.1 | 25.6 | 27.1 | 36 14.44 | | 6.61 | 20.54 | 18 35 47.29 | | 3.19 |
| | Weisse 887 . . . | 27 | 53.9 | 55.6 | 58.0 | 10.1 | 11.4 | 13.2 | 14.9 | 16.4 | 28.3 | 30.9 | 32.4 | 37 13.19 | | 0.13 | 20.54 | 18 36 52.52 | | 3.19 |
| β | Lyrae . . . | 28 | 30.6 | 32.5 | 35.5 | 49.8 | 51.6 | 53.5 | 55.5 | 57.3 | 11.7 | 14.6 | 16.2 | 45 53.53 | | 0.16 | 20.55 | 18 45 32.82 | | 2.83 |
| | Lacaille 7926 . . . | 29 | .. | .. | .. | 10.2 | 11.8 | 13.7 | 15.9 | 17.7 | 31.8 | 34.8 | 36.6 | 49 21.56 | | 7.93 | 20.56 | 18 48 53.07 | | 4.07 |
| | *—33° 28' . . . | 30 | .. | .. | .. | .. | .. | .. | 50.4 | 53.6 | 55.3 | 57.3 | 59.6 | 49 55.24 | | 40.98 | 20.56 | 18 48 53.70 | | 4.07 |
| | *—8° 21' . . . | 31 | 7.6 | 9.1 | 11.6 | .. | .. | .. | .. | .. | 42.3 | 44.8 | 46.3 | 52 26.95 | | 0.12 | 20.56 | 18 52 6.27 | | 3.35 |
| | *—8° 21' . . . | 32 | 23.4 | 25.1 | 27.7 | .. | .. | .. | .. | .. | 58.4 | 0.0 | 2.4 | 52 42.98 | | 0.12 | 20.56 | 18 52 22.30 | | 3.35 |
| | *—15° 4' . . . | 33 | 3.6 | 5.3 | 7.8 | 20.1 | 21.7 | 23.5 | 25.1 | 26.6 | 39.2 | 41.7 | 43.4 | 56 23.45 | | 0.14 | 20.56 | 18 56 2.75 | | 3.50 |
| | Lamont 6587 . . . | 34 | 54.8 | 56.3 | 58.9 | 10.9 | 12.3 | 14.1 | 15.5 | 17.2 | 29.1 | 31.5 | 33.0 | 0 13.06 | | 0.13 | 20.57 | 18 59 53.26 | | 3.23 |
| | B. A. C. 6554 . . . | 35 | 29.9 | 31.8 | 34.7 | 48.4 | 50.1 | 51.9 | 53.9 | 55.6 | 9.6 | 12.2 | 14.0 | 3 52.01 | | 0.15 | 20.57 | 19 3 31.29 | | 3.96 |
| | Weisse (2) 187 . . | 36 | 5.9 | 7.8 | 11.1 | .. | .. | .. | .. | .. | 49.9 | 52.9 | 55.0 | 11 30.43 | | 0.16 | 20.58 | 19 11 9.69 | | 2.82 |
| | *+38° 30' . . . | 37 | 28.3 | 30.1 | 33.3 | .. | .. | .. | .. | .. | 12.0 | 15.2 | 17.0 | 11 52.65 | | 0.16 | 20.58 | 19 11 31.91 | | 2.82 |
| | Weisse 345 . . . | 38 | .. | .. | .. | 57.7 | 59.3 | 1.0 | 2.7 | 4.4 | .. | .. | .. | 16 1.02 | | 0.14 | 20.58 | 19 15 40.30 | | 3.38 |
| | Lalande 36732 . . | 39 | 6.1 | 8.3 | 11.5 | 26.4 | 28.1 | 30.1 | 32.2 | 34.0 | 49.1 | 52.0 | 53.8 | 20 30.15 | | 0.16 | 20.58 | 19 20 9.41 | | 2.83 |
| | Lalande 36774 . . | 40 | .. | .. | .. | 13.8 | 15.5 | 17.8 | 20.1 | 21.9 | 36.7 | 39.8 | 41.7 | 21 25.91 | | 8.26 | 20.58 | 19 20 57.07 | | 2.83 |
| | Lalande 36878 . . | 41 | 52.0 | 53.9 | 56.6 | 9.4 | 10.9 | 12.4 | 14.4 | 16.1 | 28.9 | 31.6 | 33.1 | 25 12.66 | | 0.14 | 20.59 | 19 24 51.93 | | 3.70 |
| | *—20° 40' . . . | 42 | .. | .. | .. | .. | .. | .. | 3.3 | .. | 7.5 | .. | 11.6 | 26 7.47 | | 37.49 | 20.59 | 19 25 9.39 | | 3.70 |
| | Aquila . . . | 43 | 21.8 | 23.6 | 26.1 | 38.2 | 39.8 | 41.6 | 43.2 | 44.7 | 56.8 | 59.5 | 0.9 | 28 41.45 | | 0.13 | 20.59 | 19 28 20.73 | | 3.45 |
| | Aquila . . . | 44 | .. | .. | .. | 34.1 | 35.8 | 37.3 | 39.0 | 40.4 | 52.6 | 55.0 | 56.6 | 30 43.85 | | 6.66 | 20.59 | 19 30 16.60 | | 3.37 |
| κ | *—36° 45' . . . | 45 | 15.8 | 17.9 | 50.9 | .. | .. | .. | .. | .. | 28.5 | 31.7 | 33.5 | 35 9.72 | | 0.15 | 20.60 | 19 34 48.97 | | 2.83 |
| | *—36° 48' . . . | 46 | 6.4 | 8.7 | 11.6 | .. | .. | .. | .. | .. | 49.6 | 52.4 | 54.4 | 35 30.52 | | 0.15 | 20.60 | 19 35 9.77 | | 2.83 |
| | *+38° 2' . . . | 47 | 17.4 | 19.3 | 22.4 | .. | .. | .. | .. | .. | 1.0 | 4.2 | 6.1 | 39 41.73 | | 0.16 | 20.60 | 19 39 20.97 | | 2.82 |
| | Lalande 37597 . . | 48 | 59.4 | 1.6 | 3.9 | 4.8 | 6.1 | .. | 25.6 | 29.0 | 30.8 | 32.9 | 35.3 | 39 46.94 | | 0.08 | 20.60 | 19 39 26.26 | | 2.82 |
| | O. Arg. S. 20024 . | 49 | 14.0 | 16.4 | 20.2 | 32.8 | 34.4 | 36.8 | 38.9 | 41.0 | 54.3 | 56.3 | 58.3 | 45 36.67 | | 0.15 | 20.61 | 19 45 15.91 | | 3.92 |
| β | Aquila . . . | 50 | 17.8 | 19.5 | 22.0 | 34.0 | 35.5 | 37.2 | 38.0 | 40.5 | 52.4 | 54.8 | 56.4 | 49 37.18 | — | 0.13 | —20.61 | 19 49 16.44 | — | 3.14 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|----------|--------------------|-----------------|----|----|
| 1876. h. | s. | s. | s. | s. |

18. Only one.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | |
|-------------------------|------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|---------------|--------------|--------|---------------------------------|-------------------------|--------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | |
| 1876. July 22 Y. | | | | | | | | | | | | | | m. s. | m. s. | s. | h. m. s. | s. | |
| a | Serpentis . . . | 1 | 13.6 | 15.1 | 17.8 | 29.7 | 31.3 | 33.0 | 34.6 | 36.2 | 48.3 | 50.8 | 52.4 | 38 32.98 | — | 0.11 | —20.72 | 15 38 12.15 | — 2.47 |
| p | Serpentis . . . | 2 | 51.8 | 53.5 | 56.2 | 9.0 | 10.6 | 12.3 | 14.2 | 15.8 | 28.6 | 31.2 | 32.9 | 46 12.37 | — | 0.06 | 20.72 | 15 45 51.59 | 2.44 |
| | B. A. C. 5273 . . | 3 | 9.4 | 11.2 | 13.9 | 26.6 | 28.2 | 29.9 | 31.7 | 33.4 | 46.0 | 48.8 | 50.3 | 49 29.95 | — | 0.06 | 20.72 | 15 49 9.17 | 2.46 |
| | B. A. C. 5352 . . | 4 | .. | .. | .. | 24.2 | 37.0 | 51.5 | 5.3 | 18.7 | .. | .. | .. | 56 51.31 | + | 0.51 | 20.72 | 15 56 31.13 | 4.26 |
| | O. Arg. S. 15303 . | 5 | 28.4 | 30.0 | 32.8 | 45.1 | 46.7 | 48.3 | 50.2 | 51.7 | 4.2 | 6.8 | 8.4 | 2 48.42 | — | 0.20 | 20.72 | 16 2 27.50 | 2.79 |
| | B. A. C. 5408 . . | 6 | 33.5 | 35.2 | 37.9 | 50.5 | 52.0 | 53.7 | 55.3 | 57.1 | 9.7 | 12.3 | 13.9 | 7 53.73 | — | 0.20 | 20.72 | 16 7 32.81 | 2.84 |
| | Weisse 173 . . . | 7 | 39.1 | 41.2 | 42.9 | 44.5 | 47.1 | .. | 48.7 | 51.5 | 53.1 | 54.8 | 56.7 | 11 17.96 | — | 0.10 | 20.72 | 16 10 57.14 | 2.80 |
| | Weisse 176 . . . | 8 | 7.9 | 9.3 | 12.0 | 24.2 | 25.7 | 27.5 | 29.2 | 30.8 | .. | .. | .. | 11 20.81 | + | 6.46 | 20.72 | 16 11 6.55 | 2.80 |
| | *—21° 9' | 9 | 53.2 | 55.1 | 57.6 | .. | .. | .. | .. | .. | .. | .. | .. | 17 55.18 | + | 18.70 | 20.72 | 16 17 53.16 | 3.00 |
| | O. Arg. S. 15612 . | 10 | .. | .. | .. | 15.5 | 17.1 | 19.0 | 21.0 | 22.8 | .. | .. | .. | 18 19.02 | — | 0.24 | 20.72 | 16 17 58.06 | 3.00 |
| | Weisse 439 . . . | 11 | 26.8 | 28.4 | 31.0 | 42.9 | 44.5 | 46.1 | 47.8 | 49.3 | 1.3 | 3.7 | 5.2 | 24 46.09 | — | 0.12 | 20.72 | 16 24 25.25 | 2.69 |
| | Ophiuchi . . . | 12 | 24.1 | 25.9 | 28.4 | 40.5 | 42.0 | 43.6 | 45.3 | 47.0 | 59.0 | 1.6 | 3.1 | 30 43.68 | — | 0.17 | 20.72 | 16 30 22.79 | 2.88 |
| | Lacaille 6933 . . | 13 | 11.7 | 13.8 | 16.9 | 31.7 | 33.6 | 35.7 | 37.7 | 39.8 | 54.6 | 57.8 | 59.5 | 34 35.71 | — | 0.32 | 20.72 | 16 34 14.67 | 3.41 |
| | B. A. C. 5619 . . | 14 | 17.3 | 19.3 | 22.4 | 36.8 | 38.6 | 40.6 | 42.6 | 44.4 | 58.9 | 1.8 | 3.7 | 39 40.58 | — | 0.02 | 20.72 | 16 39 19.84 | 2.59 |
| | *—37° 23' . . . | 15 | 39.6 | 42.0 | 44.0 | 46.2 | 49.5 | .. | 5.1 | 8.5 | 10.6 | 12.4 | 14.8 | 44 27.27 | — | 0.23 | 20.72 | 16 44 6.32 | 3.51 |
| | Lacaille 7011 . . | 16 | 14.2 | 16.3 | 19.3 | 34.5 | 36.6 | 38.5 | 40.5 | 42.6 | .. | .. | .. | 44 30.31 | + | 7.82 | 20.72 | 16 44 17.41 | 3.51 |
| | B. A. C. 5700, (1st *) | 17 | 30.6 | 32.6 | 34.3 | 36.1 | 38.6 | .. | 42.5 | 45.2 | 46.8 | 48.6 | 50.6 | 50 10.59 | — | 0.13 | 20.72 | 16 49 49.74 | 3.12 |
| | B. A. C. 5700, (2d *) | 18 | 50.5 | 52.3 | 54.9 | 7.5 | 9.1 | 10.9 | 12.6 | 14.3 | 27.1 | 29.7 | 31.2 | 50 10.92 | — | 0.21 | 20.72 | 16 49 49.99 | 3.12 |
| | Weisse 1048 . . . | 19 | 34.4 | 36.0 | 38.5 | 50.7 | 52.1 | 53.8 | 55.4 | 57.5 | 9.2 | 11.5 | 13.1 | 56 53.84 | — | 0.16 | 20.72 | 16 56 32.96 | 2.99 |
| | B. A. C. 5775 . . | 20 | 15.1 | 17.4 | 21.0 | 37.5 | 39.5 | 41.9 | 44.0 | 46.2 | 2.7 | 6.3 | 8.3 | 1 41.81 | — | 0.01 | 20.72 | 17 1 21.08 | 2.61 |
| | B. A. C. 5791 . . | 21 | 39.7 | 41.4 | 44.1 | 57.3 | 59.0 | 0.7 | 2.6 | 4.4 | 17.5 | 20.2 | 21.8 | 5 0.79 | — | 0.24 | 20.72 | 17 4 39.83 | 3.32 |
| | O. Arg. S. 16450 . | 22 | .. | .. | .. | 35.2 | 37.9 | 39.7 | 51.7 | 54.7 | 36.3 | 58.2 | 0.2 | 5 49.24 | — | 30.88 | 20.72 | 17 4 57.64 | 3.32 |
| | *—35° 21' . . . | 23 | .. | .. | .. | 19.5 | 21.9 | 24.1 | 36.9 | 39.9 | 12.3 | 44.4 | 46.7 | 9 34.46 | — | 34.33 | 20.72 | 17 8 39.41 | 3.63 |
| | *—35° 14' . . . | 24 | .. | .. | .. | 3.9 | 6.8 | 8.3 | 22.2 | 25.1 | 27.3 | 29.9 | 31.5 | 17 19.26 | — | 34.28 | 20.72 | 17 16 24.26 | 3.68 |
| | *—32° 32' . . . | 25 | 58.7 | 0.3 | 3.0 | 17.3 | 18.9 | 20.7 | 22.7 | 24.7 | .. | .. | .. | 26 13.29 | + | 7.40 | 20.72 | 17 25 59.97 | 3.65 |
| f | Draconis . . . | 26 | 59.6 | 4.3 | 11.2 | 43.0 | 47.0 | 51.3 | 55.9 | 59.6 | 32.1 | 39.1 | 12.9 | 32 51.48 | — | 0.15 | 20.72 | 17 32 30.91 | 2.96 |
| | O. Arg. N. 17413 . | 27 | .. | .. | .. | 23.6 | 28.2 | 32.9 | 37.5 | 41.2 | .. | .. | .. | 37 32.68 | — | 0.12 | 20.72 | 17 37 12.08 | 2.97 |
| | O. Arg. N. 17415 . | 28 | 48.9 | 53.9 | 0.5 | .. | .. | .. | .. | .. | 22.8 | 29.6 | 33.4 | 37 41.52 | + | 0.17 | 20.72 | 17 37 20.97 | 2.97 |
| | *—40° 22' . . . | 29 | 41.1 | 43.7 | 46.1 | 48.1 | 51.3 | .. | 10.3 | 13.7 | 15.9 | 18.1 | 20.6 | 48 30.89 | — | 0.25 | 20.72 | 17 48 9.92 | 4.09 |
| | Lacaille 7490 . . | 30 | 13.9 | 16.1 | 19.3 | 34.9 | 36.8 | 39.1 | 41.3 | 43.2 | .. | .. | .. | 48 30.58 | + | 8.16 | 20.72 | 17 48 18.02 | 4.09 |
| | *—31° 26' . . . | 31 | .. | .. | .. | 55.4 | 58.5 | 0.2 | 12.8 | 16.0 | 17.7 | 19.5 | 21.6 | 52 10.21 | — | 32.80 | 20.72 | 17 51 16.69 | 3.76 |
| | O. Arg. S. 17533 . | 32 | .. | .. | .. | 26.1 | 27.9 | 29.8 | 31.8 | 33.6 | .. | .. | .. | 56 29.84 | — | 0.26 | 20.72 | 17 56 8.86 | 3.66 |
| | O. Arg. S. 17535 . | 33 | .. | .. | .. | 49.1 | 51.8 | 54.1 | 5.9 | 8.6 | 10.4 | 12.4 | 14.5 | 57 3.35 | — | 31.91 | 20.72 | 17 56 11.02 | 3.66 |
| | (*33) Washington. | 34 | 58.2 | 59.9 | 2.7 | 15.2 | 16.8 | 18.5 | 20.2 | 21.9 | 34.4 | 37.0 | 38.5 | 3 18.47 | — | 0.20 | 20.72 | 18 2 57.55 | 3.41 |
| | *—17° 12' . . . | 35 | .. | .. | .. | .. | .. | .. | 1.5 | 4.3 | 5.9 | 7.6 | 9.5 | 4 5.76 | — | 35.85 | 20.72 | 18 3 9.19 | 3.41 |
| μ | Sagittarii . . . | 36 | .. | .. | .. | 41.9 | 43.6 | 45.2 | 47.0 | 48.7 | 1.5 | 4.2 | 5.7 | 6 52.22 | — | 7.16 | 20.72 | 18 6 24.34 | 3.51 |
| | *—17° 24' . . . | 37 | 2.9 | 4.8 | 7.3 | 19.8 | 21.3 | 23.0 | 24.9 | 26.5 | 38.8 | 41.5 | 43.1 | 10 23.08 | — | 0.20 | 20.72 | 18 10 2.16 | 3.44 |
| 18 | Sagittarii . . . | 38 | 18.4 | 20.5 | 23.3 | 37.4 | 39.0 | 41.0 | 42.8 | 44.7 | 58.6 | 1.5 | 3.1 | 13 40.94 | — | 0.27 | 20.72 | 18 13 19.95 | 3.84 |
| | B. A. C. 6375 . . | 39 | 40.1 | 47.5 | 58.9 | 53.8 | 0.8 | 8.0 | 16.2 | 23.0 | 18.4 | 29.5 | 35.8 | 36 8.36 | + | 0.30 | 20.72 | 18 35 47.94 | 3.60 |
| | Lacaille 7846 . . | 40 | .. | .. | .. | 49.8 | 52.9 | 54.8 | 9.2 | 12.7 | 14.9 | 16.9 | 19.5 | 40 6.34 | — | 36.86 | 20.72 | 18 39 8.76 | 4.36 |
| β ¹ | Lyrae | 41 | 30.6 | 32.6 | 35.7 | 49.9 | 51.6 | 53.6 | 55.7 | 57.5 | 11.8 | 14.8 | 16.6 | 45 53.67 | — | 0.03 | 20.72 | 18 45 32.92 | 2.83 |
| | *—22° 9' | 42 | 4.0 | 5.6 | 8.3 | 21.2 | 22.7 | 24.7 | 26.3 | 27.9 | 41.0 | 43.4 | 45.0 | 51 24.55 | — | 0.22 | 20.72 | 18 51 3.61 | 3.68 |
| | *—22° 9' | 43 | .. | .. | .. | 55.7 | 58.4 | 59.9 | 11.6 | 14.6 | 16.4 | 18.0 | 20.1 | 52 9.34 | — | 30.19 | 20.72 | 18 51 18.43 | 3.68 |
| | B. A. C. 6488 . . | 44 | 32.9 | 34.5 | 37.0 | 49.5 | 50.9 | 52.6 | 54.2 | 56.0 | 8.5 | 11.0 | 12.6 | 54 52.70 | — | 0.19 | 20.72 | 18 54 31.79 | 3.51 |
| | O. Arg. S. 19104 . | 45 | 50.7 | 52.5 | 55.2 | 7.9 | 9.4 | 11.4 | 13.2 | 14.8 | 27.4 | 30.2 | 31.9 | 1 11.33 | — | 0.22 | 20.72 | 19 0 50.39 | 3.70 |
| | O. Arg. S. 19202 . | 46 | 7.0 | 8.7 | 11.3 | 25.3 | 27.0 | 29.1 | 30.7 | 32.7 | 46.3 | 49.0 | 51.0 | 4 28.92 | — | 0.26 | 20.72 | 19 4 7.94 | 3.96 |
| | *—22° 15' . . . | 47 | 35.5 | 37.1 | 39.9 | 52.6 | 54.1 | 56.0 | 57.8 | 59.5 | 12.4 | 15.3 | 16.7 | 8 56.08 | — | 0.22 | 20.72 | 19 8 35.14 | 3.72 |
| | *—19° 18' . . . | 48 | 19.1 | 20.9 | 23.6 | 36.4 | 37.8 | 39.6 | 41.3 | 43.0 | 55.8 | 58.2 | 59.7 | 11 39.61 | — | 0.21 | 20.72 | 19 11 18.68 | 3.64 |
| | *—28° 57' . . . | 49 | 15.3 | 17.0 | 19.7 | 33.6 | 35.1 | 36.7 | 38.5 | 40.5 | 53.9 | 57.2 | 59.0 | 16 36.95 | — | 0.26 | 20.72 | 19 16 15.97 | 3.96 |
| 4 | Vulpeculae . . . | 50 | 5.5 | 7.2 | 9.9 | 22.5 | 24.2 | 26.0 | 27.7 | 29.4 | 41.9 | 44.5 | 46.1 | 20 25.90 | — | 0.07 | —20.72 | 19 20 5.11 | — 2.97 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|---------------------------|-----------------|---------------|--------------|--------------|
| 1876. h. July 22, 18.1 | s. — 20.72 | s. + 0.001 | s. + 0.20 | s. — 0.13 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. | | |
|-------------------------|---------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|---------------|-------|-------|---------------------------------|-------------------------|--------|------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | | Clock. | |
| | | | | | | | | | | | | | | | m. | s. | | | | |
| 1876. July 22 Y. | B. A. C. 6663 . . . | 1 | 6.5 | 8.3 | 10.9 | 23.7 | 25.2 | 26.6 | 28.6 | 30.2 | 43.0 | 45.7 | 47.2 | 21 26.93 | — | 0.07 | —20.72 | 19 21 6.14 | — | 2.97 |
| | *-20° 40' . . . | 2 | .. | .. | .. | 32.6 | 34.2 | 36.1 | 37.9 | 39.6 | 52.1 | 54.6 | 56.3 | 24 42.92 | | 7.13 | 20.72 | 19 24 15.07 | | 3.70 |
| | Lalande 36878 . . . | 3 | .. | .. | .. | 9.4 | 11.0 | 12.7 | 14.5 | 16.3 | 29.0 | 31.6 | 33.3 | 25 19.72 | | 7.13 | 20.72 | 19 24 51.87 | | 3.70 |
| | B. A. C. 6711 . . . | 4 | 16.2 | 18.3 | 21.7 | 36.7 | 38.7 | 40.8 | 43.0 | 44.9 | 0.2 | 3.3 | 5.2 | 29 40.82 | | 0.01 | 20.72 | 19 29 20.09 | | 2.82 |
| | γ Aquilæ . . . | 5 | 26.2 | 27.8 | 30.4 | 42.5 | 44.1 | 45.8 | 47.4 | 49.0 | 1.2 | 3.7 | 5.2 | 40 45.75 | | 0.10 | 20.72 | 19 40 24.93 | | 3.09 |
| | *+8° 7' . . . | 6 | 55.2 | 57.0 | 59.5 | 11.4 | 13.0 | 14.7 | 16.4 | 17.8 | .. | .. | .. | 48 8.12 | | 0.10 | 20.72 | 19 47 47.30 | | 3.12 |
| | ε Aquilæ . . . | 7 | .. | .. | .. | 35.1 | 36.7 | 38.3 | 39.9 | 41.5 | 53.7 | 56.1 | 57.6 | 48 44.86 | | 6.64 | 20.72 | 19 48 17.50 | | 3.12 |
| | O. Arg. S. 20124 . . . | 8 | 37.0 | 38.8 | 41.6 | 54.7 | 56.6 | 58.3 | 0.0 | 1.8 | 15.1 | 17.8 | 19.5 | 51 58.29 | | 0.24 | 20.72 | 19 51 37.33 | | 3.87 |
| | *+34° 57' . . . | 9 | 9.8 | 11.6 | 15.0 | .. | .. | .. | .. | .. | 51.9 | 54.8 | 56.7 | 55 33.30 | | 0.01 | 20.72 | 19 55 12.57 | | 2.84 |
| | *+34° 57' . . . | 10 | 16.5 | 18.4 | 21.4 | .. | .. | .. | .. | .. | 58.5 | 1.3 | 3.2 | 55 39.88 | | 0.01 | 20.72 | 19 55 19.15 | | 2.84 |
| | *+34° 59' . . . | 11 | .. | .. | .. | 21.6 | 24.7 | 26.4 | 39.7 | 43.1 | 44.8 | 16.8 | 40.4 | 56 37.06 | | 33.90 | 20.72 | 19 55 42.44 | | 2.84 |
| | *+34° 57' . . . | 12 | 21.9 | 24.0 | 26.0 | 41.6 | 43.5 | 45.5 | 47.5 | 49.4 | 4.0 | 6.9 | 8.8 | 57 45.45 | | 0.02 | 20.72 | 19 57 24.71 | | 2.84 |
| | 64 Aquilæ . . . | 13 | 42.6 | 44.1 | 46.8 | 58.5 | 0.0 | 1.6 | 3.4 | 5.1 | 16.9 | 19.4 | 21.0 | 2 1.76 | | 0.13 | 20.72 | 20 1 40.91 | | 3.27 |
| | ζ Capricorni . . . | 14 | 10.2 | 11.8 | 14.4 | 26.7 | 28.3 | 30.0 | 31.7 | 33.3 | 45.5 | 48.1 | 49.5 | 5 29.95 | | 0.18 | 20.72 | 20 5 9.05 | | 3.51 |
| | α² Capricorni . . . | 15 | 15.2 | 17.0 | 19.4 | 31.6 | 33.0 | 34.8 | 36.4 | 38.0 | 50.3 | 52.9 | 54.5 | 11 34.83 | | 0.18 | 20.72 | 20 11 13.93 | | 3.52 |
| 24 | a Serpentis . . . | 16 | 14.0 | 15.6 | 18.2 | 30.2 | 31.7 | 33.3 | 35.1 | 36.6 | 48.5 | 51.0 | 52.5 | 38 33.34 | | 0.11 | 21.07 | 15 38 12.16 | | 2.45 |
| | μ Serpentis . . . | 17 | 13.4 | 15.0 | 17.6 | 29.5 | 31.1 | 32.7 | 34.2 | 35.9 | 47.9 | 50.4 | 51.8 | 43 32.68 | | 0.14 | 21.07 | 15 43 11.47 | | 2.53 |
| | 4 Scorpii . . . | 18 | 3.2 | 5.0 | 7.7 | 21.1 | 22.9 | 24.7 | 26.4 | 28.2 | 41.5 | 44.2 | 45.9 | 48 24.62 | | 0.24 | 21.07 | 15 48 3.31 | | 2.79 |
| | ε Coronæ Borealis . . . | 19 | 29.2 | 30.9 | 33.8 | 47.3 | 49.0 | 50.8 | 52.6 | 54.4 | 7.7 | 10.6 | 12.4 | 52 50.79 | — | 0.04 | 21.07 | 15 52 29.68 | | 2.43 |
| | B. A. C. 5352 . . . | 20 | .. | .. | .. | 24.1 | 36.9 | 52.5 | 6.3 | 20.0 | .. | .. | .. | 56 51.96 | + | 0.51 | 21.07 | 15 56 31.40 | | 3.89 |
| | Weisse (2) 1561 . . . | 21 | 10.9 | 13.0 | 16.4 | 32.4 | 34.4 | 36.9 | 39.2 | 41.4 | 57.2 | 0.8 | 2.5 | 1 36.83 | | 0.00 | 21.08 | 16 1 15.75 | | 2.44 |
| | B. A. C. 5406 . . . | 22 | 31.8 | 36.5 | 42.8 | 14.9 | 19.2 | 23.4 | 28.0 | 32.2 | 4.2 | 10.7 | 14.8 | 6 23.50 | + | 0.15 | 21.08 | 16 6 2.57 | | 2.65 |
| | *+37° 11' . . . | 23 | .. | .. | .. | 25.5 | 27.1 | 29.4 | 31.6 | 33.8 | 18.4 | 51.6 | 53.5 | 12 37.61 | — | 8.14 | 21.08 | 16 12 8.39 | | 2.47 |
| | O. Arg. S. 15612 . . . | 24 | 58.4 | 0.1 | 3.2 | 16.2 | 17.9 | 19.4 | 21.1 | 22.8 | 36.2 | 38.9 | 40.6 | 18 19.53 | | 0.23 | 21.08 | 16 17 58.22 | | 2.98 |
| | Weisse 439 . . . | 25 | 27.1 | 28.8 | 31.3 | 43.5 | 44.9 | 46.5 | 48.2 | 49.6 | 1.6 | 4.2 | 5.7 | 24 46.49 | | 0.12 | 21.08 | 16 24 25.29 | | 2.67 |
| 33 | Herculis . . . | 26 | 54.6 | 56.4 | 58.8 | 10.9 | 12.3 | 14.1 | 15.7 | 17.2 | 29.3 | 31.8 | 33.2 | 21 14.03 | | 0.11 | 21.09 | 16 30 52.83 | | 2.68 |
| | *-30° 9' . . . | 27 | .. | .. | .. | 50.8 | 2.7 | 4.3 | 17.3 | 20.0 | 21.5 | 22.8 | 24.7 | 36 14.14 | | 32.37 | 21.09 | 16 35 30.68 | | 3.23 |
| | O. Arg. S. 16031 . . . | 28 | 11.0 | 12.6 | 15.8 | 28.5 | 29.0 | 31.7 | 33.5 | 35.2 | 48.1 | 50.7 | 52.4 | 44 31.76 | | 0.23 | 21.09 | 16 44 10.44 | | 3.11 |
| | O. Arg. S. 16090 . . . | 29 | 15.9 | 17.9 | 20.9 | 34.9 | 36.8 | 38.3 | 40.1 | 41.8 | 55.4 | 58.3 | 59.8 | 47 38.19 | | 0.26 | 21.09 | 16 47 16.84 | | 3.29 |
| | O. Arg. S. 16160 . . . | 30 | .. | .. | .. | 24.7 | 27.7 | 29.3 | 31.8 | 34.8 | 46.5 | 48.6 | 50.6 | 45 39.25 | | 32.03 | 21.09 | 16 47 46.13 | | 3.29 |
| | *-37° 9' . . . | 31 | 51.8 | 53.8 | 56.9 | 10.7 | 12.3 | 14.1 | 16.1 | 18.4 | 31.7 | 37.2 | 39.0 | 53 14.09 | | 0.32 | 21.09 | 16 52 52.68 | | 3.56 |
| | *-20° 17' . . . | 32 | 30.4 | 32.1 | 34.4 | 47.6 | 49.2 | 50.9 | 52.5 | 53.9 | 7.0 | 9.6 | 10.9 | 56 50.77 | | 0.21 | 21.09 | 16 56 29.47 | | 3.16 |
| | *-20° 14' . . . | 33 | .. | .. | .. | 17.5 | 20.2 | 22.0 | 33.5 | 36.3 | 37.9 | 39.8 | 41.7 | 57 31.12 | | 29.79 | 21.09 | 16 56 40.24 | | 3.15 |
| | Lalande 31166 . . . | 34 | 39.6 | 41.3 | 43.9 | 56.7 | 58.3 | 0.6 | 1.6 | 3.5 | 16.3 | 19.0 | 20.6 | 2 0.10 | | 0.21 | 21.09 | 17 1 38.80 | | 3.20 |
| | α¹ Herculis . . . | 35 | 3.7 | 5.5 | 7.9 | 20.4 | 21.8 | 23.6 | 25.3 | 26.8 | 39.2 | 41.9 | 43.4 | 9 23.59 | — | 0.08 | 21.09 | 17 9 2.42 | | 2.77 |
| | *-27° 51' . . . | 36 | 32.6 | 34.5 | 37.0 | 51.1 | 52.6 | 54.1 | 56.0 | 57.6 | .. | .. | .. | 15 46.95 | + | 7.07 | 21.10 | 17 15 32.92 | | 3.44 |
| | ρ Herculis, (1st *) . . . | 37 | 0.5 | 2.8 | 4.8 | 6.8 | 10.0 | .. | 25.5 | 28.8 | 30.8 | 32.7 | 35.1 | 19 47.78 | + | 0.08 | 21.10 | 17 19 26.76 | | 2.66 |
| | ρ Herculis, (2d *) . . . | 38 | 24.0 | 25.8 | 29.1 | 44.0 | 46.0 | 48.0 | 50.1 | 52.0 | 7.1 | 10.1 | 12.0 | 19 48.02 | — | 0.01 | 21.10 | 17 19 26.91 | | 2.66 |
| | O. Arg. S. 16758 . . . | 39 | .. | .. | .. | 20.6 | 23.1 | 24.7 | 36.1 | 38.9 | 40.8 | 42.8 | 45.1 | 28 34.01 | — | 29.41 | 21.10 | 17 27 43.50 | | 3.28 |
| | f Draconis . . . | 40 | 0.6 | 5.1 | 11.4 | 43.5 | 47.5 | 51.9 | 56.9 | 1.0 | 32.6 | 39.5 | 43.5 | 52 52.14 | + | 0.15 | 21.10 | 17 32 31.19 | | 2.88 |
| | *-34° 48' . . . | 41 | 59.1 | 1.0 | 4.2 | 19.8 | 20.6 | 22.6 | 24.6 | 26.4 | 40.9 | 43.9 | 45.8 | 39 22.63 | — | 0.30 | 21.10 | 17 39 1.23 | | 3.80 |
| | Weisse (2) 1394 . . . | 42 | 14.3 | 16.7 | 18.6 | 20.6 | 23.6 | .. | 38.3 | 41.6 | 43.2 | 45.2 | 47.8 | 44 0.99 | + | 0.07 | 21.11 | 17 43 39.95 | | 2.71 |
| | Weisse (2) 1398 . . . | 43 | 43.2 | 45.4 | 48.6 | 3.5 | 5.2 | 7.3 | 9.4 | 11.2 | 25.9 | 29.0 | 30.8 | 44 7.23 | — | 0.02 | 21.11 | 17 43 46.10 | | 2.71 |
| | *-40° 22' . . . | 44 | 6.3 | 8.5 | 11.7 | 27.4 | 29.3 | 31.3 | 33.4 | 35.6 | 50.7 | 54.4 | 56.3 | 48 31.35 | | 0.34 | 21.11 | 17 48 9.90 | | 4.09 |
| | *-31° 26' . . . | 45 | .. | .. | .. | 55.7 | 58.3 | 0.3 | 12.5 | 16.1 | 18.1 | 20.0 | 22.2 | 52 10.40 | | 32.80 | 21.11 | 17 51 16.49 | | 3.75 |
| | O. Arg. S. 17489 . . . | 46 | 18.6 | 20.4 | 23.5 | 36.3 | 38.0 | 39.8 | 41.6 | 43.4 | 56.5 | 59.3 | 0.8 | 54 39.84 | | 0.23 | 21.11 | 17 54 18.50 | | 3.55 |
| | Telescopii . . . | 47 | 59.5 | 2.0 | 5.7 | 22.7 | 24.9 | 27.4 | 29.7 | 31.7 | 19.1 | 52.6 | 55.0 | 2 27.30 | | 0.39 | 21.11 | 18 2 5.80 | | 4.47 |
| | O. Arg. S. 17817 . . . | 48 | 19.7 | 21.5 | 24.2 | 37.0 | 38.5 | 40.2 | 42.0 | 43.7 | 56.7 | 59.5 | 0.9 | 5 40.35 | | 0.22 | 21.11 | 18 5 19.02 | | 3.51 |
| | *-18° 35' . . . | 49 | 37.2 | 39.0 | 41.4 | 54.1 | 55.7 | 57.4 | 59.2 | 1.0 | 13.4 | 16.1 | 18.0 | 9 57.50 | — | 0.20 | 21.11 | 18 9 36.19 | | 3.47 |
| | B. A. C. 6375 . . . | 50 | 40.5 | 47.8 | 58.5 | 54.8 | 1.3 | 5.8 | 10.6 | 23.7 | 18.8 | 29.9 | 37.0 | 36 8.88 | + | 0.30 | —21.12 | 18 35 48.06 | — | 3.49 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|---------------------------|-----------------|---------------|--------------|--------------|
| 1876. h. July 24, 18.0 | s. — 21.03 | s. — 0.017 | s. + 0.20 | s. — 0.13 |

27. Not very good.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | |
|-------------------------|--|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|-------------------|-----------------|---------------------------------|-------------------------|--------------|--------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | |
| 1876. July 24 Y. | β Lyrae | 1 | 31.0 | 33.1 | 36.1 | 50.3 | 52.1 | 54.1 | 56.9 | 57.9 | 12.3 | 15.2 | 16.9 | m. s. 45 54.09 | m. s. — 0.03 | s. — 21.12 | h. m. s. 18 45 32.94 | s. — 2.82 | |
| | Lacaille 7926 | 2 | 51.6 | 53.8 | 56.3 | 10.7 | 12.3 | 14.5 | 16.3 | 18.3 | 32.6 | 35.2 | 37.2 | 49 14.40 | 0.29 | 21.12 | 18 48 52.99 | 4.08 | |
| | B. A. C. 6488 | 3 | 33.3 | 35.0 | 37.7 | 50.0 | 51.4 | 53.2 | 55.0 | 56.6 | 8.9 | 11.4 | 13.0 | 54 53.23 | 0.19 | 21.13 | 18 54 31.91 | 3.52 | |
| | *—13° 2' | 4 | 30.8 | 32.5 | 35.0 | 47.2 | 48.7 | 50.3 | 52.1 | 53.7 | 6.1 | 8.5 | 10.0 | 0 50.45 | 0.18 | 21.13 | 19 0 29.14 | 3.48 | |
| | O. Arg. S. 19202 | 5 | 7.4 | 9.0 | 11.8 | 25.8 | 27.5 | 29.3 | 31.1 | 33.0 | 46.9 | 49.6 | 51.3 | 4 29.33 | 0.26 | 21.13 | 19 4 7.94 | 3.98 | |
| | 21 Aquilæ | 6 | 32.8 | 34.4 | 36.9 | 49.0 | 50.5 | 52.0 | 53.7 | 55.3 | 7.2 | 9.6 | 11.1 | 7 52.05 | 0.12 | 21.13 | 19 7 30.80 | 3.20 | |
| | Lalande 36324 | 7 | 20.0 | 21.7 | 24.2 | 37.0 | 38.5 | 40.3 | 42.2 | 43.9 | 56.5 | 59.0 | 0.4 | 10 40.34 | 0.21 | 21.13 | 19 10 19.00 | 3.65 | |
| | ρ^2 Sagittarii | 8 | 41.5 | 43.2 | 45.9 | 58.5 | 59.9 | 1.7 | 3.5 | 5.0 | 17.8 | 20.4 | 21.9 | 15 1.75 | 0.20 | 21.13 | 19 14 40.42 | 3.64 | |
| | Lalande 36774 | 9 | 54.2 | 56.3 | 59.5 | 14.5 | 16.3 | 18.4 | 20.2 | 22.3 | 37.4 | 40.4 | 42.2 | 21 18.34 | 0.01 | 21.13 | 19 20 57.20 | 2.83 | |
| | *+36° 52' | 10 | 9.3 | 11.3 | 14.5 | 29.4 | 31.2 | 33.3 | 35.4 | 37.2 | 52.4 | 55.3 | 57.1 | 23 33.31 | 0.01 | 21.13 | 19 23 12.17 | 2.83 | |
| | *+36° 56' | 11 | 12.9 | 15.0 | 18.1 | 32.9 | 34.8 | 37.0 | 39.1 | 41.1 | 55.9 | 59.1 | 0.9 | 24 36.98 | 0.02 | 21.13 | 19 24 15.83 | 2.83 | |
| | *+36° 58' | 12 | .. | .. | .. | 28.5 | 31.3 | 33.6 | 47.4 | 50.6 | 52.6 | 54.7 | 56.9 | 25 44.45 | 34.76 | 21.13 | 19 24 48.56 | 2.83 | |
| | γ Vulpeculæ | 13 | 12.0 | 13.7 | 16.2 | 28.8 | 30.5 | 32.3 | 34.0 | 35.7 | 48.4 | 50.9 | 52.6 | 29 32.28 | 0.07 | 21.14 | 19 29 11.07 | 2.98 | |
| | *—23° 37' | 14 | 59.5 | 1.1 | 3.8 | 16.8 | 18.4 | 20.3 | 22.2 | 23.8 | 36.9 | 39.5 | 41.2 | 33 20.32 | 0.23 | 21.14 | 19 32 58.95 | 3.82 | |
| | Lalande 37597 | 15 | 23.3 | 25.4 | 28.6 | 43.5 | 45.6 | 47.7 | 49.8 | 51.7 | 6.9 | 10.1 | 12.1 | 39 47.70 | 0.01 | 21.14 | 19 39 26.55 | 2.83 | |
| | O. Arg. S. 20002 | 16 | 24.4 | 25.8 | 28.9 | 42.4 | 44.0 | 45.9 | 47.6 | 49.2 | 2.7 | 5.2 | 7.0 | 43 45.74 | 0.25 | 21.14 | 19 43 24.35 | 3.94 | |
| | *—22° 43' | 17 | 23.7 | 25.7 | 28.5 | 40.7 | 42.7 | 44.6 | 46.5 | 48.3 | 1.2 | 3.8 | 5.5 | 49 44.65 | 0.22 | 21.14 | 19 49 23.29 | 3.80 | |
| | B. A. C. 6855 | 18 | 39.6 | 41.6 | 44.4 | 56.7 | 58.3 | 0.0 | 1.6 | 3.3 | 15.8 | 18.2 | 19.8 | 52 59.96 | 0.08 | 21.14 | 19 52 38.74 | 3.02 | |
| | 15 Vulpeculæ | 19 | 2.6 | 3.8 | 6.8 | 20.1 | 21.8 | 23.6 | 25.6 | 27.3 | 40.8 | 43.6 | 45.2 | 56 23.69 | 0.05 | 21.14 | 19 56 2.50 | 2.90 | |
| | *—19° 3' | 20 | 57.4 | 59.2 | 1.9 | 14.4 | 16.0 | 17.7 | 19.4 | 21.2 | 33.6 | 36.5 | 38.0 | 59 17.75 | 0.21 | 21.14 | 19 58 56.40 | 3.70 | |
| | *—9° 15' | 21 | 52.7 | 54.5 | 57.3 | .. | .. | .. | .. | .. | 26.5 | 29.2 | 31.0 | 4 11.87 | 0.15 | 21.14 | 20 3 50.58 | 3.45 | |
| | *+26° 21' | 22 | 48.8 | 50.4 | 53.2 | 6.7 | 8.4 | 10.1 | 11.9 | 12.6 | 27.1 | 29.8 | 31.4 | 7 10.04 | 0.05 | 21.14 | 20 6 48.85 | 2.91 | |
| | a^2 Capricorni | 23 | 15.5 | 17.3 | 19.9 | 31.9 | 33.5 | 35.2 | 36.9 | 38.4 | 50.7 | 53.3 | 54.8 | 11 35.22 | 0.18 | 21.15 | 20 11 13.89 | 3.54 | |
| | Weisse (2) 641 | 24 | 22.1 | 24.0 | 27.3 | 42.9 | 44.7 | 46.6 | 49.0 | 51.0 | 6.3 | 9.2 | 11.2 | 18 46.75 | — | 0.01 | 21.15 | 20 18 25.59 | 2.81 |
| | Weisse (2) 643 | 25 | 1.6 | 4.1 | 6.5 | 8.6 | 11.7 | .. | 28.8 | 32.0 | 34.0 | 36.1 | 38.6 | 18 50.20 | + | 0.08 | 21.15 | 20 18 29.13 | 2.81 |
| | μ Cygni | 26 | 58.5 | 0.4 | 3.5 | 18.7 | 20.5 | 22.6 | 24.8 | 26.8 | 41.8 | 44.9 | 46.7 | 23 22.65 | — | 0.01 | 21.15 | 20 23 1.49 | 2.82 |
| | ϵ Delphini | 27 | 22.1 | 23.7 | 26.3 | 38.5 | 39.9 | 41.6 | 43.4 | 44.7 | 57.0 | 59.5 | 1.0 | 27 41.61 | — | 0.09 | 21.15 | 20 27 20.37 | 3.08 |
| | 26 ν^1 Coronæ Borealis | 28 | 41.8 | 43.8 | 46.8 | 1.2 | 3.1 | 5.1 | 7.1 | 8.8 | 23.3 | 26.2 | 28.0 | 18 5.02 | 0.02 | 21.18 | 16 17 43.82 | 2.47 | |
| | γ Herculis | 29 | 32.0 | 34.4 | 37.6 | 53.7 | 55.7 | 57.8 | 0.1 | 2.3 | 18.3 | 21.7 | 23.7 | 24 57.94 | 0.00 | 21.18 | 16 24 36.76 | 2.47 | |
| | ζ Ophiuchi | 30 | 24.5 | 26.2 | 28.8 | 40.8 | 42.4 | 44.0 | 45.9 | 47.4 | 59.5 | 2.0 | 3.6 | 30 41.10 | 0.17 | 21.18 | 16 30 22.75 | 2.85 | |
| | *—36° 50' f. | 31 | .. | .. | .. | 32.4 | 34.1 | 35.9 | 38.2 | 40.2 | 55.0 | 58.1 | 59.8 | 34 44.21 | 8.41 | 21.19 | 16 33 34.61 | 3.37 | |
| | Weisse 760 | 32 | 53.0 | 54.7 | 57.1 | 9.2 | 10.7 | 12.3 | 13.9 | 15.5 | 27.7 | 30.0 | 31.6 | 41 12.34 | — | 0.14 | 21.19 | 16 40 51.01 | 2.84 |
| | B. A. C. 5705 | 33 | 33.2 | 40.7 | 52.5 | 47.8 | 55.3 | 2.9 | 11.0 | 18.5 | 14.3 | 26.0 | 33.1 | 49 3.21 | + | 0.31 | 21.19 | 16 48 42.33 | 3.09 |
| | *—24° 6' | 34 | .. | .. | .. | 49.1 | 52.0 | 53.5 | 5.7 | 8.5 | 10.2 | 12.0 | 14.4 | 57 3.18 | — | 30.63 | 21.20 | 16 56 11.35 | 3.22 |
| | a^1 Herculis | 35 | 3.8 | 5.6 | 8.0 | 20.4 | 22.0 | 23.5 | 25.3 | 27.0 | 39.3 | 41.9 | 43.5 | 9 23.66 | 0.08 | 21.20 | 17 9 2.38 | 2.75 | |
| | Lacaille 7259 | 36 | 56.1 | 58.0 | 1.1 | 15.7 | 17.3 | 19.1 | 21.5 | 23.2 | 37.8 | 40.9 | 42.6 | 16 19.43 | 0.30 | 21.20 | 17 15 57.93 | 3.63 | |
| | B. A. C. 5890 | 37 | 8.1 | 9.8 | 12.3 | 24.3 | 25.9 | 27.4 | 29.1 | 30.6 | 41.6 | 45.2 | 46.6 | 20 27.35 | 0.15 | 21.21 | 17 20 5.99 | 3.01 | |
| | *—38° 32' | 38 | 9.9 | 11.9 | 15.2 | 30.0 | 32.3 | 34.2 | 36.4 | 38.6 | 53.6 | 56.8 | 58.7 | 27 34.24 | 0.33 | 21.21 | 17 27 12.70 | 3.85 | |
| | *—20° 35' | 39 | 31.6 | 33.0 | 35.8 | 48.8 | 50.2 | 52.0 | 54.0 | 55.4 | 8.5 | 10.9 | 12.4 | 30 52.05 | 0.21 | 21.22 | 17 30 30.62 | 3.34 | |
| | *—34° 23' | 40 | 34.5 | .. | 39.4 | 53.9 | 55.7 | 57.5 | 59.7 | 1.3 | 16.0 | .. | 20.7 | 35 57.63 | 0.30 | 21.22 | 17 35 36.11 | 3.76 | |
| | *—30° 55' | 41 | 11.1 | 13.2 | 16.0 | 29.9 | 31.8 | 33.7 | 35.6 | 37.4 | 51.3 | 54.2 | 55.9 | 42 33.65 | 0.27 | 21.22 | 17 42 12.16 | 3.68 | |
| | *—30° 55' | 42 | .. | .. | .. | 11.5 | 13.4 | 15.3 | 17.1 | 19.0 | .. | .. | .. | 43 15.26 | 0.28 | 21.22 | 17 42 53.76 | 3.69 | |
| | *—30° 55' | 43 | .. | .. | .. | 47.0 | 50.0 | 51.5 | 4.4 | 7.6 | 9.2 | 11.1 | 13.2 | 44 1.75 | 32.62 | 21.22 | 17 43 7.91 | 3.69 | |
| | *—31° 50' | 44 | 26.2 | 28.2 | 31.2 | 45.5 | 47.5 | 49.1 | 50.1 | 53.0 | 7.0 | 10.0 | 11.7 | 47 49.05 | 0.28 | 21.22 | 17 47 27.55 | 3.74 | |
| | *—31° 50' | 45 | 10.4 | 12.5 | 14.6 | 16.4 | 19.4 | .. | 30.5 | 33.5 | 35.3 | 37.3 | 39.5 | 47 54.94 | 0.19 | 21.23 | 17 47 33.52 | 3.74 | |
| | *—15° 40' | 46 | .. | .. | .. | 43.2 | 44.7 | 46.4 | 48.3 | 49.9 | .. | .. | .. | 53 46.50 | 0.20 | 21.23 | 17 53 25.07 | 3.34 | |
| | O. Arg. S. 17540 | 47 | 24.6 | 26.5 | 29.1 | 42.3 | 43.8 | 45.6 | 47.5 | 49.0 | 2.3 | 5.1 | 6.6 | 56 45.67 | 0.23 | 21.23 | 17 56 24.21 | 3.87 | |
| | *—24° 15' | 48 | .. | .. | .. | 41.3 | 44.3 | 45.7 | 57.8 | 0.5 | 2.3 | 4.1 | 6.1 | 57 55.26 | 30.67 | 21.23 | 17 57 3.36 | 3.87 | |
| | ϵ Telescopii | 49 | 59.4 | 2.0 | 5.3 | 22.6 | 24.9 | 27.3 | 29.6 | 31.8 | 49.0 | 52.7 | 54.6 | 2 27.20 | 0.39 | 21.23 | 18 2 5.58 | 4.47 | |
| | *—37° 44' | 50 | 42.2 | 44.2 | 47.2 | .. | .. | .. | .. | .. | 25.6 | 28.9 | 30.7 | 6 6.65 | — | 0.31 | — 21.23 | 18 5 45.11 | — 4.07 |

OBSERVATIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|---------------------------|--------------------|-----------------|--------------|--------------|
| 1876. h. July 26, 18.6 | s. — 21.23 | s. — 0.031 | s. + 0.20 | s. — 0.13 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0 | | | | |
|-------------------------|-----------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|---------------|-------|--------|---------------------------------|------------------------|-------------|-----------|------|------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | | | | |
| | | | m. | s. | m. | s. | s. | h. | m. | s. | s. | | | | | | | | | | | |
| 1876. July 26 Y. | $-37^{\circ} 41'$. . . | 1 | 59.9 | 2.1 | 5.1 | | | | | | | 43.2 | 46.6 | 48.4 | 6 | 24.22 | — | 0.31 | 21.24 | 18 6 2.67 | — | 4.07 |
| | Lalande 33598 . . . | 2 | 18.3 | 20.5 | 22.3 | 23.9 | 26.5 | | 30.0 | 32.8 | 34.5 | 36.3 | 38.1 | 10 | 58.32 | — | 0.12 | 21.24 | 18 10 36.96 | 3.48 | | |
| | * $-18^{\circ} 51'$. . . | 3 | 38.9 | 40.8 | | 56.0 | 57.5 | 59.2 | 1.0 | 2.6 | | 18.3 | 20.2 | 10 | 59.39 | — | 0.19 | 21.24 | 18 10 37.96 | 3.48 | | |
| 18 | Sagittarii . . . | 4 | | | | 37.6 | 39.3 | 41.3 | 43.4 | 45.0 | 50.1 | 2.1 | 3.5 | 13 | 48.91 | — | 7.83 | 21.24 | 18 13 19.84 | 3.81 | | |
| | * $-36^{\circ} 51'$. . . | 5 | | | | 36.8 | 38.7 | 41.0 | 42.7 | 44.7 | 59.6 | 3.0 | 4.6 | 25 | 48.89 | — | 8.42 | 21.24 | 18 25 19.23 | 4.13 | | |
| 1 | Aquila . . . | 6 | 32.8 | 34.4 | 37.0 | 49.1 | 50.6 | 52.3 | 53.9 | 55.5 | 7.6 | 10.2 | 11.6 | 28 | 52.27 | — | 0.16 | 21.25 | 18 28 30.86 | 3.30 | | |
| | Lalande 34831 . . . | 7 | 59.8 | 4.7 | 13.0 | 52.7 | 57.4 | 2.3 | 8.2 | 13.3 | 52.9 | 0.7 | 5.6 | 35 | 2.78 | — | 0.20 | 21.25 | 18 34 41.73 | 3.05 | | |
| β | Lacaille 7846 . . . | 8 | | | | 49.9 | 53.0 | 55.0 | 9.4 | 13.1 | 15.0 | 17.0 | 19.6 | 40 | 6.65 | — | 36.86 | 21.25 | 18 39 8.54 | 4.36 | | |
| | Lyra . . . | 9 | | 33.1 | 36.2 | 50.2 | 52.1 | 54.2 | 56.2 | 58.0 | 12.2 | 15.2 | | 45 | 54.16 | — | 0.05 | 21.26 | 18 45 32.85 | 2.82 | | |
| | * $-22^{\circ} 8'$. . . | 10 | 4.2 | 6.1 | 8.9 | | | | | | 41.3 | 44.2 | 45.7 | 51 | 25.07 | — | 0.21 | 21.25 | 18 51 3.61 | 3.70 | | |
| | * $-22^{\circ} 8'$. . . | 11 | 18.5 | 20.4 | 23.6 | | | | | | 56.2 | 58.5 | 0.2 | 51 | 39.57 | — | 0.21 | 21.26 | 18 51 18.10 | 3.70 | | |
| | B. A. C. 6488 . . . | 12 | 33.1 | 35.0 | 37.6 | 49.9 | 51.5 | 53.1 | 55.0 | 56.6 | 9.0 | 11.5 | 13.1 | 54 | 53.22 | — | 0.19 | 21.26 | 18 54 31.77 | 3.53 | | |
| | * $-22^{\circ} 15'$. . . | 13 | 35.9 | 37.5 | 40.0 | 53.0 | 54.6 | 56.2 | 58.2 | 59.9 | 12.0 | 15.5 | 17.1 | 8 | 56.44 | — | 0.22 | 21.27 | 19 8 34.95 | 3.74 | | |
| | Weisse (2) 187 . . . | 14 | 6.4 | 8.5 | 11.7 | | | | | | 50.4 | 53.6 | 55.3 | 11 | 30.97 | — | 0.00 | 21.27 | 19 11 9.70 | 2.81 | | |
| | * $-38^{\circ} 29'$. . . | 15 | 28.9 | 30.8 | 34.1 | | | | | | 12.5 | 15.7 | 17.6 | 11 | 53.27 | — | 0.00 | 21.27 | 19 11 32.00 | 2.81 | | |
| | Weisse 345 . . . | 16 | 42.2 | 43.8 | 46.3 | 58.4 | 59.9 | 1.6 | 3.2 | 4.9 | 17.0 | 19.5 | 20.6 | 16 | 1.61 | — | 0.16 | 21.27 | 19 15 40.18 | 3.41 | | |
| | * $+36^{\circ} 56'$. . . | 17 | 9.3 | 11.3 | 14.4 | 29.5 | 31.1 | 33.4 | 35.5 | 37.3 | 52.4 | 55.5 | 57.3 | 23 | 33.36 | — | 0.02 | 21.27 | 19 23 12.07 | 2.83 | | |
| | * $-37^{\circ} 0'$. . . | 18 | 12.8 | 14.8 | 18.1 | 33.0 | 34.8 | 37.0 | 39.6 | 41.0 | 55.8 | 59.0 | 0.9 | 24 | 36.93 | — | 0.01 | 21.28 | 19 24 15.64 | 2.83 | | |
| | B. A. C. 6700 . . . | 19 | 20.0 | 21.7 | 24.4 | 37.0 | 38.8 | 40.6 | 42.4 | 44.0 | 56.8 | 59.5 | 1.1 | 28 | 40.57 | — | 0.22 | 21.28 | 19 28 19.07 | 3.74 | | |
| | * $-23^{\circ} 37'$. . . | 20 | 59.5 | 1.2 | 4.0 | 17.0 | 18.6 | 20.4 | 22.2 | 23.9 | 37.2 | 39.7 | 41.2 | 32 | 20.45 | — | 0.23 | 21.28 | 19 32 58.94 | 3.83 | | |
| | * $+38^{\circ} 2'$. . . | 21 | 17.7 | 19.8 | 22.4 | 37.9 | 40.1 | 41.8 | 43.5 | 45.4 | 1.3 | 4.6 | 6.4 | 39 | 41.90 | — | 0.01 | 21.28 | 19 39 20.61 | 2.83 | | |
| | Lalande 37597 . . . | 22 | 23.7 | 25.4 | 28.8 | | | | | | 7.4 | 10.2 | 12.0 | 39 | 47.92 | — | 0.00 | 21.28 | 19 39 20.61 | 2.83 | | |
| | O. Arg. S. 20022 . . . | 23 | 11.3 | 13.2 | 15.9 | 29.5 | 31.0 | 32.9 | 34.9 | 36.6 | 50.1 | 52.8 | 54.5 | 45 | 32.97 | — | 0.25 | 21.28 | 19 45 11.44 | 3.97 | | |
| | * $-22^{\circ} 43'$. . . | 24 | 24.0 | 25.5 | 28.5 | 41.6 | 43.0 | 41.8 | 46.6 | 48.2 | 1.4 | 3.7 | 5.3 | 49 | 44.78 | — | 0.23 | 21.29 | 19 49 23.26 | 3.82 | | |
| 7 | Sagittæ . . . | 25 | 18.5 | 20.2 | 22.8 | 35.4 | 37.0 | 38.8 | 40.6 | 42.2 | 54.8 | 57.6 | 59.1 | 53 | 38.82 | — | 0.07 | 21.29 | 19 53 17.46 | 3.00 | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| 15 | Vulpeculæ . . . | 26 | 1.9 | 3.8 | 6.7 | 20.1 | 21.8 | 23.7 | 25.5 | 27.3 | 40.8 | 43.6 | 45.2 | 56 | 23.67 | — | 0.04 | 21.29 | 19 56 2.34 | 2.92 | | |
| | * $-19^{\circ} 3'$. . . | 27 | 57.6 | 59.2 | 2.0 | 14.5 | 16.1 | 17.9 | 19.5 | 21.2 | 33.8 | 36.2 | 38.0 | 59 | 17.82 | — | 0.20 | 21.29 | 19 58 56.33 | 3.72 | | |
| | O. Arg. S. 20299 . . . | 28 | 39.8 | 41.7 | 45.0 | 57.4 | 59.0 | 1.2 | 2.8 | 4.8 | 17.5 | 20.3 | 22.1 | 5 | 1.05 | — | 0.24 | 21.30 | 20 4 39.51 | 3.90 | | |
| | * $+38^{\circ} 18'$. . . | 29 | 52.4 | 54.8 | 57.0 | 58.9 | 2.1 | | 18.6 | 21.9 | 23.8 | 26.0 | 28.4 | 7 | 40.39 | + | 0.08 | 21.30 | 20 7 19.17 | 2.83 | | |
| | * $+38^{\circ} 19'$. . . | 30 | 22.2 | 24.5 | 27.6 | 42.7 | 44.5 | 46.5 | 48.5 | 50.2 | 6.1 | 9.3 | 11.0 | 7 | 46.65 | — | 0.01 | 21.30 | 20 7 25.34 | 2.83 | | |
| | α^2 Capricorni . . . | 31 | 15.7 | 17.5 | 20.0 | 32.1 | 33.7 | 35.4 | 37.2 | 38.8 | 50.9 | 53.6 | 55.1 | 11 | 35.45 | — | 0.19 | 21.30 | 20 11 13.96 | 3.56 | | |
| | * $+64^{\circ} 16'$. . . | 32 | 40.5 | 44.0 | 50.4 | 7.8 | 20.8 | 24.8 | 28.6 | 32.6 | 57.7 | 6.1 | 9.2 | 17 | 23.86 | + | 0.12 | 21.30 | 20 17 2.68 | 2.86 | | |
| 40 | Cygni . . . | 33 | 58.3 | 0.4 | 3.6 | 18.6 | 20.6 | 22.7 | 24.8 | 26.7 | 42.0 | 45.1 | 46.9 | 23 | 22.70 | — | 0.01 | 21.31 | 20 23 1.38 | 2.83 | | |
| ϵ | Delphini . . . | 34 | 22.2 | 23.9 | 26.5 | 38.5 | 40.0 | 41.8 | 43.4 | 45.0 | 57.2 | 59.7 | 1.2 | 27 | 41.76 | — | 0.09 | 21.31 | 20 27 20.36 | 3.10 | | |
| 27 | δ Ophiuchi . . . | 35 | 55.5 | 57.2 | 59.7 | 41.7 | 13.1 | 14.8 | 16.5 | 18.1 | 30.0 | 32.4 | 33.9 | 8 | 14.81 | — | 0.14 | 21.14 | 16 7 53.53 | 2.64 | | |
| | ϵ Ophiuchi . . . | 36 | 10.3 | 12.0 | 14.6 | 26.6 | 28.2 | 29.8 | 31.4 | 33.1 | 45.1 | 47.6 | 49.2 | 21 | 29.81 | — | 0.16 | 21.14 | 16 21 8.51 | 2.76 | | |
| γ | Herculis . . . | 37 | 31.8 | 33.9 | 37.4 | 53.6 | 55.4 | 57.6 | 59.9 | 2.0 | 18.1 | 21.5 | 23.5 | 24 | 57.70 | + | 0.01 | 21.13 | 16 24 36.58 | 2.45 | | |
| | Lacaille 6894 . . . | 38 | 30.1 | 32.1 | 35.2 | 49.8 | 51.7 | 53.7 | 55.8 | 57.7 | 12.4 | 15.4 | 17.3 | 28 | 53.75 | — | 0.30 | 21.13 | 16 28 32.32 | 3.28 | | |
| | B. A. C. 5567 . . . | 39 | 19.8 | 21.5 | 24.3 | 37.0 | 38.5 | 40.3 | 42.1 | 43.7 | 56.5 | 59.0 | 0.6 | 33 | 40.30 | — | 0.21 | 21.12 | 16 33 18.97 | 2.99 | | |
| | O. Arg. S. 15886 . . . | 40 | 38.6 | 40.6 | 43.4 | 56.8 | 58.4 | 0.3 | 2.1 | 3.8 | 17.3 | 20.1 | 21.6 | 37 | 0.27 | — | 0.25 | 21.12 | 16 36 38.90 | 3.15 | | |
| | O. Arg. S. 15896 . . . | 41 | | | | 29.2 | 31.0 | 32.7 | 34.8 | 36.5 | 49.9 | 52.6 | 54.5 | 37 | 40.15 | — | 7.54 | 21.12 | 16 37 11.49 | 3.15 | | |
| | * $-24^{\circ} 7'$. . . | 42 | 20.3 | 21.5 | 23.9 | 38.5 | 39.9 | 41.9 | 43.6 | 44.8 | 58.1 | 1.0 | 2.8 | 42 | 41.48 | — | 0.23 | 21.12 | 16 42 20.13 | 3.13 | | |
| | B. A. C. 5705 . . . | 43 | 32.1 | 39.9 | 51.5 | 47.7 | 54.7 | 2.3 | 10.2 | 17.7 | 13.6 | 25.3 | 32.3 | 49 | 2.39 | + | 0.31 | 21.12 | 16 48 41.58 | 3.00 | | |
| | * $-36^{\circ} 59'$. . . | 44 | 17.0 | 19.3 | 22.0 | | | | | | 0.0 | 2.5 | 4.8 | 55 | 40.93 | — | 0.30 | 21.11 | 16 55 19.52 | 3.55 | | |
| 60 | Herculis . . . | 45 | 41.8 | 43.6 | 46.2 | 58.4 | 59.9 | 1.6 | 3.3 | 5.0 | 17.1 | 19.6 | 21.1 | 0 | 1.60 | — | 0.09 | 21.11 | 16 59 40.40 | 2.72 | | |
| | B. A. C. 5793 . . . | 46 | 57.0 | 59.0 | 2.0 | 16.0 | 17.8 | 19.8 | 21.7 | 23.7 | 37.7 | 40.6 | 42.5 | 5 | 19.80 | — | 0.28 | 21.11 | 17 4 58.41 | 2.48 | | |
| α^1 | Herculis . . . | 47 | 3.7 | 5.4 | 8.0 | 20.3 | 21.9 | 23.5 | 25.3 | 26.8 | 39.3 | 41.8 | 43.3 | 9 | 23.57 | — | 0.08 | 21.11 | 17 9 2.38 | 2.75 | | |
| | Lalande 31762 . . . | 48 | 52.6 | 54.7 | 58.0 | | | | | | 35.7 | 38.8 | 40.5 | 20 | 16.72 | — | 0.00 | 21.10 | 17 19 55.62 | 2.62 | | |
| | B. A. C. 5895 . . . | 49 | 9.0 | 11.0 | 14.3 | | | | | | 52.1 | 55.2 | 57.0 | 20 | 33.10 | — | 0.00 | 21.10 | 17 20 12.00 | 2.62 | | |
| | * $-38^{\circ} 32'$. . . | 50 | 0.5 | 2.0 | 3.7 | 5.1 | 7.1 | | 43.0 | 46.2 | 47.7 | 49.5 | 51.5 | 27 | 25.63 | — | 22.10 | —21.10 | 17 26 42.43 | — | 3.85 | |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|---------------|-----------------|--------------|--------|--------|
| 1876. h. s. | | | | |
| July 27, 18.2 | — 21.07 | + 0.033 | + 0.20 | — 0.13 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | | |
|-------------------------|---------------------|---------|--------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|----------|-------------------|-------|---------------------------------|-------------------------|-------------------------|------|------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | | |
| 1876. July 27 Y. | *-32° 11' | 1 | 34.5 | 36.5 | 39.5 | 53.6 | 55.3 | 57.1 | 59.1 | 1.1 | 15.2 | 18.3 | 19.8 | m. s. 31 57.27 | — | 0.28 | — 21.09 | h. m. s. 17 31 35.90 | — | s. 3.65 |
| | *-32° 10' | 2 | | | | 47.9 | 50.4 | 52.5 | 5.3 | 8.5 | 10.3 | 12.1 | 14.5 | 33 2.69 | 33.07 | 21.09 | 17 32 8.53 | | 3.66 | |
| | *-32° 11' | 3 | | | | 26.9 | 28.3 | 30.6 | 32.4 | 34.4 | | | | 32 30.52 | 0.29 | 21.09 | 17 32 9.14 | | 3.65 | |
| | O. Arg. S. 17133 . | 4 | 58.4 | 0.1 | 2.9 | 15.6 | 17.2 | 19.1 | 20.8 | 22.5 | 35.4 | 37.9 | 39.6 | 37 19.06 | 0.22 | 21.09 | 17 36 57.75 | | 3.39 | |
| | *-30° 55' | 5 | 11.1 | 13.0 | 15.9 | 29.9 | 31.7 | 33.5 | 35.5 | 37.3 | 51.2 | 54.2 | 55.8 | 42 33.55 | 0.27 | 21.09 | 17 42 12.19 | | 3.68 | |
| | *-30° 55' | 6 | 11.5 | 13.1 | 15.0 | 16.9 | 18.7 | | 50.1 | 53.1 | 55.0 | 56.7 | 59.0 | 43 34.91 | 20.12 | 21.09 | 17 42 53.70 | | 3.68 | |
| | *-30° 55' | 7 | 25.7 | 27.3 | 29.0 | 31.2 | 32.8 | | 4.4 | 7.5 | 9.2 | 11.1 | 13.4 | 43 49.16 | 20.12 | 21.09 | 17 43 7.95 | | 3.68 | |
| | *-28° 8' | 8 | 0.9 | 3.3 | 5.1 | 6.8 | 9.6 | | 17.9 | 20.9 | 22.7 | 24.5 | 26.5 | 50 43.82 | 0.18 | 21.08 | 17 50 22.56 | | 3.64 | |
| | *-28° 8' | 9 | 23.0 | 25.1 | 27.7 | 41.2 | 42.9 | 45.0 | 47.0 | 48.7 | 1.9 | 4.7 | 6.5 | 50 44.88 | 0.26 | 21.08 | 17 50 23.54 | | 3.65 | |
| | O. Arg. S. 17466 . | 10 | 20.4 | 22.0 | 24.8 | 38.1 | 39.8 | 41.4 | 43.2 | 45.0 | 58.1 | 0.9 | 2.5 | 53 41.47 | 0.23 | 21.08 | 17 53 20.16 | | 3.54 | |
| | O. Arg. S. 17467 . | 11 | | | | 6.9 | 9.4 | 11.4 | 23.4 | 26.2 | 27.9 | 29.7 | 31.8 | 54 20.84 | 30.66 | 21.08 | 17 53 29.10 | | 3.54 | |
| | B. A. C. 6128 . . | 12 | | | | 2.6 | 4.4 | 6.9 | 9.2 | 11.0 | | | | 1 6.82 | 0.40 | 21.08 | 18 0 45.34 | | 4.40 | |
| | μ Sagittarii . . | 13 | 25.0 | 26.8 | 29.5 | 42.3 | 44.0 | 45.7 | 47.3 | 49.0 | 1.0 | 4.4 | 6.2 | 6 45.65 | — | 0.22 | 21.07 | 18 6 24.36 | | 3.51 |
| | δ Ursæ Minoris . | 14 | | | | 52.0 | 19.0 | 46.0 | 15.0 | 40.0 | | | | 12 46.40 | + | 1.03 | 21.07 | | | 6.49 |
| | O. Arg. S. 18198 . | 15 | 18.5 | 20.2 | 23.0 | 35.8 | 37.5 | 39.1 | 40.8 | 42.4 | 55.5 | 58.1 | 59.7 | 18 39.15 | — | 0.22 | 21.07 | 18 18 17.86 | | 3.56 |
| | *-26° 40' | 16 | 17.2 | 19.0 | 21.7 | | | | | 55.5 | 58.2 | 59.9 | 21 38.58 | 0.24 | 21.07 | 18 21 17.27 | | 3.74 | | |
| | B. A. C. 6270 . . | 17 | | | | 35.1 | 36.9 | 38.7 | 40.6 | 42.3 | | | | 21 38.72 | 0.26 | 21.07 | 18 21 17.39 | | 3.74 | |
| | B. A. C. 6308 . . | 18 | 59.5 | 1.6 | 4.6 | 18.9 | 20.5 | 22.5 | 24.6 | 26.4 | 40.7 | 43.7 | 45.4 | 26 22.58 | 0.29 | 21.06 | 18 26 1.23 | | 3.98 | |
| | B. A. C. 6317 . . | 19 | 21.4 | 23.2 | 26.2 | 40.5 | 42.3 | 44.2 | 46.3 | 48.0 | 2.4 | 5.5 | 7.0 | 27 44.27 | — | 0.29 | 21.06 | 18 27 22.92 | | 3.98 |
| | Lalande 34831 . | 20 | 59.4 | 4.8 | 13.1 | 51.9 | 57.1 | 2.4 | 7.9 | 13.0 | 52.4 | 0.3 | 4.9 | 35 2.47 | + | 0.20 | 21.06 | 18 34 41.61 | | 2.91 |
| β | Lalande 34950 . | 21 | 1.1 | 3.1 | 6.3 | 21.1 | 22.9 | 24.9 | 27.2 | 28.9 | 43.7 | 46.8 | 48.6 | 41 24.96 | — | 0.01 | 21.05 | 18 41 3.90 | | 2.79 |
| | Lyrae | 22 | 30.9 | 33.0 | 36.0 | 50.2 | 52.0 | 54.0 | 56.0 | 57.9 | 12.0 | 15.0 | 16.8 | 45 53.98 | 0.02 | 21.05 | 18 45 32.91 | | 2.81 | |
| | *-33° 26' | 23 | 53.6 | 55.6 | 58.7 | | | | | 34.8 | 37.8 | 39.6 | 48 16.68 | 0.28 | 21.05 | 18 47 55.35 | | 4.08 | | |
| | *-33° 25' | 24 | 14.2 | 16.3 | 19.5 | | | | | 55.5 | 58.4 | 0.2 | 48 37.35 | 0.28 | 21.05 | 18 48 16.02 | | 4.08 | | |
| | Weisse 1277 . . | 25 | 34.0 | 36.5 | 39.2 | 51.3 | 52.6 | 54.3 | 56.0 | 57.6 | 9.8 | 12.3 | 13.8 | 51 54.39 | 0.17 | 21.05 | 18 51 33.17 | | 3.39 | |
| | *-15° 4' | 26 | 4.1 | 5.7 | 8.3 | 20.7 | 22.2 | 23.9 | 25.5 | 27.2 | 39.6 | 42.2 | 43.7 | 56 23.92 | 0.19 | 21.05 | 18 56 2.63 | | 3.53 | |
| | O. Arg. S. 19104 . | 27 | 51.0 | 52.6 | 55.2 | 8.5 | 9.9 | 11.9 | 13.5 | 14.9 | 28.0 | 30.7 | 32.3 | 1 11.66 | 0.22 | 21.04 | 19 0 50.40 | | 3.72 | |
| | *-22° 15' | 28 | 35.7 | 37.4 | 40.1 | | | | | 12.7 | 15.4 | 17.4 | 8 56.45 | 0.21 | 21.04 | 19 8 35.20 | | 3.75 | | |
| | 23 Aquilæ, (1st *). | 29 | 0.5 | 2.4 | 4.1 | 5.7 | 8.2 | | 8.3 | 11.0 | 12.5 | 14.2 | 16.0 | 12 38.29 | 0.06 | 21.04 | 19 12 17.19 | | 3.23 | |
| | 23 Aquilæ, (2d *). | 30 | | 20.8 | 23.4 | 35.4 | 36.8 | 38.4 | 40.0 | 41.7 | 53.4 | 56.0 | | 12 38.43 | 0.14 | 21.04 | 19 12 17.25 | | 3.23 | |
| κ | *-28° 57' | 31 | 15.1 | 17.2 | 19.9 | | | | | 54.3 | 57.2 | 58.9 | 16 37.10 | 0.25 | 21.04 | 19 16 15.81 | | 3.99 | | |
| | Aquilæ. | 32 | | | | 34.5 | 36.1 | 37.8 | 39.5 | 41.0 | | | 30 37.78 | 0.17 | 21.03 | 19 30 16.58 | | 3.41 | | |
| | γ Aquilæ. | 33 | 26.5 | 28.2 | 30.8 | 42.9 | 44.4 | 46.1 | 47.8 | 49.4 | 1.4 | 4.0 | 5.5 | 40 46.09 | — | 0.10 | 21.02 | 19 40 24.97 | | 3.12 |
| Aug. 5 | β Herculis | 34 | 45.8 | 47.4 | 50.1 | 2.8 | 4.5 | 6.4 | 8.1 | 9.7 | 22.5 | 25.2 | 27.0 | 25 6.32 | + | 0.19 | 10.67 | 16 24 55.84 | | 2.12 |
| | ζ Ophiuchi | 35 | 13.9 | | 17.9 | 30.0 | 31.5 | 33.3 | 35.0 | 36.6 | 48.6 | | 52.7 | 30 33.28 | 0.07 | 10.66 | 16 30 22.69 | | 2.75 | |
| | μ Herculis | 36 | 27.7 | 29.6 | 32.2 | 45.7 | 47.5 | 49.2 | 51.3 | 53.0 | 6.4 | 9.3 | 11.1 | 41 49.36 | + | 0.22 | 10.63 | 17 41 38.95 | | 2.62 |
| | B. A. C. 6128 . . | 37 | 29.6 | 31.8 | 35.0 | 52.1 | 54.2 | 56.7 | 59.0 | 1.2 | 18.2 | 21.7 | 23.9 | 0 56.67 | — | 0.06 | 10.62 | 18 0 45.99 | | 4.34 |
| | α Lyrae | 38 | | | | 53.3 | 55.4 | 57.5 | 59.4 | 1.4 | 16.7 | 19.9 | 21.8 | 33 5.68 | 8.00 | 10.60 | 18 32 47.08 | — | 2.69 | |
| | 51 Cephei, S. P. . | 39 | | | | 55.0 | 26.0 | 1.5 | 37.0 | 8.0 | | | | 42 1.50 | — | 6.42 | 10.60 | | + | 0.40 |
| | 12 Aquilæ. | 40 | 58.1 | 59.6 | 2.1 | 14.1 | 15.6 | 17.4 | 19.0 | 20.5 | 32.5 | 35.0 | 36.7 | 55 17.32 | + | 0.08 | 10.60 | 18 55 6.80 | — | 3.32 |
| | O. Arg. S. 19140 . | 41 | | | | 7.5 | 9.0 | 10.7 | 12.5 | 14.1 | 26.5 | 29.1 | 30.8 | 2 17.52 | — | 6.67 | 10.59 | 19 2 0.26 | | 3.56 |
| | Lalande 36051 . . | 42 | 16.4 | 18.3 | 21.5 | 36.5 | 38.5 | 40.5 | 42.6 | 44.6 | 59.4 | 2.8 | 4.8 | 5 40.54 | + | 0.29 | 10.59 | 19 5 30.24 | | 2.75 |
| | Weisse 187 . . . | 43 | 25.5 | 27.1 | 29.6 | 41.7 | 43.3 | 45.0 | 46.7 | 48.2 | 0.2 | 2.8 | 4.5 | 9 44.96 | 0.07 | 10.58 | 19 9 34.45 | | 3.42 | |
| f | Aquilæ. | 44 | 50.2 | 51.9 | 54.3 | | 7.7 | 9.5 | 11.1 | | 24.7 | 27.2 | 28.8 | 14 9.49 | 0.08 | 10.58 | 19 13 58.99 | | 3.37 | |
| γ | Lalande 36557 . . | 45 | 44.5 | 46.0 | 48.5 | 1.0 | 2.5 | 4.2 | 5.8 | 7.4 | 19.9 | 22.5 | 24.2 | 18 4.23 | 0.05 | 10.58 | 19 17 53.70 | | 3.60 | |
| | O. Arg. S. 19609 . | 46 | 54.9 | 56.4 | 59.2 | 12.5 | 14.2 | 16.1 | 17.8 | 19.6 | 33.0 | 35.6 | 37.3 | 22 16.05 | 0.01 | 10.58 | 19 22 5.48 | | 3.92 | |
| | Lalande 36878 . . | 47 | 42.0 | 43.5 | 45.9 | 59.0 | 0.5 | 2.3 | 4.0 | 5.6 | 18.4 | 21.1 | 22.7 | 25 2.27 | + | 0.03 | 10.58 | 19 24 51.72 | | 3.74 |
| | Lacaille 8158 . . | 48 | 52.6 | 54.7 | 57.5 | 13.7 | 16.1 | 18.3 | 20.6 | 22.3 | 38.5 | 41.8 | 43.9 | 29 18.18 | — | 0.05 | 10.57 | 19 29 7.56 | | 4.65 |
| | *-23° 37' | 49 | 48.6 | 50.2 | 53.0 | 6.1 | 7.6 | 9.5 | 11.4 | 13.1 | 26.0 | 28.7 | 30.6 | 33 9.53 | + | 0.02 | 10.57 | 19 32 58.98 | | 3.87 |
| | Aquilæ. | 50 | 16.0 | 17.5 | 20.0 | 32.1 | 33.8 | 35.5 | 37.1 | 38.6 | 50.8 | 53.3 | 55.0 | 40 35.43 | + | 0.14 | — 10.57 | 19 40 25.00 | — | 3.14 |

August 5. Image west of 51. Clamp west.
Image west of 19. Clamp east.

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------------------|--------------------|-----------------|--------------|--------------|
| 1876. h. Aug. 5, 18.6 | s. — 10.60 | s. + 0.030 | s. + 0.20 | s. + 0.10 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. |
|-------------------------|-----------------------------|---------|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------------------|-------|---------------|--------------|---------------------------------|-------------------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | |
| 1876. Aug. 5 Y. | Lalande 37785 . . . | 1 | 56.0 | 58.0 | 0.9 | 15.6 | 17.3 | 19.4 | 21.4 | 23.2 | 37.7 | 40.8 | 42.8 | m. s. 41 19.37 | + | m. s. 0.26 | s. -10.57 | h. m. s. 19 44 9.06 | — s. 2.85 |
| | B. A. C. 6839 . . . | 2 | 0.8 | 3.8 | 8.9 | 33.5 | 36.6 | 40.0 | 43.7 | 46.7 | 11.0 | 15.8 | 19.6 | 48 40.40 | | 0.56 | 10.56 | 19 48 30.40 | 2.74 |
| | γ Sagittæ . . . | 3 | 7.8 | 9.3 | 11.8 | 24.5 | 26.3 | 28.0 | 29.6 | 31.3 | 43.8 | 46.5 | 48.2 | 53 27.92 | | 0.18 | 10.56 | 19 53 17.54 | 3.03 |
| | *+36° 45' . . . | 4 | 31.2 | 33.0 | 36.0 | 50.9 | 52.9 | 55.0 | 57.1 | 59.0 | 13.7 | 16.8 | 19.0 | 56 54.96 | + | 0.28 | 10.56 | 19 56 44.68 | 2.85 |
| | *-39° 5' . . . | 5 | 36.0 | 38.1 | 41.2 | 56.1 | 58.0 | 0.0 | 2.2 | 4.2 | 19.2 | 21.9 | 24.0 | 1 0.08 | - | 0.03 | 10.56 | 20 0 49.49 | 4.58 |
| | *-14° 3' . . . | 6 | 28.0 | 29.4 | 32.1 | 44.3 | 46.0 | 47.7 | 49.4 | 51.0 | 3.3 | 5.9 | 7.6 | 4 47.70 | - | 0.05 | 10.56 | 20 4 37.09 | 3.65 |
| | *+38° 19' . . . | 7 | 35.5 | 37.4 | 40.6 | 55.8 | 57.8 | 59.8 | 1.8 | 3.8 | 19.0 | 22.0 | 24.3 | 8 59.80 | + | 0.29 | 10.55 | 20 8 49.54 | 2.85 |
| | ε Delphini . . . | 8 | 11.4 | 13.0 | 15.4 | 27.6 | 29.1 | 30.9 | 32.6 | 34.1 | 46.2 | 48.8 | 50.4 | 27 30.86 | | 0.14 | 10.54 | 20 27 20.46 | 3.17 |
| | 9 a Ophiuchi . . . | 9 | 2.2 | 3.7 | 6.1 | 18.5 | 20.0 | 21.7 | 23.5 | 25.0 | 37.2 | 39.9 | 41.5 | 29 21.75 | + | 0.15 | 8.42 | 17 29 13.48 | 2.72 |
| | *-34° 52' . . . | 10 | 46.0 | 47.9 | 50.8 | 5.5 | 7.1 | 9.3 | 11.3 | 13.2 | 27.7 | 30.8 | 32.9 | 39 9.32 | - | 0.02 | 8.42 | 17 39 0.88 | 3.69 |
| | *-34° 52' . . . | 11 | 55.6 | 57.5 | 0.4 | . . . | . . . | . . . | . . . | . . . | 37.2 | 40.3 | 42.2 | 45 18.87 | | 0.03 | 8.42 | 17 45 10.42 | 3.74 |
| | *-34° 50' . . . | 12 | 7.2 | 8.8 | 12.0 | . . . | . . . | . . . | . . . | . . . | 48.7 | 51.6 | 53.5 | 45 30.27 | | 0.03 | 8.42 | 17 45 21.82 | 3.74 |
| | *-34° 50' . . . | 13 | . . . | . . . | . . . | 12.3 | 15.2 | 17.2 | 30.6 | 33.7 | 35.8 | 37.7 | 40.0 | 46 27.81 | | 33.95 | 8.42 | 17 45 45.44 | 3.74 |
| | *-34° 52' . . . | 14 | . . . | . . . | . . . | . . . | . . . | . . . | 54.3 | 57.5 | 59.5 | 1.6 | 4.0 | 46 59.38 | | 41.70 | 8.42 | 17 46 9.26 | 3.74 |
| | *-31° 25' . . . | 15 | 2.2 | 4.2 | 7.1 | 21.2 | 23.0 | 24.6 | 26.8 | 28.5 | 42.6 | 45.6 | 47.4 | 51 24.84 | | 0.01 | 8.42 | 17 51 16.41 | 3.66 |
| | O. Arg. S. 17467 . . . | 16 | . . . | . . . | . . . | 53.8 | 56.7 | 58.3 | 10.4 | 13.2 | 14.9 | 16.4 | 18.2 | 54 7.74 | | 30.50 | 8.42 | 17 53 28.82 | 3.47 |
| | *-37° 30' . . . | 17 | 32.8 | 34.6 | 37.7 | 52.8 | 54.8 | 56.8 | 59.1 | 0.8 | 15.8 | 19.1 | 21.3 | 57 56.78 | - | 0.02 | 8.42 | 17 57 48.34 | 3.93 |
| | O. Arg. S. 17809 . . . | 18 | 46.5 | 48.1 | 50.6 | 3.4 | 5.1 | 6.8 | 8.5 | 10.2 | 22.8 | 25.5 | 27.0 | 5 6.77 | + | 0.04 | 8.42 | 18 4 58.39 | 3.41 |
| | *-32° 14' . . . | 19 | 14.2 | 15.9 | 18.5 | . . . | 34.8 | 36.9 | 38.7 | . . . | 54.5 | 57.6 | 59.3 | 13 36.71 | - | 0.01 | 8.42 | 18 13 28.28 | 3.83 |
| | *-32° 10' . . . | 20 | 17.9 | 19.6 | 22.7 | . . . | . . . | . . . | . . . | . . . | 58.3 | 1.4 | 3.2 | 17 40.52 | | 0.02 | 8.42 | 18 17 32.08 | 3.85 |
| | B. A. C. 6283 . . . | 21 | . . . | . . . | . . . | 47.6 | 49.5 | 51.4 | 53.2 | 55.0 | 8.7 | 11.5 | 13.3 | 22 58.78 | - | 7.39 | 8.42 | 18 22 42.97 | 3.77 |
| | B. A. C. 6301 . . . | 22 | 3.0 | 4.5 | 7.0 | 19.8 | 21.4 | 23.2 | 24.8 | 26.5 | 39.2 | 41.8 | 43.5 | 25 23.15 | + | 0.04 | 8.42 | 18 25 14.77 | 3.50 |
| | ι Aquilæ . . . | 23 | 19.8 | 21.3 | 23.8 | 35.8 | 37.4 | 39.0 | 40.7 | 42.2 | 54.2 | 56.9 | 58.5 | 28 39.05 | | 0.07 | 8.42 | 18 28 30.70 | 3.27 |
| | a Lyre . . . | 24 | 30.7 | 32.5 | 35.7 | 51.0 | 53.0 | 55.2 | 57.3 | 59.1 | 14.5 | 17.6 | 19.8 | 32 55.13 | | 0.29 | 8.42 | 18 32 47.00 | 2.65 |
| | O. Arg. S. 18609 . . . | 25 | 5.7 | 7.6 | 9.9 | 22.7 | 24.5 | 26.2 | 27.8 | 29.6 | 42.4 | 45.1 | 46.8 | 37 26.21 | + | 0.03 | 8.42 | 18 37 17.82 | 3.61 |
| | 51 Cephei, S. P. . . | 26 | . . . | . . . | . . . | 55.0 | 26.0 | 59.0 | 34.0 | 7.0 | . . . | . . . | . . . | 42 0.20 | - | 6.42 | 8.42 | . . . | 0.92 |
| | δ ² Lyre . . . | 27 | . . . | . . . | . . . | 17.0 | 18.9 | 21.1 | 23.1 | 24.9 | 39.8 | 42.9 | 44.0 | 50 29.08 | - | 7.80 | 8.42 | 18 50 12.86 | 2.70 |
| | Radcliffe 4208 . . . | 28 | . . . | . . . | . . . | 25.0 | 53.0 | 19.0 | 46.0 | 13.0 | . . . | . . . | . . . | 55 19.20 | + | 5.11 | 8.42 | 18 55 15.89 | 3.69 |
| | O. Arg. S. 19140 . . . | 29 | 48.9 | 50.2 | 52.9 | 6.0 | 7.4 | 9.1 | 10.5 | 11.8 | 24.0 | 26.9 | 28.5 | 2 8.75 | | 0.05 | 8.42 | 19 2 0.38 | 3.55 |
| | 21 Aquilæ . . . | 30 | 19.9 | 21.5 | 23.9 | 35.7 | 37.2 | 39.0 | 40.5 | 42.1 | 54.0 | 56.6 | 58.2 | 7 38.96 | | 0.11 | 8.42 | 19 7 30.65 | 3.20 |
| | 24 Aquilæ . . . | 31 | 22.7 | 24.2 | 26.7 | 38.6 | 40.1 | 41.9 | 43.5 | 45.0 | 56.9 | 59.4 | 1.0 | 12 41.82 | | 0.10 | 8.42 | 19 12 33.50 | 3.25 |
| | δ Aquilæ . . . | 32 | 7.3 | 8.7 | 11.0 | 23.0 | 24.5 | 26.3 | 28.0 | 29.4 | 41.3 | 43.8 | 45.5 | 19 26.25 | | 0.11 | 8.42 | 19 19 17.94 | 3.21 |
| | B. A. C. 6711 . . . | 33 | 2.7 | 5.6 | 8.7 | 23.9 | 25.7 | 27.9 | 30.1 | 32.1 | 47.1 | 50.6 | 52.7 | 29 27.92 | | 0.29 | 8.42 | 19 29 19.79 | 2.77 |
| | *-23° 56' . . . | 34 | 28.4 | 30.0 | 32.8 | 45.9 | 47.5 | 49.3 | 51.2 | 52.8 | 5.6 | 8.7 | 10.2 | 33 49.31 | | 0.02 | 8.42 | 19 33 40.91 | 3.89 |
| | O. Arg. S. 19941 . . . | 35 | 15.3 | 16.9 | 19.8 | 33.2 | 34.8 | 36.7 | 38.5 | 40.2 | 53.0 | 56.5 | 58.2 | 39 36.70 | | 0.01 | 8.42 | 19 39 28.29 | 4.00 |
| | O. Arg. S. 20011 . . . | 36 | 58.6 | 0.2 | 3.0 | 16.6 | 18.4 | 20.3 | 22.2 | 23.8 | 37.6 | 40.5 | 42.5 | 51 20.34 | | 0.00 | 8.42 | 19 51 11.92 | 4.11 |
| | Lalande 33202, (1st*) . . . | 37 | 52.7 | 54.6 | 57.8 | . . . | . . . | . . . | . . . | . . . | 36.1 | 39.2 | 41.4 | 54 16.97 | | 0.27 | 8.42 | 19 54 8.82 | 2.82 |
| | Lalande 33202, (2d*) . . . | 38 | . . . | . . . | . . . | 13.0 | 14.9 | 17.0 | 19.1 | 21.1 | . . . | . . . | . . . | 54 17.02 | | 0.29 | 8.42 | 19 54 8.89 | 2.82 |
| | 64 Sagittarii . . . | 39 | 6.9 | 8.5 | 11.0 | 23.1 | 24.8 | 26.5 | 28.0 | 29.6 | 41.9 | 44.5 | 46.0 | 58 26.44 | | 0.06 | 8.42 | 19 58 18.08 | 3.60 |
| | O. Arg. S. 20299 . . . | 40 | 26.8 | 28.4 | 31.2 | 44.2 | 46.0 | 47.7 | 49.7 | 51.2 | 4.7 | 7.2 | 9.0 | 4 47.83 | | 0.02 | 8.42 | 20 4 39.43 | 3.98 |
| | *-13° 57' . . . | 41 | 26.5 | 28.0 | 30.3 | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | 9 28.27 | + | 17.83 | 8.42 | 20 9 37.68 | 3.67 |
| | *-33° 6' . . . | 42 | 12.2 | 13.8 | 16.9 | 31.1 | 33.0 | 35.0 | 37.0 | 38.5 | 53.0 | 55.9 | 57.9 | 13 34.94 | - | 0.01 | 8.42 | 20 13 26.51 | 4.32 |
| | Weisse (2) 641 . . . | 43 | 45.0 | 47.5 | 49.8 | 51.8 | 55.3 | . . . | 12.4 | 15.6 | 17.6 | 19.7 | 22.3 | 18 33.70 | + | 0.20 | 8.42 | 20 18 25.48 | 2.86 |
| | Weisse (2) 643 . . . | 44 | 12.6 | 14.5 | 17.9 | 33.0 | 35.0 | 37.2 | 39.2 | 41.3 | 56.5 | 59.8 | 1.8 | 18 37.16 | + | 0.29 | 8.42 | 20 18 29.03 | 2.86 |
| | Lacaille 8471 . . . | 45 | 52.4 | 54.3 | 57.7 | 13.8 | 15.9 | 18.1 | 20.4 | 22.4 | 38.4 | 41.5 | 43.9 | 25 18.07 | - | 0.05 | 8.42 | 20 25 9.60 | 4.80 |
| | ε Delphini . . . | 46 | 9.4 | 10.8 | 13.2 | 25.5 | 27.1 | 28.8 | 30.5 | 32.0 | 44.1 | 46.8 | 48.3 | 27 28.77 | + | 0.14 | 8.42 | 20 27 20.49 | 3.19 |
| | *+27° 21' . . . | 47 | . . . | . . . | . . . | 26.1 | 27.9 | 29.7 | 31.4 | 33.2 | 46.6 | 49.5 | 51.5 | 32 36.99 | | 7.07 | 8.42 | 20 32 21.50 | 2.98 |
| Sept. 20 | γ Aquilæ . . . | 48 | 8.8 | 10.3 | 12.7 | 25.0 | 26.5 | 28.1 | 29.9 | 31.4 | 43.5 | 46.1 | 47.8 | 41 28.19 | | 0.06 | 63.61 | 19 40 24.64 | 2.76 |
| a Aquilæ . . . | 49 | 31.0 | 32.5 | 35.1 | 47.1 | 48.5 | 50.4 | 52.1 | 53.5 | 5.5 | 8.0 | 9.7 | 45 50.39 | + | 0.05 | -63.61 | 19 44 46.83 | — 2.84 | |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|-----------------------------|--------------------|-----------------|--------|--------|
| 1876. h. s. Aug. 9, 18.9 | — 8.42 | + 0.003 | + 0.20 | + 0.10 |
| Sept. 20, 21.0 | — 63.65 | — 0.029 | + 0.02 | + 0.05 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | | |
|-------------------------|--------------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|---------|------|----------------|----------|---------------------------------|-------------------------|----------------------|-------------|------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | | |
| 1876. Sept. 20 Y. | β Aquilæ. | 1 | 0.5 | 2.0 | 4.5 | 15.5 | 18.0 | 19.7 | 21.4 | 23.0 | 34.9 | 37.5 | 39.1 | m. s. 50 19.74 | + | 0.05 | — 63.61 | h. m. s. 19 49 16.18 | — 2.89 | |
| | δ^3 Cygni | 2 | 35.7 | 37.3 | 40.5 | 55.3 | 57.0 | 59.3 | 1.1 | 3.2 | 18.1 | 21.2 | 23.0 | 10 59.25 | — | 0.08 | 63.63 | 20 9 55.70 | 2.38 | |
| | B. A. C. 6969 | 3 | 43.0 | 44.9 | 47.8 | 55.3 | 57.0 | 59.3 | 1.1 | 3.2 | 25.5 | 28.6 | 30.7 | 11 0.75 | — | 0.07 | 63.63 | 20 10 3.19 | 2.38 | |
| | Weisse (2) 641 | 4 | 40.1 | 42.5 | 44.5 | 46.5 | 55.3 | 57.0 | 59.3 | 1.1 | 10.5 | 12.5 | 14.6 | 17.2 | 19 28.55 | — | 0.00 | 63.63 | 20 18 24.92 | 2.38 |
| | Weisse (2) 643 | 5 | 7.5 | 9.5 | 12.6 | 27.9 | 29.8 | 31.8 | 34.0 | 35.9 | 51.4 | 54.7 | 56.6 | 19 31.97 | — | 0.08 | 63.63 | 20 18 28.42 | 2.38 | |
| | B. A. C. 7130 | 6 | 33.8 | 35.2 | 37.7 | 49.7 | 51.2 | 52.9 | 54.5 | 56.1 | 8.0 | 10.5 | 12.0 | 33 52.87 | + | 0.05 | 63.64 | 20 32 49.28 | 3.27 | |
| | γ Delphini, (1st *) . . | 7 | 20.8 | 22.7 | 24.4 | 26.1 | 28.9 | 31.2 | 33.9 | 35.4 | 37.3 | 39.3 | 42 | 0.00 | — | 0.02 | 63.64 | 20 40 56.34 | 2.94 | |
| | γ Delphini, (2d *) . . | 8 | 41.0 | 42.6 | 45.2 | 57.5 | 59.0 | 0.8 | 2.6 | 4.0 | 10.5 | 19.1 | 20.7 | 42 0.82 | + | 0.06 | 63.64 | 20 40 57.24 | 2.94 | |
| | δ^1 Vulpeculæ | 9 | 34.2 | 35.9 | 38.7 | 52.1 | 53.7 | 55.7 | 57.3 | 59.1 | 12.2 | 15.3 | 17.0 | 47 55.56 | + | 0.07 | 63.64 | 20 46 51.99 | 2.77 | |
| | B. A. C. 7259 | 10 | 18.6 | 21.8 | 24.4 | 39.7 | 43.1 | 45.2 | 47.5 | 50.3 | 50 | 36.32 | — | 38.57 | — | 0.05 | 63.65 | 20 48 54.10 | 2.45 | |
| | Weisse 1359 | 11 | 11.8 | 13.3 | 15.8 | 28.3 | 29.8 | 31.5 | 33.3 | 34.7 | 47.1 | 49.7 | 51.3 | 54 31.51 | + | 0.05 | 63.65 | 20 53 27.91 | 3.62 | |
| | *—32° 50' | 12 | 20.8 | 22.5 | 25.6 | 39.8 | 41.8 | 43.6 | 45.5 | 47.5 | 1.6 | 4.4 | 6.6 | 58 43.61 | — | 0.05 | 63.65 | 20 57 40.01 | 4.25 | |
| | *—12° 15' | 13 | 50.7 | 52.3 | 54.7 | 6.7 | 8.4 | 10.1 | 11.9 | 13.4 | 25.6 | 28.2 | 29.9 | 5 10.17 | — | 0.05 | 63.65 | 21 4 6.57 | 3.61 | |
| | *—12° 17' | 14 | 29.0 | 30.7 | 33.0 | 45.3 | 46.7 | 48.6 | 50.4 | 51.8 | 3.9 | 6.5 | 8.2 | 6 48.55 | — | 0.05 | 63.65 | 21 5 44.95 | 3.62 | |
| | B. A. C. 7378 | 15 | 25.0 | 26.4 | 29.0 | 41.9 | 43.6 | 45.4 | 47.0 | 48.7 | 1.4 | 4.0 | 5.8 | 10 45.29 | — | 0.05 | 63.65 | 21 9 41.69 | 3.86 | |
| | δ^1 Vulpeculæ | 16 | 13.8 | 15.3 | 18.2 | 31.0 | 32.8 | 34.7 | 36.3 | 38.0 | 50.9 | 53.7 | 55.6 | 16 34.57 | — | 0.06 | 63.66 | 21 15 30.97 | 2.96 | |
| | 2 Pegasi | 17 | 5.6 | 7.4 | 9.9 | 23.0 | 24.6 | 26.4 | 28.1 | 29.9 | 42.8 | 45.5 | 47.4 | 25 26.42 | — | 0.06 | 63.66 | 21 24 22.82 | 3.00 | |
| | 5 Pegasi | 18 | 43.7 | 45.3 | 47.9 | 0.6 | 2.2 | 4.0 | 5.6 | 7.4 | 19.9 | 22.5 | 24.2 | 33 3.94 | — | 0.06 | 63.66 | 21 32 0.34 | 3.10 | |
| | ϵ Pegasi | 19 | 53.2 | 54.7 | 57.3 | 9.5 | 11.0 | 12.6 | 14.2 | 15.7 | 27.8 | 30.4 | 32.1 | 39 12.59 | — | 0.05 | 63.67 | 21 38 8.97 | 3.27 | |
| | Weisse 1063 | 20 | 54.7 | 56.1 | 58.5 | 10.6 | 12.1 | 13.9 | 15.3 | 16.8 | 29.0 | 31.5 | 33.1 | 47 13.78 | — | 0.05 | 63.67 | 21 46 10.16 | 3.58 | |
| | Lacaille 8989 | 21 | 28.7 | 30.4 | 33.1 | 46.9 | 48.5 | 50.6 | 52.3 | 54.0 | 7.5 | 10.6 | 12.4 | 54 50.46 | — | 0.05 | 63.68 | 21 53 46.83 | 4.25 | |
| | ξ Cephei, (1st *) . . . | 22 | 9.8 | 13.3 | 17.0 | 21.2 | 24.5 | 28.1 | 31.9 | 35.7 | 39.5 | 43.3 | 47.1 | 1 17.16 | — | 0.18 | 63.68 | 22 0 13.66 | 2.72 | |
| | ξ Cephei, (2d *) . . . | 23 | 34.4 | 37.9 | 43.7 | 52.5 | 58.3 | 1.9 | 5.2 | 8.3 | 1.9 | 1 18.12 | — | 0.14 | 63.68 | 22 0 14.58 | 2.72 | | | |
| | 24 Cephei | 24 | 30.1 | 34.7 | 40.5 | 48.5 | 53.3 | 57.3 | 61.3 | 65.3 | 69.3 | 73.3 | 77.3 | 8 33.45 | — | 0.11 | 63.68 | 22 7 29.88 | 2.79 | |
| | 26 Cephei | 25 | 28.0 | 31.5 | 37.1 | 4.8 | 8.3 | 12.2 | 16.2 | 19.5 | 47.2 | 53.3 | 57.3 | 24 12.31 | — | 0.16 | 63.69 | 22 23 8.78 | 2.97 | |
| | ζ Pegasi | 26 | 4.3 | 5.8 | 8.3 | 20.5 | 22.0 | 23.7 | 25.3 | 26.9 | 39.0 | 41.6 | 43.2 | 36 23.69 | — | 0.06 | 63.70 | 22 35 20.05 | 3.44 | |
| | λ Aquarii | 27 | 56.7 | 58.2 | 0.7 | 12.8 | 14.3 | 16.0 | 17.7 | 19.3 | 31.4 | 33.9 | 35.6 | 47 16.05 | — | 0.05 | 63.70 | 22 46 12.40 | 3.75 | |
| | 26 μ Capricorni . . . | 28 | 18.8 | 20.4 | 22.9 | 35.4 | 36.9 | 38.7 | 40.4 | 42.0 | 54.4 | 56.9 | 58.7 | 47 38.68 | — | 0.04 | 62.96 | 21 46 35.76 | 3.76 | |
| | 79 Draconis | 29 | 18.6 | 23.8 | 32.5 | 13.6 | 18.8 | 25.1 | 30.4 | 35.4 | 16.8 | 25.6 | 30.8 | 52 24.67 | — | 0.20 | 62.96 | 21 51 21.91 | 2.26 | |
| | α Aquarii | 30 | 12.1 | 13.6 | 16.2 | 28.1 | 29.7 | 31.3 | 32.9 | 34.5 | 46.5 | 49.0 | 50.7 | 0 31.33 | — | 0.04 | 62.97 | 21 59 28.40 | 3.49 | |
| | *+71° 42' | 31 | 56.3 | 1.4 | 8.9 | 47.4 | 52.0 | 57.5 | 3.4 | 7.3 | 46.0 | 53.9 | 58.5 | 5 57.51 | — | 0.19 | 62.97 | 22 4 54.73 | 2.54 | |
| | B. A. C. 7772 | 32 | 57.6 | 59.1 | 1.6 | 13.5 | 15.2 | 16.8 | 18.5 | 19.9 | 31.9 | 34.3 | 36.0 | 11 16.76 | — | 0.04 | 62.98 | 22 10 13.82 | 3.55 | |
| | Lalande 43717 | 33 | 3.1 | 4.8 | 8.1 | 22.9 | 24.7 | 26.6 | 28.6 | 30.6 | 45.3 | 48.4 | 50.3 | 18 26.67 | — | 0.06 | 62.98 | 22 17 23.75 | 3.03 | |
| | 26 Cephei | 34 | 28.0 | 31.1 | 36.7 | 4.4 | 8.0 | 11.7 | 15.5 | 18.9 | 46.8 | 52.5 | 56.4 | 24 11.82 | — | 0.13 | 62.99 | 22 23 8.96 | 2.86 | |
| | B. A. C. 7861 | 35 | 21.8 | 23.5 | 26.0 | 38.0 | 39.5 | 41.2 | 42.9 | 44.4 | 56.7 | 58.9 | 0.9 | 28 41.25 | — | 0.04 | 62.99 | 22 27 38.30 | 3.75 | |
| | Piazzi 169 | 36 | 20.4 | 21.9 | 24.5 | 36.2 | 37.9 | 39.5 | 41.1 | 42.7 | 54.7 | 57.2 | 58.8 | 33 39.54 | — | 0.04 | 63.00 | 22 32 36.58 | 3.50 | |
| | Weisse 1017 | 37 | 6.4 | 8.0 | 10.4 | 22.8 | 24.3 | 26.1 | 27.7 | 29.0 | 41.4 | 43.9 | 45.6 | 51 25.96 | — | 0.04 | 63.01 | 22 50 22.99 | 3.80 | |
| | α Pegasi | 38 | 21.8 | 23.4 | 25.7 | 38.2 | 39.7 | 41.6 | 43.2 | 44.8 | 57.0 | 59.7 | 1.4 | 59 41.50 | — | 0.05 | 63.02 | 22 58 38.53 | 3.43 | |
| | O. Arg. S. 22712 . . . | 39 | 52.5 | 54.1 | 56.9 | 10.6 | 11.9 | 13.6 | 15.3 | 17.1 | 29.8 | 32.4 | 34.4 | 10 13.51 | + | 0.03 | 63.02 | 23 9 10.52 | 4.10 | |
| | *—6° 17' | 40 | 24.9 | 26.3 | 28.0 | 29.4 | 31.0 | 32.9 | 34.5 | 36.0 | 48.2 | 50.6 | 52.4 | 12 34.48 | — | 0.47 | 63.03 | 23 11 24.98 | 3.75 | |
| | *+66° 21' | 41 | 32.2 | 35.4 | 42.5 | 15.5 | 19.6 | 24.2 | 29.1 | 34.1 | 57.5 | 3.6 | 7.8 | 18 19.81 | + | 0.15 | 63.03 | 23 17 16.93 | 3.58 | |
| | *+66° 18' | 42 | 22.5 | 26.7 | 30.8 | 35.1 | 38.8 | 43.1 | 47.4 | 51.7 | 59.4 | 5.2 | 9.2 | 21 30.78 | — | 0.17 | 63.03 | 23 20 27.92 | 3.58 | |
| | 75 Pegasi | 43 | 27.6 | 29.1 | 31.8 | 44.3 | 45.9 | 47.7 | 49.5 | 51.0 | 3.5 | 6.4 | 8.1 | 32 47.72 | — | 0.05 | 63.04 | 23 31 44.73 | 3.49 | |
| | B. A. C. 8273 | 44 | 17.5 | 21.3 | 27.8 | 59.0 | 2.9 | 7.2 | 11.2 | 15.0 | 45.5 | 51.6 | 56.4 | 43 6.76 | — | 0.15 | 63.05 | 23 42 3.86 | 3.93 | |
| | O. Arg. S. 23156 . . . | 45 | 32.0 | 33.6 | 36.0 | 49.2 | 50.8 | 52.6 | 54.4 | 55.8 | 8.5 | 11.6 | 13.5 | 52 52.55 | — | 0.03 | 63.05 | 23 51 49.53 | 4.07 | |
| | B. A. C. 8355, (1st *) | 46 | 36.9 | 40.8 | 46.4 | 59.0 | 2.9 | 7.2 | 11.2 | 15.0 | 45.5 | 51.6 | 56.4 | 57 22.93 | — | 0.12 | 63.06 | 23 56 20.04 | 4.01 | |
| | B. A. C. 8355, (2d *) | 47 | 17.6 | 21.1 | 25.3 | 29.6 | 32.8 | 36.1 | 39.4 | 42.7 | 54.4 | 56.4 | 58.4 | 57 25.28 | — | 0.16 | 63.06 | 23 56 22.38 | 4.02 | |
| | B. A. C. 8374 | 48 | 55.7 | 57.3 | 0.2 | 13.8 | 15.5 | 17.5 | 19.4 | 21.0 | 34.4 | 37.3 | 39.1 | 1 17.38 | — | 0.06 | 63.06 | 0 0 14.38 | 3.53 | |
| | γ Pegasi | 49 | 37.9 | 39.5 | 41.9 | 54.5 | 56.1 | 57.8 | 59.4 | 0.9 | 13.2 | 15.7 | 17.6 | 7 57.68 | — | 0.05 | 63.07 | 0 6 54.66 | 3.58 | |
| | Polaris | 50 | 50.0 | 53.0 | 3.0 | 13.0 | 22.0 | 31.0 | 40.0 | 49.0 | 58.0 | 67.0 | 76.0 | 15 4.20 | — | 3.04 | 63.12 | 0 0 0.00 | 43.05 | |
| | η Piscium | 51 | 37.9 | 39.4 | 42.2 | 54.4 | 55.9 | 57.7 | 59.4 | 0.8 | 13.2 | 15.9 | 17.5 | 25 57.66 | + | 0.05 | — 63.13 | 1 24 54.58 | — 3.64 | |

CORRECTIONS, &c.

September 27. Image of.00. Clamp east.
Image west of.17. Clamp west.

| Date. | Error of clock. | Hourly rate. | n | c |
|--|--------------------------|--------------------------|------------------------|------------------------|
| 1876. h. Sept. 26, 23.3 27, 21.1 | s. — 63.03 — 26.12 | s. — 0.048 — 0.013 | s. + 0.02 — 0.13 | s. + 0.04 — 0.07 |

OBSERVATIONS WITH THE MERIDIAN TRANSIT INSTRUMENT.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. | | | |
|-------------------------|---------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|---------------|-------|-------|---------------------------------|-------------------------|-------------|---------|---------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | | Clock. | | |
| | | | | | | | | | | | | | | | m. | s. | | | | m. | s. |
| 1876. Sept. 27 Y. | Radcliffe 4208 | 1 | ... | ... | ... | 34.0 | 59.0 | 26.0 | 55.0 | 20.0 | ... | ... | ... | 55 | 26.80 | - | 3.13 | -26.09 | 18 54 57.58 | + 14.23 | |
| | ζ Aquilæ | 2 | 51.3 | 53.1 | 55.6 | 7.9 | 9.4 | 11.0 | 12.8 | 14.5 | 26.8 | 29.2 | 30.7 | 0 | 11.12 | | 0.10 | 26.09 | 18 59 44.93 | - 2.37 | |
| | ρ ² Sagittarii | 3 | 45.8 | 47.5 | 50.3 | 2.8 | 4.4 | 6.1 | 7.8 | 9.5 | 22.0 | 24.7 | 26.2 | 15 | 6.10 | | 0.03 | 26.10 | 19 14 39.97 | 3.16 | |
| | O. Arg. S. 19623 | 4 | 33.8 | 35.5 | 38.4 | 50.8 | 52.2 | 54.0 | 55.5 | 56.8 | 10.2 | 13.0 | 14.5 | 22 | 54.06 | | 0.03 | 26.10 | 19 22 27.93 | 3.23 | |
| | O. Arg. S. 19629 | 5 | ... | ... | ... | 32.1 | 34.6 | 36.4 | 47.9 | 50.7 | 52.2 | 54.0 | 56.2 | 23 | 45.51 | - | 29.51 | 26.10 | 19 22 49.90 | 3.24 | |
| | Lacaille 8158 | 6 | 7.3 | 9.1 | 12.9 | 28.9 | 31.3 | 33.1 | 35.2 | 37.4 | ... | ... | ... | 29 | 24.40 | + | 8.69 | 26.10 | 19 29 6.99 | 4.03 | |
| | *-23° 56' | 7 | 45.5 | 47.4 | 50.3 | 3.1 | 4.6 | 6.6 | 8.4 | 10.0 | 23.3 | 25.9 | 27.4 | 34 | 6.59 | - | 0.02 | 26.10 | 19 33 40.47 | 3.42 | |
| | O. Arg. S. 19941 | 8 | 32.4 | 34.3 | 37.0 | 50.5 | 52.0 | 53.8 | 55.7 | 57.3 | 11.0 | 13.7 | 15.4 | 40 | 53.92 | | 0.01 | 26.10 | 19 40 27.81 | - 3.55 | |
| | λ Ursæ Minoris | 9 | ... | ... | ... | 21.0 | 46.0 | 12.0 | 43.0 | 9.0 | ... | ... | ... | 48 | 14.20 | | 11.10 | 26.10 | ... | + 39.95 | |
| | *+34° 57' | 10 | ... | ... | ... | 34.1 | 36.0 | 38.0 | 40.0 | 41.9 | ... | ... | ... | 55 | 38.00 | | 0.19 | 26.10 | 19 55 11.71 | - 2.19 | |
| | *+34° 57' | 11 | 58.4 | 0.8 | 2.6 | 4.5 | 7.8 | ... | 21.2 | 24.3 | 26.2 | 28.5 | 30.8 | 55 | 44.51 | | 0.09 | 26.10 | 19 55 18.32 | 2.19 | |
| | *+34° 58' | 12 | 26.7 | 28.4 | 31.7 | 45.9 | 48.1 | 50.1 | 52.0 | 54.2 | 8.8 | 11.8 | 13.4 | 57 | 50.10 | | 0.18 | 26.11 | 19 57 23.81 | 2.20 | |
| | *-14° 5' | 13 | ... | ... | ... | 59.8 | 1.5 | 3.0 | 4.8 | 6.4 | 18.8 | 21.3 | 22.8 | 5 | 9.80 | | 6.72 | 26.11 | 20 4 36.97 | 3.32 | |
| | Weisse 81 | 14 | 1.1 | 2.8 | 5.4 | 17.6 | 19.2 | 20.9 | 22.5 | 24.1 | 36.5 | 39.1 | 40.6 | 6 | 20.89 | | 0.04 | 26.11 | 20 5 54.74 | 3.33 | |
| | 63 Cygni | 15 | ... | ... | ... | 17.8 | 19.7 | 21.8 | 23.8 | 25.9 | ... | ... | ... | 10 | 21.80 | | 0.19 | 26.11 | 20 9 55.50 | 2.23 | |
| | B. A. C. 6969 | 16 | 5.9 | 8.0 | 11.2 | ... | ... | ... | ... | ... | 48.5 | 51.7 | 53.5 | 10 | 29.80 | | 0.17 | 26.11 | 20 10 3.52 | 2.24 | |
| | *+64° 16' | 17 | 44.3 | 47.9 | 53.5 | 21.3 | 24.8 | 28.3 | 31.8 | 55.5 | 3.6 | 9.6 | 12.5 | 17 | 28.46 | - | 0.43 | 26.11 | 20 17 1.92 | 1.26 | |
| | Lacaille 8471 | 18 | 9.6 | 11.9 | 15.4 | 31.3 | 33.1 | 35.3 | 37.6 | 39.7 | 55.9 | 59.1 | 1.3 | 25 | 35.47 | + | 0.02 | 26.11 | 20 25 9.38 | 4.42 | |
| | η Delphini | 19 | 14.6 | 16.3 | 18.7 | 31.0 | 32.5 | 34.2 | 35.8 | 37.4 | 49.7 | 52.2 | 53.7 | 28 | 34.19 | - | 0.10 | 26.11 | 20 28 7.98 | 2.85 | |
| | *+27° 21' | 20 | 25.7 | 27.6 | 30.1 | 43.7 | 45.3 | 47.1 | 48.8 | 50.5 | 4.5 | 7.0 | 8.9 | 32 | 47.20 | | 0.15 | 26.11 | 20 32 20.94 | 2.57 | |
| | Weisse 1023 | 21 | 35.1 | 36.7 | 39.5 | 51.5 | 53.0 | 54.6 | 56.3 | 57.9 | 10.1 | 12.5 | 14.1 | 41 | 54.66 | | 0.05 | 26.11 | 20 41 28.50 | 3.40 | |
| | μ Aquarii | 22 | 8.0 | 9.6 | 12.0 | 24.2 | 25.8 | 27.4 | 29.0 | 30.6 | 42.8 | 45.2 | 46.7 | 46 | 27.39 | | 0.05 | 26.12 | 20 46 1.22 | 3.40 | |
| | B. A. C. 7255 | 23 | 37.9 | 39.6 | 42.3 | 54.2 | 55.7 | 57.3 | 58.9 | 0.8 | 12.6 | 15.0 | 16.6 | 49 | 57.35 | - | 0.08 | 26.12 | 20 49 31.15 | 3.12 | |
| | Lacaille 8638, (1st*) | 24 | 38.4 | 40.1 | 43.3 | 45.4 | 48.9 | ... | 11.8 | 15.4 | 17.6 | 19.8 | 22.6 | 54 | 30.33 | + | 0.13 | 26.12 | 20 54 4.34 | 4.66 | |
| | Lacaille 8638, (2d*) | 25 | 9.1 | 11.3 | 14.8 | 31.3 | 33.5 | 35.5 | 37.9 | 40.0 | 56.5 | 0.0 | 1.9 | 54 | 35.62 | + | 0.03 | 26.12 | 20 54 9.53 | 4.66 | |
| | *-32° 50' | 26 | 43.0 | 45.0 | 48.3 | 2.5 | 4.0 | 6.0 | 8.0 | 9.8 | 24.1 | 26.9 | 28.9 | 58 | 6.05 | | 0.00 | 26.12 | 20 57 39.93 | 4.16 | |
| | 2 Piscis Australis | 27 | 57.0 | 58.9 | 1.9 | 16.0 | 17.8 | 19.8 | 21.7 | 23.6 | 37.8 | 40.8 | 42.5 | 59 | 19.80 | | 0.00 | 26.12 | 20 58 53.68 | 4.17 | |
| | *-12° 15' | 28 | 13.2 | 14.7 | 17.4 | 29.2 | 30.9 | 32.9 | 34.7 | 36.1 | 48.5 | 50.9 | 52.5 | 4 | 32.82 | - | 0.04 | 26.12 | 21 4 6.66 | 3.54 | |
| | *-12° 17' | 29 | 51.5 | 53.2 | 55.8 | 8.0 | 9.5 | 11.1 | 12.9 | 14.5 | 26.6 | 29.3 | 30.9 | 6 | 11.21 | - | 0.04 | 26.12 | 21 5 45.05 | 3.55 | |
| | Lacaille 8760 | 30 | 5.0 | 7.0 | 10.3 | 25.7 | 27.6 | 29.8 | 31.8 | 33.8 | 49.6 | 52.7 | 54.6 | 10 | 29.81 | + | 0.02 | 26.12 | 21 10 3.71 | 4.51 | |
| | *+48° 48' | 31 | 1.4 | 3.8 | 7.8 | ... | ... | ... | ... | ... | 53.3 | 57.6 | 59.8 | 16 | 30.62 | - | 0.25 | 26.12 | 21 16 4.25 | 2.41 | |
| | *+48° 48' | 32 | 24.8 | 27.1 | 30.8 | ... | ... | ... | ... | ... | 17.1 | 20.9 | 23.3 | 16 | 54.00 | - | 0.25 | 26.12 | 21 16 27.63 | 2.41 | |
| | *-23° 46' | 33 | 56.8 | 58.6 | 1.6 | 14.4 | 15.9 | 18.1 | 19.9 | 21.4 | ... | ... | ... | 23 | 10.84 | + | 7.05 | 26.12 | 21 22 51.77 | 3.94 | |
| | *+38° 4' | 34 | 25.1 | 27.0 | 30.2 | 45.0 | 47.2 | 49.2 | 51.2 | 53.2 | 8.6 | 11.9 | 13.9 | 30 | 49.32 | - | 0.19 | 26.13 | 21 29 23.00 | 2.71 | |
| | Weisse (2) 816 | 35 | 39.8 | 42.2 | 45.5 | 1.7 | 3.7 | 6.0 | 8.2 | 10.1 | 26.5 | 29.8 | 31.9 | 34 | 5.95 | | 0.22 | 26.13 | 21 33 39.60 | 2.66 | |
| | ε Pegasi | 36 | 15.6 | 17.3 | 20.1 | 32.0 | 33.6 | 35.2 | 37.0 | 38.5 | 50.7 | 53.2 | 54.6 | 38 | 35.25 | - | 0.09 | 26.13 | 21 38 9.03 | 3.22 | |
| | Lacaille 8945 | 37 | 22.9 | 24.6 | 28.3 | 43.1 | 44.9 | 46.8 | 48.9 | 50.8 | 5.5 | 8.8 | 10.8 | 45 | 46.85 | + | 0.01 | 26.13 | 21 45 20.73 | 4.49 | |
| | Lacaille 8952 | 38 | ... | ... | ... | 41.9 | 45.0 | 46.8 | 0.3 | 3.6 | 5.5 | 7.5 | 10.0 | 47 | 57.57 | - | 34.58 | 26.13 | 21 46 56.86 | 4.49 | |
| | Weisse 1253 | 39 | 11.0 | 12.7 | 15.3 | ... | ... | ... | ... | ... | 46.2 | 48.9 | 50.5 | 55 | 30.77 | | 0.03 | 26.13 | 21 55 4.61 | 3.72 | |
| | Weisse 1255 | 40 | ... | ... | ... | 28.7 | 30.1 | 31.5 | 33.3 | 35.1 | ... | ... | ... | 55 | 31.75 | | 0.65 | 26.13 | 21 55 5.57 | 3.72 | |
| | a Aquarii | 41 | 35.4 | 36.9 | 39.5 | 51.4 | 52.8 | 54.5 | 56.2 | 57.8 | 9.5 | 12.1 | 13.6 | 59 | 54.52 | | 0.07 | 26.13 | 21 59 28.32 | 3.48 | |
| | θ Aquarii | 42 | 27.7 | 29.5 | 32.0 | 43.9 | 45.5 | 47.2 | 48.9 | 50.6 | 2.6 | 4.8 | 6.5 | 10 | 47.20 | | 0.05 | 26.14 | 22 10 21.01 | - 3.67 | |
| | δ Ursæ Minoris | 43 | ... | ... | ... | 37.5 | 2.0 | 30.0 | 59.0 | 24.0 | ... | ... | ... | ... | 12 | 30.50 | | 1.28 | 26.84 | ... | + 17.53 |
| | a Lyre | 44 | 48.2 | 50.4 | 53.7 | 8.7 | 10.7 | 13.0 | 15.0 | 17.0 | 32.3 | 35.6 | 37.5 | 33 | 12.95 | | 0.10 | 26.87 | 18 32 45.98 | - 1.60 | |
| | B. A. C. 6375 | 45 | ... | ... | ... | 19.2 | 29.8 | 36.1 | 26.8 | 39.0 | 46.0 | 53.8 | 1.6 | 38 | 16.54 | 2 | 8.06 | 26.88 | 18 35 41.60 | + 2.50 | |
| | β Lyre | 46 | 35.8 | 38.0 | 40.9 | 55.1 | 50.9 | 58.9 | 0.9 | 2.7 | 17.0 | 20.0 | 21.7 | 45 | 58.90 | | 0.09 | 26.89 | 18 45 31.92 | - 1.81 | |
| | B. A. C. 6469 | 47 | 8.0 | 14.2 | 23.0 | 6.3 | 11.9 | 17.6 | 23.4 | 29.5 | 12.7 | 21.4 | 26.7 | 49 | 17.70 | | 0.25 | 26.90 | 18 48 50.55 | + 1.20 | |
| | O. Arg. S. 19140 | 48 | 7.1 | 8.6 | 11.2 | 23.7 | 25.1 | 26.6 | 28.4 | 30.2 | 42.5 | 45.3 | 46.7 | 2 | 26.85 | | 0.09 | 26.91 | 19 1 59.85 | 2.99 | |
| | *-40° 2' | 49 | 49.4 | 51.7 | 54.9 | 10.4 | 12.4 | 14.7 | 16.7 | 18.7 | 34.4 | 37.4 | 39.4 | 29 | 14.56 | - | 0.11 | -26.96 | 19 28 47.49 | - 3.93 | |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|----------------------------|--------------------|-----------------|--------------|--------------|
| 1876. h. Sept. 28, 20.5 | s. - 27.05 | s. - 0.91 | s. + 0.01 | s. - 0.08 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. |
|-------------------------|-----------------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|---------------|--------------|--------|---------------------------------|-------------------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | |
| | | | | | | | | | | | | | | | | | | |
| 1876. Sept. 28 Y. | ϵ^1 Sagittarii | 1 | 27.8 | 30.0 | 31.6 | 33.3 | 36.1 | . . | 38.5 | 41.4 | 43.0 | 44.7 | 46.7 | m. s. | m. s. | s. | h. m. s. | s. |
| | O. Arg. S. 19857 | 2 | 49.6 | 51.1 | 53.9 | 6.3 | 7.7 | 9.3 | 11.1 | 12.9 | 25.3 | 27.8 | 29.4 | 34 7.31 | — | 0.01 | 19 33 40.34 | — 3.19 |
| | O. Arg. S. 19941 | 3 | 33.4 | 35.2 | 38.0 | 51.3 | 53.0 | 54.8 | 56.6 | 58.5 | 11.7 | 14.8 | 16.3 | 34 9.49 | 0.09 | 26.96 | 19 33 42.44 | 3.19 |
| | O. Arg. S. 19960 | 4 | 52.6 | 54.3 | 57.2 | 10.6 | 12.2 | 14.1 | 15.8 | 16.6 | . . | . . | . . | 39 54.87 | — | 0.09 | 19 39 27.81 | 3.52 |
| | O. Arg. S. 20002 | 5 | 29.6 | 31.6 | 34.1 | 47.9 | 49.4 | 51.0 | 52.9 | 54.8 | . . | . . | . . | 41 6.68 | + | 7.17 | 19 40 46.87 | 3.55 |
| | B. A. C. 6834 | 6 | 16.1 | 19.6 | 24.5 | 49.3 | 52.2 | 55.8 | 59.2 | 2.4 | 26.8 | 32.0 | 35.0 | 48 55.72 | — | 0.15 | 19 48 28.58 | 1.13 |
| | Weisse (2) 1729 | 7 | 18.6 | 20.7 | 24.0 | 39.2 | 40.9 | 43.4 | 45.7 | 47.5 | 2.9 | 6.0 | 7.8 | 53 43.34 | 0.10 | 26.99 | 19 53 16.25 | 2.05 |
| 64 | Sagittarii | 8 | 25.2 | 26.9 | 29.4 | 41.5 | 43.2 | 44.8 | 46.6 | 48.1 | 0.3 | 2.9 | 4.3 | 58 54.84 | 0.09 | 27.00 | 19 58 17.75 | 3.22 |
| | *—14° 2' | 9 | 44.4 | 46.2 | 48.8 | 1.0 | 2.5 | 4.2 | 5.8 | 7.4 | 20.0 | 22.5 | 24.0 | 5 4.25 | 0.09 | 27.01 | 20 4 37.15 | 3.30 |
| | Weisse 81 | 10 | 2.1 | 3.6 | 6.2 | 18.6 | 20.2 | 21.8 | 23.6 | 25.3 | 37.5 | 40.0 | 41.7 | 6 21.87 | 0.09 | 27.01 | 20 5 54.77 | 3.31 |
| | *—13° 57' | 11 | 45.0 | 46.6 | 48.9 | 1.0 | 2.5 | 3.9 | 5.3 | 7.0 | 20.3 | 22.5 | 24.4 | 10 4.31 | 0.09 | 27.02 | 20 9 37.20 | 3.33 |
| | *—33° 6' | 12 | 30.4 | 32.3 | 35.4 | 49.8 | 51.5 | 53.4 | 55.3 | 57.2 | 11.6 | 14.5 | 16.3 | 13 53.43 | 0.10 | 27.02 | 20 13 26.31 | 3.94 |
| | *—10° 57' | 13 | 3.7 | 5.4 | 8.2 | 20.9 | 22.5 | 24.1 | 26.0 | 27.7 | 40.4 | 43.0 | 44.5 | 20 24.22 | 0.09 | 27.03 | 20 19 57.10 | 3.54 |
| | Lacaille 8471 | 14 | 10.6 | 12.8 | 16.3 | 32.3 | 33.9 | 36.6 | 38.8 | 40.8 | 56.8 | 0.2 | 1.1 | 25 36.38 | 0.12 | 27.04 | 20 25 9.22 | 4.40 |
| η | Delphini | 15 | 15.2 | 17.0 | 19.5 | 31.7 | 33.3 | 35.0 | 36.6 | 38.2 | 50.5 | 53.0 | 54.5 | 28 34.95 | 0.08 | 27.05 | 20 28 7.82 | 2.83 |
| | B. A. C. 7130 | 16 | 57.2 | 58.8 | 1.4 | 13.3 | 14.8 | 16.4 | 18.0 | 19.6 | 31.6 | 34.0 | 35.6 | 33 16.43 | 0.08 | 27.05 | 20 32 49.30 | 3.17 |
| 52 | Cygni | 17 | 39.8 | 41.9 | 44.8 | 58.5 | 0.3 | 2.2 | 4.2 | 6.2 | 19.8 | 22.7 | 24.4 | 41 2.25 | 0.09 | 27.07 | 20 40 35.09 | 2.54 |
| μ | Aquarii | 18 | 8.9 | 10.6 | 13.1 | 25.1 | 26.5 | 28.4 | 30.0 | 31.5 | 43.8 | 46.3 | 47.8 | 46 28.36 | 0.08 | 27.07 | 20 46 1.21 | 3.39 |
| | B. A. C. 7259 | 19 | 54.5 | 56.8 | 0.1 | 16.9 | 18.9 | 21.1 | 23.5 | 25.7 | 42.2 | 45.8 | 47.9 | 49 21.22 | 0.10 | 27.08 | 20 48 54.04 | 2.30 |
| | B. A. C. 8638, (1st *) | 20 | 39.1 | 42.0 | 44.3 | 46.3 | 49.9 | . . | 12.6 | 16.4 | 18.5 | 20.7 | 23.0 | 54 31.28 | 0.02 | 27.09 | 20 54 4.17 | 4.64 |
| | B. A. C. 8638, (2d *) | 21 | 9.7 | 11.9 | 15.6 | 31.8 | 34.0 | 36.2 | 38.6 | 41.1 | 57.3 | 0.7 | 2.7 | 54 36.33 | 0.12 | 27.09 | 20 54 9.12 | 4.64 |
| η | Microscopii | 22 | 12.9 | 16.3 | 18.2 | . . | . . | . . | 33.0 | 36.5 | 38.4 | 40.7 | 43.2 | 59 29.90 | 37.39 | 27.10 | 20 58 25.41 | 4.57 |
| | *—12° 17' | 23 | 32.5 | 34.7 | 36.4 | 38.0 | 40.6 | . . | 42.1 | 44.5 | 46.5 | 48.3 | 50.0 | 6 11.39 | 0.01 | 27.10 | 21 5 44.28 | 3.54 |
| | *—12° 20' | 24 | 52.6 | 53.9 | 56.6 | 8.9 | 10.5 | 12.1 | 13.7 | 15.4 | 27.8 | 30.1 | 31.6 | 6 12.11 | 0.09 | 27.10 | 21 5 44.92 | 3.54 |
| | Lacaille 8760 | 25 | 5.9 | 8.1 | 11.5 | 26.8 | 28.8 | 30.8 | 33.0 | 34.9 | 50.6 | 53.7 | 55.6 | 10 30.88 | 0.11 | 27.11 | 21 10 3.66 | 4.49 |
| | *+48° 48' | 26 | 20.4 | 22.8 | 26.6 | 44.8 | 47.0 | 49.6 | 51.8 | 54.4 | 12.3 | 16.2 | 18.5 | 15 49.49 | 0.11 | 27.12 | 21 15 22.26 | 2.38 |
| | *—23° 46' | 27 | 57.9 | 59.6 | 2.3 | 15.6 | 17.0 | 18.7 | 20.6 | 22.4 | 35.5 | 38.3 | 40.2 | 23 18.92 | 0.09 | 27.13 | 21 22 51.70 | 3.92 |
| | *—23° 44' | 28 | 47.3 | 49.5 | 51.4 | . . | . . | . . | 1.9 | 5.7 | 7.4 | 9.3 | 11.8 | 24 0.54 | 30.41 | 27.13 | 21 23 3.00 | 3.92 |
| | *+38° 4' | 29 | 25.5 | 27.5 | 30.9 | 45.9 | 47.7 | 49.7 | 51.7 | 54.0 | 9.2 | 12.4 | 14.1 | 29 49.87 | 0.09 | 27.14 | 21 29 22.64 | 2.69 |
| | Weisse (2) 816 | 30 | 40.4 | 43.6 | 46.3 | 2.5 | 4.5 | 6.7 | 8.9 | 11.0 | 27.5 | 30.7 | 32.7 | 34 6.71 | 0.10 | 27.15 | 21 33 39.46 | 2.64 |
| | B. A. C. 7565 | 31 | 11.9 | 14.1 | 17.3 | 33.0 | 35.0 | 37.3 | 39.4 | 41.5 | 57.3 | 0.6 | 2.3 | 38 37.25 | 0.10 | 27.15 | 21 38 10.00 | 2.71 |
| | Lacaille 8945 | 32 | 24.0 | 26.0 | 29.0 | 44.0 | 45.9 | 48.0 | 50.1 | 52.0 | 7.0 | 10.0 | 11.7 | 45 47.97 | 0.09 | 27.16 | 21 45 20.72 | 4.48 |
| α | Aquarii | 33 | 36.4 | 38.0 | 40.5 | 52.5 | 54.0 | 55.7 | 57.2 | 58.7 | 10.8 | 13.3 | 14.8 | 59 55.63 | 0.08 | 27.19 | 21 59 28.36 | 3.48 |
| | *+36° 47' | 34 | 55.9 | 58.0 | 1.1 | 15.8 | 17.7 | 19.7 | 22.0 | 23.8 | 38.7 | 42.0 | 43.6 | 4 19.84 | 0.11 | 27.19 | 22 3 52.54 | 2.93 |
| 24 | Cephei | 35 | 54.0 | 59.4 | 7.3 | 45.0 | 49.8 | 55.4 | 1.0 | 5.7 | 42.9 | 51.5 | 56.3 | 7 55.30 | 0.22 | 27.20 | 22 7 27.88 | 2.51 |
| | *—35° 7' | 36 | 32.2 | 34.6 | 36.6 | 38.3 | 41.5 | . . | 55.0 | 58.3 | 1.1 | 2.1 | 4.3 | 15 18.40 | 0.02 | 27.21 | 22 14 51.17 | 4.47 |
| | *—35° 7' | 37 | 1.9 | 4.0 | 7.2 | 21.7 | 23.5 | 25.5 | 27.7 | 29.4 | 44.1 | 47.3 | 48.9 | 15 25.56 | 0.11 | 27.21 | 22 14 58.24 | 4.47 |
| | B. A. C. 7810, (1st *) | 38 | 46.6 | 50.7 | 57.0 | . . | . . | . . | . . | . . | 11.5 | 17.4 | 21.0 | 18 34.03 | 0.15 | 27.22 | 22 18 6.66 | 2.74 |
| | B. A. C. 7810, (2d *) | 39 | . . | . . | . . | 26.8 | 30.7 | 34.7 | 39.1 | 43.0 | . . | . . | . . | 18 34.86 | 0.20 | 27.22 | 22 18 7.44 | 2.74 |
| 26 | Cephei | 40 | 51.5 | 55.6 | 1.3 | 28.7 | 32.5 | 36.5 | 40.5 | 44.0 | 11.5 | 17.1 | 20.7 | 23 36.34 | 0.16 | 27.22 | 22 23 8.96 | 2.82 |
| η | Aquarii | 41 | 10.6 | 12.3 | 14.8 | 26.7 | 28.2 | 29.9 | 31.5 | 33.1 | 45.0 | 47.5 | 48.9 | 29 29.86 | — | 0.08 | 22 29 2.55 | 3.56 |
| 29 | ζ Cephei, S. P. | 42 | . . | . . | . . | 26.5 | 0.5 | 34.0 | 8.0 | 39.0 | . . | . . | . . | 42 33.60 | + | 4.33 | | 25.47 |
| | Aquila | 43 | 53.0 | 54.7 | 57.3 | 9.5 | 11.0 | 12.8 | 14.5 | 16.1 | 28.3 | 31.0 | 32.5 | 0 12.79 | — | 0.11 | 18 59 44.91 | 2.34 |
| | Lacaille 8041 | 44 | 22.4 | 24.5 | 27.6 | 42.6 | 44.5 | 46.5 | 48.6 | 50.7 | 5.6 | 8.7 | 10.5 | 7 46.56 | 0.01 | 27.77 | 19 7 18.78 | 3.63 |
| 1 | Vulpeculæ | 45 | 2.6 | 4.4 | 7.0 | 19.7 | 21.4 | 23.2 | 24.8 | 26.7 | 39.2 | 42.0 | 43.7 | 11 23.15 | 0.13 | 27.76 | 19 10 55.26 | 2.23 |
| | Lacaille 8090 | 46 | 47.4 | 49.5 | 52.5 | 6.8 | 8.7 | 10.8 | 12.9 | 14.7 | 29.4 | 32.4 | 34.3 | 16 10.85 | 0.18 | 27.76 | 19 15 42.91 | 3.62 |
| 50 | Sagittarii | 47 | 5.8 | 7.5 | 10.2 | 23.1 | 24.6 | 26.4 | 28.2 | 29.9 | 42.7 | 45.5 | 47.0 | 19 26.45 | 0.04 | 27.76 | 19 18 58.65 | 3.24 |
| | O. Arg. S. 19623 | 48 | 35.4 | 37.0 | 39.7 | 52.5 | 54.0 | 55.8 | 57.6 | 59.2 | 11.9 | 14.4 | 16.1 | 22 55.78 | 0.04 | 27.76 | 19 22 27.98 | 3.20 |
| | O. Arg. S. 19629 | 49 | 33.8 | 36.4 | 37.9 | . . | . . | . . | 49.5 | 52.4 | 53.9 | 55.6 | 57.7 | 23 47.15 | 29.50 | 27.76 | 19 22 49.87 | 3.20 |
| 9 | Vulpeculæ | 50 | 17.7 | 19.5 | 22.2 | 34.9 | 36.4 | 38.2 | 40.0 | 41.6 | 54.3 | 56.9 | 58.5 | 29 38.20 | — | 0.13 | 19 29 10.31 | — 2.36 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|----------------------------|--------------------|-----------------|--------------|--------------|
| 1876. h. Sept. 29, 20.5 | s. — 27.75 | s. + 0.011 | s. — 0.12 | s. — 0.08 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. |
|-------------------------|-----------------------|---------|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|-------|--------------|--------|---------------------------------|-------------------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | |
| | | | | | | | | | | | | | | | m. s. | m. s. | s. | h. m. s. | s. |
| 1876. Sept. 29 Y. | *-10° 20' . . . | 1 | . . . | . . . | . . . | 54.5 | 56.9 | 58.4 | 9.4 | 12.0 | 13.8 | 15.4 | 17.2 | 32 7.20 | - | 28.27 | -27 76 | 19 31 11.17 | - 3.02 |
| | *+36° 45' . . . | 2 | 51.8 | 54.0 | 57.2 | . . . | . . . | . . . | . . . | . . . | 34.7 | 37.7 | 39.7 | 35 15.85 | | 0.18 | 27.76 | 19 34 47.91 | 1.97 |
| | *+36° 45' . . . | 3 | 12.8 | 14.8 | 17.9 | . . . | . . . | . . . | . . . | . . . | 55.6 | 58.6 | 0.5 | 35 36.70 | | 0.18 | 27.76 | 19 35 8.76 | 1.97 |
| | Aquila. . . . | 4 | 32.8 | 34.5 | 37.0 | 49.0 | 50.8 | 52.3 | 54.0 | 55.6 | 7.7 | 10.1 | 11.7 | 40 52.32 | | 0.10 | 27.76 | 19 40 24.46 | 2.62 |
| | λ Ursæ Minoris. . . | 5 | . . . | . . . | . . . | 24.0 | 43.0 | 11.0 | 43.0 | 4.0 | . . . | . . . | . . . | 48 13.00 | | 10.96 | 27.76 | . . . | + 42.63 |
| | Lacaille 8359 . . . | 6 | 36.3 | 38.5 | 41.6 | 55.9 | 57.6 | 59 8 | 1.9 | 3.8 | 17.9 | 21.1 | 22.9 | 1 59.75 | | 0.02 | 27.75 | 20 1 31.98 | - 3.90 |
| | O. Arg. S. 20299 . . | 7 | 45.7 | 47.5 | 50.6 | 3.5 | 5.3 | 7.2 | 9.0 | 10.5 | 23.8 | 26.2 | 28.0 | 5 7.03 | | 0.03 | 27.75 | 20 4 39.25 | 3.58 |
| | *-13° 57' . . . | 8 | . . . | . . . | . . . | 2.0 | 3.6 | 5.2 | 6.8 | 8.7 | . . . | . . . | . . . | 10 5.26 | | 0.06 | 27.75 | 20 9 37.45 | 3.31 |
| | *-33° 6' . . . | 9 | 31.1 | 33.0 | 36.0 | 50.3 | 51.9 | 54.0 | 56.0 | 57.8 | 12.1 | 15.0 | 16.9 | 13 54.01 | | 0.02 | 27.75 | 20 13 26.24 | 3.92 |
| | *-19° 57' . . . | 10 | 4.5 | 6.1 | 8.9 | 21.6 | 23.2 | 24.9 | 26.6 | 28.3 | 41.0 | 43.1 | 45.2 | 20 24.91 | | 0.04 | 27.75 | 20 19 57.12 | 3.53 |
| 52 | B. A. C. 7080 . . . | 11 | 48.3 | 49.9 | 52.6 | 4.6 | 6.1 | 7.8 | 9.5 | 11.0 | 23.2 | 25.7 | 27.2 | 26 7.81 | | 0.06 | 27.75 | 20 25 40.00 | 3 30 |
| | B. A. C. 7167 . . . | 12 | 27.5 | 29.6 | 32.7 | 18.0 | 49.9 | 51.9 | 54.1 | 56.3 | 11.4 | 14.5 | 16.6 | 37 52.04 | | 0.20 | 27.75 | 20 37 24.09 | 2.32 |
| | Cygni | 13 | 40.6 | 42.6 | 45.5 | 59.4 | 1.0 | 2.8 | 4.8 | 6.5 | 20.5 | 23.3 | 24.9 | 41 2.90 | | 0.16 | 27.75 | 20 40 34.99 | 2.52 |
| | *-21° 35' . . . | 14 | 30.2 | 32.0 | 34.8 | 47.5 | 49.1 | 50.9 | 52.6 | 54.2 | 7.2 | 9.8 | 11.4 | 44 50.88 | | 0.04 | 27.75 | 20 44 23.09 | 3.69 |
| | 31 Vulpeculæ. . . | 15 | 57.9 | 59.8 | 2.7 | 16.0 | 17.6 | 19.5 | 21.3 | 23.1 | 36.4 | 39.2 | 40.9 | 47 19.49 | | 0.15 | 27.75 | 20 46 51.59 | 2.63 |
| | B. A. C. 7255. (1st*) | 16 | . . . | 14.1 | 16.5 | 18.1 | . . . | . . . | 29.0 | 31.5 | 33.1 | 34.8 | 36.7 | 50 26.72 | - | 27.92 | 27.75 | 20 49 31.05 | 3.09 |
| | B. A. C. 7255. (2d*) | 17 | 39.8 | 41.4 | 43.8 | 55.8 | 57.4 | 59.0 | 0.8 | 2.3 | . . . | . . . | . . . | 49 52.54 | + | 6.40 | 27.75 | 20 49 31.19 | 3.09 |
| | Weisse 1359 . . . | 18 | 29.7 | 31.5 | 34.0 | 46.3 | 47.9 | 49.5 | 51.2 | 52.9 | 5.2 | 7.6 | 9.2 | 54 49.55 | - | 0.05 | 27.75 | 20 54 21.75 | 3.52 |
| | η Microscopii . . . | 19 | 27.7 | 29.7 | 32.9 | 19.0 | 51.0 | 53.1 | 55.4 | 57.7 | 13.7 | 17.2 | 19.0 | 58 53.31 | | 0.00 | 27.75 | 20 58 25.56 | 4.56 |
| | *-12° 20' . . . | 20 | 33.4 | 35.4 | 37.0 | 38.8 | 41.3 | . . . | 42.9 | 45.7 | 47.2 | 48.8 | 50.8 | 6 12.13 | + | 0.01 | 27.74 | 21 5 44.40 | 3.53 |
| 7 | *-12° 17' . . . | 21 | 53.1 | 54.8 | 57.3 | 9.6 | 11.1 | 12.8 | 14.4 | 16.0 | 28.4 | 30.8 | 32.4 | 6 12.79 | - | 0.06 | 27.74 | 21 5 44.99 | 3 53 |
| | Cygni | 22 | 56.6 | 58.6 | 1.7 | 16.8 | 18.7 | 20.8 | 22.9 | 24.9 | 39.8 | 43.1 | 44.8 | 10 20.79 | | 0.19 | 27.74 | 21 9 52.86 | 2.56 |
| | 1 Pegasi | 23 | 31.5 | 33.2 | 36.1 | 48.6 | 50.2 | 52.0 | 53.6 | 55.3 | 7.9 | 10.6 | 12.1 | 16 51.92 | | 0.13 | 27.74 | 21 16 24.05 | 2.94 |
| | 2 Pegasi | 24 | 29.6 | 31.4 | 34.3 | 47.0 | 48.8 | 50.5 | 52.3 | 54.0 | 7.0 | 9.7 | 11.3 | 24 50.63 | | 0.14 | 27.74 | 21 24 22.65 | 2.90 |
| | B. A. C. 7509 . . . | 25 | 10.3 | 16.8 | 27.0 | 15.7 | 21.8 | 28.9 | 35.8 | 41.6 | 31.0 | 41.2 | 47.2 | 29 28.85 | | 0.80 | 27.74 | 21 29 0.31 | 1.46 |
| | B. A. C. 7565 . . . | 26 | 12.5 | 14.9 | 18.1 | 33.8 | 35.9 | 38.0 | 40.3 | 42.3 | 58.0 | 1.2 | 3.2 | 38 38.02 | | 0.21 | 27.74 | 21 38 10.07 | 2.69 |
| | B. A. C. 7584 . . . | 27 | 28.8 | 30.6 | 33.5 | 46.6 | 48.2 | 50.0 | 51.9 | 53.5 | 6.8 | 9.6 | 11.1 | 40 50.05 | | 0.14 | 27.74 | 21 40 22.17 | 2.95 |
| | B. A. C. 7586 . . . | 28 | . . . | 32.7 | 35.5 | 37.1 | . . . | . . . | 49.0 | 52.0 | 53.7 | 55.5 | 57.7 | 41 46.67 | | 30.76 | 27 74 | 21 40 48.17 | 2.96 |
| | Weisse 1063 . . . | 29 | 18.7 | 20.2 | 23.0 | . . . | . . . | . . . | . . . | . . . | 53.3 | 55.8 | 57.4 | 46 38.07 | | 0.06 | 27.74 | 21 46 10.27 | 3.54 |
| | Lacaille 8989 . . . | 30 | 52.6 | 54.3 | 57.3 | 11.0 | 12.7 | 14.6 | 16.5 | 18.2 | 31.8 | 34.7 | 36.4 | 54 14.55 | | 0.02 | 27.73 | 21 53 46.80 | 4.18 |
| a | Aquarii | 31 | 37.0 | 38.6 | 41.1 | 53.0 | 54.5 | 56.2 | 57.8 | 59.4 | 11.3 | 13.8 | 15.4 | 59 56.19 | | 0.08 | 27.73 | 21 59 28.38 | 3.47 |
| | *+36° 47' . . . | 32 | . . . | . . . | . . . | 16.5 | 18.4 | 20.3 | 22.5 | 24.3 | 39.4 | 42.5 | 44.3 | 4 28.52 | | 8.28 | 27.73 | 22 3 52.51 | 2.91 |
| | 24 Cephei | 33 | 54.8 | 1.4 | 6.2 | 45.7 | 50.4 | 55.8 | 0.0 | 8.0 | 44.3 | 51.8 | 56.8 | 7 55.93 | | 0.62 | 27.73 | 22 7 27.58 | 2.47 |
| | γ Lyrae | 34 | 49.8 | 52.1 | 55.2 | 10.4 | 12.4 | 14.5 | 16.6 | 18.7 | 33.8 | 37.1 | 39.0 | 33 14.51 | - | 0.23 | 28.43 | 18 32 45.85 | 1.50 |
| | 51 Cephei, S. P. . . | 35 | . . . | . . . | . . . | 28.0 | 0.5 | 36.0 | 10.0 | 40.0 | . . . | . . . | . . . | 42 34.90 | + | 5.26 | 28.46 | . . . | 26.97 |
| | B. A. C. 6469 . . . | 36 | 10.1 | 15.8 | 24.7 | 8.1 | 13.4 | 19.6 | 25.5 | 31.0 | 14.4 | 23.0 | 28.3 | 49 19.45 | - | 0.84 | 28.48 | 18 48 50.13 | 1.55 |
| | ζ Aquilæ | 37 | 53.8 | 55.5 | 58.2 | 10.4 | 11.8 | 13.6 | 15.2 | 16.8 | 29.2 | 31.8 | 33.2 | 0 13.59 | - | 0.12 | 28.50 | 19 0 44.97 | 2.28 |
| | Lacaille 8041 . . . | 38 | 23.1 | 25.3 | 28.4 | 43.3 | 45.2 | 47.3 | 49.3 | 51.4 | 6.3 | 9.3 | 11.3 | 7 47.29 | + | 0.02 | 28.53 | 19 7 18.78 | 3.57 |
| | 1 Vulpeculæ . . . | 39 | 3.4 | 5.0 | 7.7 | 20.6 | 22.3 | 24.0 | 25.6 | 27.4 | 40.3 | 42.9 | 44.5 | 11 23.97 | - | 0.15 | 28.55 | 19 10 55.27 | 2.17 |
| | Lacaille 8090 . . . | 40 | 47.9 | 50.1 | 53.3 | 7.7 | 9.6 | 11.6 | 13.5 | 15.5 | 30.2 | 33.2 | 35.0 | 16 11.60 | + | 0.02 | 28.56 | 19 15 43.06 | 3.57 |
| β | O. Arg. S. 19600 . . | 41 | 45.2 | 47.0 | 49.6 | 3.2 | 4.8 | 6.6 | 8.4 | 10.1 | 23.4 | 26.3 | 28.0 | 22 6.00 | - | 0.01 | 28.58 | 19 21 38.01 | 3.32 |
| | B. A. C. 6711 . . . | 42 | 23.3 | 25.3 | 28.6 | 43.8 | 45.7 | 47.7 | 49.8 | 51.9 | 7.0 | 10.3 | 12.2 | 29 47.78 | | 0.23 | 28.60 | 19 29 18.95 | 1.82 |
| | *+36° 45' . . . | 43 | 52.9 | 55.0 | 58.0 | . . . | . . . | . . . | . . . | . . . | 35.8 | 38.9 | 40.8 | 35 16.90 | | 0.21 | 28.61 | 19 34 48.08 | 1.90 |
| | *+36° 45' . . . | 44 | 13.7 | 15.9 | 18.9 | . . . | . . . | . . . | . . . | . . . | 56.8 | 59.9 | 1.7 | 35 37.82 | - | 0.21 | 28.61 | 19 35 9.00 | 1.90 |
| | O. Arg. S. 19960 . . | 45 | 54.3 | 56.0 | 58.6 | 12.1 | 13.8 | 15.7 | 17.4 | 19.2 | . . . | . . . | . . . | 41 8.39 | + | 7.25 | 28.63 | 19 40 47.01 | 3.47 |
| | Lalande 37785 . . . | 46 | 13.4 | 15.5 | 18.4 | 33.1 | 35.0 | 37.0 | 39.0 | 40.8 | 55.3 | 58.5 | 0.1 | 44 36.92 | - | 0.21 | 28.63 | 19 44 8.08 | 2.01 |
| | Aquilæ | 47 | 25.3 | 26.9 | 29.6 | 41.4 | 43.0 | 44.6 | 46.0 | 47.8 | 59.9 | 2.5 | 3.9 | 49 44.63 | | 0.07 | 28.65 | 19 49 15.91 | 2.70 |
| | Lalande 38175 . . . | 48 | . . . | . . . | . . . | 50.4 | 52.4 | 54.6 | 56.8 | 58.6 | . . . | . . . | . . . | 53 54.56 | | 0.24 | 28.66 | 19 53 25.66 | 1.99 |
| | Lalande 38202 . . . | 49 | 12.4 | 14.5 | 17.7 | 32.7 | 34.6 | 36.8 | 38.8 | 40.8 | 55.7 | 59.1 | 0.9 | 54 36.73 | | 0.23 | 28.66 | 19 54 7.84 | 2.00 |
| | *+34° 58' . . . | 50 | . . . | . . . | . . . | 48.5 | 50.5 | 52.6 | 54.6 | 56.4 | 11.0 | 14.1 | 16.0 | 58 0.46 | - | 8.12 | -28.67 | 19 57 23.67 | - 2.09 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------------------|--------------------|-----------------|--------------|--------------|
| 1876. h. Oct. 2, 19.4 | s. - 28.58 | s. - 0.167 | s. - 0.16 | s. - 0.08 |

13. Saw the companion.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | |
|-------------------------|--------------------------------|---------|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------------|-----------------|---------------------------------|-------------------------|--------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. |
| 1876. Oct. 2 Y. | Lacaille 8351 . . . | 1 | 37.2 | 39.2 | 42.3 | 56.7 | 58.4 | 0.4 | 2.4 | 4.2 | 18.7 | 21.7 | 23.4 | m. s. 2 0.42 | m. s. + 0.01 | s. -28.68 | h. m. s. 20 1 31.75 | s. - 3.84 |
| | Lalande 38708 . . . | 2 | 28.9 | 31.1 | 34.4 | 49.6 | 51.6 | 54.0 | 56.0 | 57.8 | 13.0 | 16.1 | 18.2 | 5 53.70 | - 0.23 | 28.69 | 20 5 24.78 | 2.04 |
| | a ² Capricorni. . . | 3 | 22.6 | 24.4 | 26.8 | 39.2 | 40.8 | 42.4 | 44.1 | 45.7 | 58.1 | 0.5 | 2.0 | 11 42.42 | 0.01 | 28.71 | 20 11 13.67 | 3.25 |
| 3 | 1 Aquilæ . . . | 4 | 40.0 | 41.7 | 44.1 | 56.3 | 57.8 | 59.4 | 1.1 | 2.7 | 14.8 | 17.3 | 18.7 | 28 59.45 | 0.07 | 29.25 | 18 28 30.13 | 2.56 |
| a | Lyre . . . | 5 | 50.5 | 52.6 | 55.9 | 11.0 | 13.0 | 14.9 | 17.2 | 19.2 | 34.4 | 37.7 | 39.6 | 33 15.09 | - 0.15 | 29.25 | 18 32 45.69 | 1.47 |
| 51 | Cephei, S. P. . . | 6 | . . . | . . . | . . . | 31.0 | 4.0 | 39.0 | 14.0 | 44.0 | . . . | . . . | . . . | 42 38.40 | + 2.98 | 29.25 | . . . | 27.47 |
| | *+73° 5' . . . | 7 | . . . | . . . | . . . | 59.9 | 5.2 | 11.6 | 17.2 | 23.2 | . . . | . . . | . . . | 48 11.42 | - 0.50 | 29.26 | 18 47 41.66 | 1.43 |
| ζ | Aquilæ . . . | 8 | 54.5 | 56.2 | 58.7 | 11.0 | 12.7 | 14.3 | 16.0 | 17.5 | 29.9 | 32.4 | 34.0 | 0 14.29 | 0.08 | 29.26 | 18 59 44.95 | 2.26 |
| | Lalande 36002 . . . | 9 | 29.4 | 31.2 | 34.6 | 49.7 | 51.5 | 53.8 | 55.9 | 57.9 | 13.0 | 16.2 | 18.1 | 4 53.75 | 0.15 | 29.26 | 19 4 24.34 | 1.64 |
| | Lalande 36238 . . . | 10 | 34.5 | 36.6 | 39.7 | 54.3 | 56.4 | 58.5 | 0.4 | 2.4 | 17.2 | 20.3 | 22.0 | 9 58.39 | 0.14 | 29.26 | 19 9 28.99 | 1.74 |
| | B. A. C. 6604 . . . | 11 | 20.6 | 22.3 | 25.1 | 38.0 | 39.7 | 41.6 | 43.3 | 45.1 | 58.1 | 0.9 | 2.6 | 13 41.57 | 0.06 | 29.26 | 19 13 12.25 | 3.20 |
| | Lalande 36557 . . . | 12 | 2.4 | 4.0 | 6.9 | 19.2 | 20.8 | 22.5 | 24.1 | 25.7 | 38.2 | 40.7 | 42.3 | 18 22.44 | 0.07 | 29.26 | 19 17 53.11 | 2.99 |
| | *+38° 56' . . . | 13 | 1.9 | 4.3 | 6.5 | 8.6 | 11.8 | . . . | 29.3 | 32.8 | 34.6 | 36.7 | 39.2 | 30 50.57 | 0.06 | 29.26 | 19 30 21.25 | 1.78 |
| | *+38° 58' . . . | 14 | 28.4 | 30.5 | 33.7 | 49.1 | 51.0 | 53.8 | 55.2 | 57.3 | 12.9 | 15.9 | 17.8 | 30 53.17 | 0.15 | 29.26 | 19 30 23.76 | 1.78 |
| | O. Arg. S. 19863 . . . | 15 | 17.9 | 19.5 | 21.8 | 34.9 | 36.7 | 38.6 | 40.3 | 42.0 | 55.2 | 57.7 | 59.0 | 34 38.51 | 0.06 | 29.26 | 19 34 9.19 | 3.40 |
| | O. Arg. S. 19960 . . . | 16 | 54.9 | 56.4 | 57.2 | 12.8 | 14.4 | 16.4 | 18.2 | 19.7 | 23.5 | 26.1 | 27.8 | 41 16.31 | 0.06 | 29.26 | 19 40 46.99 | 3.45 |
| | *-10° 19' . . . | 17 | . . . | 36.4 | 39.0 | 51.2 | 52.7 | 54.4 | 56.0 | 57.6 | 9.8 | 12.2 | . . . | 43 54.37 | 0.05 | 29.26 | 19 43 25.06 | 3.03 |
| | O. Arg. S. 20011 . . . | 18 | 19.0 | 20.7 | 23.5 | 37.3 | 39.0 | 40.9 | 42.7 | 44.4 | 58.2 | 1.0 | 2.8 | 51 40.86 | 0.06 | 29.26 | 19 51 11.54 | 3.58 |
| | *-22° 27' . . . | 19 | 30.0 | 31.5 | 34.2 | 47.3 | 49.0 | 50.7 | 52.5 | 54.2 | 7.0 | 9.8 | 11.5 | 54 50.71 | - 0.06 | 29.26 | 19 54 21.39 | 3.40 |
| | *+34° 58' . . . | 20 | 29.8 | 31.8 | 34.9 | 49.2 | 51.4 | 53.3 | 56.3 | 57.3 | . . . | . . . | . . . | 57 45.50 | + 7.76 | 29.26 | 19 57 24.00 | 2.07 |
| | *+34° 57' . . . | 21 | . . . | . . . | . . . | 10.6 | 12.6 | 14.5 | 16.7 | 18.5 | 33.0 | 36.2 | 38.0 | 58 22.51 | - 8.04 | 29.26 | 19 57 45.21 | 2.07 |
| 64 | Aquilæ . . . | 22 | 50.6 | 52.3 | 54.9 | 6.7 | 8.3 | 9.9 | 11.6 | 13.0 | 25.0 | 27.5 | 29.0 | 2 9.89 | 0.08 | 29.26 | 20 1 40.55 | 2.91 |
| | Lalande 38708 . . . | 23 | 29.7 | 31.8 | 35.2 | 50.3 | 52.2 | 54.3 | 56.4 | 57.4 | 13.8 | 16.9 | 18.8 | 5 54.25 | 0.15 | 29.26 | 20 5 21.84 | 2.62 |
| 33 | Cygni . . . | 24 | 27.5 | 30.5 | 34.9 | 56.2 | 58.9 | 1.8 | 4.8 | 7.5 | 29.0 | 33.4 | 36.1 | 11 1.87 | 0.25 | 29.26 | 20 10 32.36 | 1.41 |
| | B. A. C. 7023 . . . | 25 | 31.4 | 33.1 | 35.6 | 47.9 | 49.4 | 51.0 | 52.7 | 54.4 | 6.4 | 9.0 | 10.5 | 18 51.04 | 0.07 | 29.26 | 20 18 21.71 | 3.25 |
| | B. A. C. 7076 . . . | 26 | 43.6 | 46.0 | 49.7 | 7.9 | 10.0 | 12.5 | 15.0 | 17.3 | 35.5 | 39.2 | 41.3 | 25 12.55 | 0.19 | 29.26 | 20 24 43.10 | 1.85 |
| | B. A. C. 7130 . . . | 27 | 59.3 | 0.9 | 2.6 | 15.5 | 17.0 | 18.7 | 20.2 | 21.7 | 33.8 | 36.1 | 37.7 | 33 18.50 | 0.08 | 29.26 | 20 32 49.16 | 3.11 |
| | B. A. C. 7172 . . . | 28 | 55.5 | 57.3 | 59.7 | 11.6 | 13.1 | 14.7 | 16.4 | 17.9 | 29.9 | 32.5 | 33.8 | 38 14.76 | 0.08 | 29.26 | 20 37 45.42 | 3.17 |
| | Weisse 1023 . . . | 29 | 38.3 | 40.0 | 42.5 | 54.6 | 56.1 | 57.9 | 59.5 | 1.0 | 13.1 | 15.7 | 17.1 | 41 57.80 | - 0.07 | 29.26 | 20 41 28.47 | 3.32 |
| | *+37° 56' . . . | 30 | 1.2 | 2.6 | 5.7 | 7.4 | 11.1 | . . . | 27.3 | 30.0 | 32.4 | . . . | . . . | 47 37.21 | + 11.61 | 29.26 | 20 47 19.56 | 2.32 |
| | *+37° 56' . . . | 31 | 26.4 | 28.4 | 31.5 | 47.0 | 48.6 | 50.8 | 52.8 | 54.6 | 9.7 | 13.1 | 14.9 | 47 50.71 | 0.15 | 29.26 | 20 47 21.30 | 2.32 |
| | *-13° 58' . . . | 32 | 4.7 | 6.4 | 9.0 | 21.4 | 22.9 | 24.6 | 26.3 | 27.8 | 40.0 | 42.8 | 44.3 | 55 24.56 | 0.07 | 29.26 | 20 54 55.23 | 3.48 |
| η | Microscopii . . . | 33 | 28.9 | 31.0 | 34.6 | 50.3 | 52.4 | 54.7 | 56.9 | 59.0 | 15.0 | 18.4 | 20.3 | 58 54.68 | + 0.05 | 29.26 | 20 58 25.37 | 4.49 |
| | Weisse (2) 137 . . . | 34 | 53.1 | 54.9 | 57.5 | 10.3 | 11.8 | 13.6 | 15.3 | 17.0 | 29.8 | 32.3 | 34.0 | 8 13.51 | - 0.11 | 29.26 | 21 7 44.14 | 2.82 |
| 34 | Vulpeculæ . . . | 35 | 39.1 | 41.0 | 43.7 | 56.6 | 58.4 | 0.0 | 1.8 | 3.6 | 16.6 | 19.3 | 20.9 | 16 0.09 | 0.11 | 29.26 | 21 15 30.72 | 2.80 |
| | B. A. C. 7437 . . . | 36 | 34.7 | 36.5 | 39.2 | 52.4 | 54.0 | 55.8 | 57.5 | 59.2 | 12.3 | 15.0 | 16.5 | 18 55.74 | - 0.11 | 29.26 | 21 18 26.37 | 2.81 |
| | *-23° 42' . . . | 37 | 0.1 | 1.7 | 4.5 | 17.5 | 19.0 | 20.8 | 22.8 | 24.5 | . . . | . . . | . . . | 23 13.86 | + 7.01 | 29.26 | 21 22 51.61 | 3.86 |
| ε | Pegasi . . . | 38 | 18.8 | 20.3 | 22.9 | 35.0 | 36.6 | 38.3 | 39.8 | 41.4 | 53.6 | 56.0 | 57.6 | 38 38.21 | - 0.09 | 29.26 | 21 38 8.86 | 3.16 |
| | *-24° 14' . . . | 39 | 5.0 | 6.7 | 9.6 | 22.6 | 24.3 | 25.9 | 27.8 | 29.6 | 42.6 | 45.2 | 47.0 | 42 26.03 | 0.06 | 29.26 | 21 41 56.71 | 3.95 |
| | Weisse (2) 1100 . . . | 40 | 53.0 | 55.2 | 58.3 | 13.6 | 15.6 | 17.9 | 19.9 | 21.9 | 37.0 | 40.6 | 42.5 | 46 17.77 | 0.15 | 29.26 | 21 45 48.36 | 2.71 |
| | Weisse (2) 1102 . . . | 41 | . . . | 48.6 | 51.9 | 53.7 | . . . | . . . | 8.0 | 11.3 | 13.3 | 15.4 | 18.0 | 47 5.02 | - 35.84 | 29.26 | 21 45 59.92 | 2.71 |
| | *-21° 22' . . . | 42 | . . . | . . . | . . . | 10.2 | 11.8 | 13.8 | 15.6 | 17.2 | . . . | . . . | . . . | 50 13.72 | + 0.06 | 29.26 | 21 49 44.39 | 3.89 |
| | Lacaille 9008 . . . | 43 | 48.3 | 50.2 | 53.0 | 6.4 | 8.3 | 10.1 | 11.9 | 13.7 | 27.1 | 30.3 | 32.0 | 56 10.12 | - 0.06 | 29.26 | 21 55 40.80 | 4.11 |
| | B. A. C. 7732 . . . | 44 | 43.1 | 55.6 | 13.7 | . . . | . . . | . . . | . . . | . . . | 0.1 | 17.2 | 28.6 | 3 6.38 | 0.97 | 29.26 | 22 2 36.15 | 1.49 |
| | B. A. C. 7735 . . . | 45 | . . . | . . . | . . . | 49.5 | 1.5 | 13.1 | 26.0 | 36.4 | . . . | . . . | . . . | 3 13.30 | 1.10 | 29.26 | 22 2 42.94 | 1.52 |
| | B. A. C. 7772 . . . | 46 | 24.0 | 25.6 | 28.2 | 39.9 | 41.5 | 43.0 | 44.9 | 46.2 | 58.4 | 0.8 | 2.2 | 10 43.15 | 0.08 | 29.26 | 22 10 13.81 | 3.50 |
| | Lalande 43717 . . . | 47 | 29.3 | 31.2 | 34.3 | 49.0 | 50.9 | 53.0 | 54.9 | 56.9 | 11.7 | 14.7 | 16.6 | 17 52.95 | 0.14 | 29.27 | 22 17 23.54 | 2.96 |
| | *-31° 5' . . . | 48 | 23.9 | 25.8 | 28.6 | 42.6 | 44.5 | 46.4 | 48.3 | 50.1 | 3.9 | 6.9 | 8.9 | 23 46.35 | 0.06 | 29.27 | 22 23 17.02 | 4.29 |
| | B. A. C. 7861 . . . | 49 | 48.0 | 49.7 | 52.4 | 4.5 | 6.0 | 7.8 | 9.4 | 11.0 | 23.3 | 25.7 | 27.2 | 28 7.73 | 0.07 | 29.27 | 22 27 38.39 | 3.62 |
| | Lacaille 9196 . . . | 50 | 55.8 | 57.8 | 1.0 | 16.4 | 18.3 | 20.4 | 22.6 | 24.4 | 40.0 | 43.2 | 45.0 | 32 20.45 | 0.06 | 29.27 | 22 31 51.12 | 4.64 |
| ζ | Pegasi . . . | 51 | 29.8 | 31.4 | 34.0 | 46.2 | 47.7 | 49.4 | 51.0 | 52.6 | 4.8 | 7.3 | 8.7 | 35 49.35 | - 0.09 | -29.27 | 22 35 19.99 | - 3.39 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | " | c |
|--------------------------|-----------------|---------------|--------------|--------------|
| 1876. h. Oct. 3, 20.5 | s. - 29.26 | s. - 0.003 | s. - 0.06 | s. - 0.08 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. |
|-------------------------|------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|---------------|--------------|--------|---------------------------------|-------------------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | |
| 1876. | | | | | | | | | | | | | | m. s. | m. s. | s. | h. m. s. | s. |
| Oct. 3 | O. Arg. S. 22383 . | 1 | . | . | . | 5.6 | 7.2 | 9.0 | 10.9 | 12.5 | 25.5 | 27.0 | 29.8 | 39 16.05 | — | 7.02 | 22 38 39.76 | — 4.01 |
| Y. | Aquarii | 2 | 22.3 | 24.0 | 26.4 | 38.4 | 40.0 | 41.7 | 43.4 | 45.0 | 57.0 | 59.4 | 1.0 | 46 41.69 | — | 0.07 | 22 46 12.35 | 3.72 |
| 9 | κ Aquilæ | 3 | 20.0 | 21.7 | 24.2 | 36.3 | 37.7 | 39.5 | 41.0 | 42.6 | 4.7 | 7.2 | 8.7 | 30 39.42 | — | 0.07 | 19 30 15.96 | 2.79 |
| | ε Sagittarii | 4 | 24.1 | 26.1 | 27.9 | 29.5 | 32.2 | . | 34.8 | 37.7 | 39.1 | 40.5 | 42.8 | 34 3.50 | + | 0.03 | 19 33 40.14 | 3.02 |
| | O. Arg. S. 19857 . | 5 | 45.5 | 47.5 | 50.3 | . | . | . | . | . | 21.6 | 24.3 | 25.6 | 34 5.80 | — | 0.04 | 19 33 42.37 | 3.02 |
| | λ Ursæ Minoris . . | 6 | . | . | . | 3.0 | 25.0 | 55.0 | 24.0 | 48.0 | . | . | . | 47 55.00 | 11.34 | 23.39 | . | + 55.70 |
| | Lalande 38202 . . | 7 | 7.0 | 9.0 | 12.3 | 27.3 | 29.2 | 31.5 | 33.4 | 35.5 | 50.6 | 53.7 | 55.6 | 54 31.37 | 0.18 | 23.39 | 19 54 7.80 | — 1.83 |
| | α² Capricorni . . . | 8 | 17.4 | 19.1 | 21.5 | 33.9 | 35.3 | 37.0 | 38.8 | 40.4 | 52.6 | 55.0 | 56.6 | 11 37.05 | 0.06 | 23.39 | 20 11 13.60 | 3.15 |
| | *+36° 44' | 9 | 53.2 | 55.2 | 57.7 | 13.2 | 15.1 | 17.4 | 19.7 | 21.6 | 36.1 | 39.2 | 41.0 | 17 17.22 | 0.17 | 23.39 | 20 16 53.66 | 2.02 |
| | B. A. C. 7080 . . . | 10 | 43.7 | 45.5 | 48.0 | 0.0 | 1.6 | 3.2 | 5.0 | 6.6 | 18.8 | 21.3 | 22.8 | 26 3.32 | 0.06 | 23.39 | 20 25 39.87 | 3.16 |
| | *+37° 56' | 11 | 22.0 | 23.8 | 27.3 | 42.5 | 44.2 | 46.3 | 48.5 | 50.6 | 5.6 | 8.8 | 10.6 | 47 46.38 | 0.18 | 23.39 | 20 47 22.81 | 2.20 |
| | B. A. C. 7269 . . . | 12 | 43.2 | 44.9 | 47.3 | 59.2 | 0.8 | 2.4 | 4.1 | 5.7 | 17.7 | 20.1 | 21.6 | 52 2.45 | 0.09 | 23.39 | 20 51 38.97 | 2.98 |
| | 2 Equulei | 13 | 12.8 | 14.5 | 16.8 | 28.8 | 30.4 | 32.1 | 33.6 | 35.1 | 37.5 | 39.9 | 41.4 | 56 32.08 | 0.09 | 23.39 | 20 56 8.60 | 2.94 |
| | f² Cygni | 14 | 17.6 | 19.7 | 23.4 | 40.9 | 43.4 | 45.8 | 48.1 | 50.4 | 7.9 | 11.5 | 13.7 | 2 45.67 | 0.23 | 23.39 | 21 2 22.05 | 2.06 |
| | γ Cygni | 15 | 52.1 | 54.0 | 57.4 | 12.1 | 14.2 | 16.3 | 18.5 | 20.5 | 35.4 | 38.5 | 40.4 | 10 16.31 | 0.18 | 23.39 | 21 9 52.74 | 2.38 |
| | ι Pegasi | 16 | 26.9 | 28.6 | 31.4 | 44.0 | 45.7 | 47.5 | 49.0 | 50.9 | 3.5 | 6.1 | 7.7 | 16 47.39 | 0.12 | 23.39 | 21 16 23.88 | 2.81 |
| | ε Pegasi | 17 | 12.8 | 14.5 | 17.1 | 29.1 | 30.6 | 32.3 | 34.0 | 35.6 | 47.6 | 50.2 | 51.7 | 38 32.32 | 0.10 | 23.39 | 21 38 8.83 | 3.10 |
| | B. A. C. 7678 . . . | 18 | 50.5 | 0.3 | 13.3 | 20.0 | 28.6 | 38.1 | 47.6 | 56.3 | 2.6 | 17.0 | 25.6 | 56 38.17 | 1.00 | 23.39 | 21 56 13.78 | 1.04 |
| | *+71° 44' | 19 | 17.1 | 22.5 | 30.2 | 8.0 | 12.6 | 18.0 | 23.0 | 28.4 | 6.9 | 14.1 | 19.3 | 5 18.27 | 0.56 | 23.39 | 22 4 54.32 | 1.99 |
| | 24 Cephei | 20 | 50.0 | 55.3 | 4.0 | 41.4 | 46.2 | 51.0 | 56.9 | 2.3 | 39.9 | 47.5 | 52.4 | 7 51.54 | 0.56 | 23.39 | 22 7 27.59 | 2.05 |
| | B. A. C. 7810, (1st *) | 21 | 43.1 | 47.4 | 53.6 | . | . | . | . | . | 7.5 | 14.1 | 17.5 | 18 30.53 | 0.40 | 23.39 | 22 18 6.74 | 2.43 |
| | B. A. C. 7810, (2d *) | 22 | . | . | . | 23.3 | 26.9 | 31.1 | 35.1 | 39.2 | . | . | . | 18 31.12 | 0.45 | 23.39 | 22 18 7.28 | 2.43 |
| | 26 Cephei | 23 | 48.0 | 51.6 | 57.5 | 24.8 | 28.5 | 32.9 | 36.6 | 40.3 | 7.6 | 13.5 | 16.9 | 23 32.56 | 0.40 | 23.39 | 22 23 8.77 | 2.54 |
| | Weisse (2) 672 . . | 24 | 50.4 | 52.4 | 55.8 | 10.6 | 12.6 | 14.6 | 16.6 | 18.5 | 33.6 | 36.8 | 38.6 | 31 14.68 | 0.18 | 23.39 | 22 30 51.11 | 2.97 |
| | ζ Pegasi | 25 | 23.8 | 25.6 | 28.3 | 40.1 | 41.7 | 43.5 | 45.2 | 46.7 | 58.8 | 1.3 | 2.8 | 35 43.44 | 0.10 | 23.39 | 22 35 19.95 | 3.35 |
| | λ Aquarii | 26 | 16.4 | 17.8 | 20.7 | 32.5 | 34.2 | 35.8 | 37.6 | 39.2 | 51.2 | 53.6 | 55.2 | 46 35.84 | 0.07 | 23.39 | 22 46 12.38 | 3.69 |
| II | Weisse 722 | 27 | 9.4 | 11.0 | 13.6 | 25.6 | 27.1 | 28.9 | 30.6 | 32.1 | 44.3 | 46.8 | 48.4 | 30 28.89 | 0.06 | 23.89 | 19 30 4.94 | 2.83 |
| | *—10° 26' | 28 | 2.1 | 3.8 | 6.3 | 18.4 | 19.0 | 21.5 | 23.2 | 24.9 | 37.0 | 39.3 | 41.0 | 32 21.58 | 0.06 | 23.89 | 19 31 57.63 | 2.84 |
| | O. Arg. S. 19880 . | 29 | 13.4 | 15.1 | 17.9 | 31.0 | 32.5 | 34.4 | 36.2 | 38.1 | 51.2 | 54.0 | 55.3 | 35 34.46 | 0.04 | 23.89 | 19 35 10.53 | 3.21 |
| | γ Aquilæ | 30 | 28.7 | 30.3 | 32.9 | 45.0 | 46.5 | 48.2 | 49.9 | 51.6 | 3.6 | 6.2 | 7.7 | 40 48.24 | 0.10 | 23.89 | 19 40 24.25 | — 2.43 |
| | λ Ursæ Minoris . . | 31 | . | . | . | . | . | 50.0 | 24.0 | 45.0 | . | . | . | 49 19.67 | 1 37.56 | 23.89 | . | + 58.71 |
| | *+36° 45' | 32 | 25.1 | 27.2 | 30.5 | . | . | . | . | . | 8.5 | 11.4 | 13.0 | 56 49.28 | 0.17 | 23.89 | 19 56 25.22 | — 1.83 |
| | *+36° 45' | 33 | 43.7 | 45.5 | 48.9 | . | . | . | . | . | 26.7 | 29.7 | 31.4 | 57 7.65 | 0.18 | 23.89 | 19 56 43.58 | 1.83 |
| | O. Arg. N. 20223 . | 34 | 23.0 | 25.4 | 29.3 | 47.2 | 49.7 | 52.0 | 54.5 | 57.1 | 14.8 | 18.8 | 21.1 | 9 52.08 | 0.24 | 23.89 | 20 9 27.95 | 1.49 |
| | κ Cephei, (1st *) . | 35 | . | . | . | 9.4 | 16.8 | 24.3 | 31.9 | 38.7 | . | . | . | 13 24.22 | 0.86 | 23.89 | 20 12 59.47 | 1.84 |
| | B. A. C. 7023 . . . | 36 | 26.0 | 27.6 | 30.1 | 42.2 | 43.7 | 45.3 | 47.0 | 48.6 | 0.9 | 3.5 | 5.1 | 18 45.45 | 0.06 | 23.89 | 20 18 21.50 | 3.14 |
| | B. A. C. 7076 . . . | 37 | 37.8 | 40.2 | 44.2 | 2.3 | 4.4 | 7.0 | 9.5 | 11.7 | 29.8 | 33.7 | 35.8 | 25 6.95 | 0.24 | 23.88 | 20 24 42.83 | 1.63 |
| | *+38° 50' | 38 | 30.0 | 32.2 | 35.4 | 50.7 | 52.5 | 54.5 | 56.7 | 58.9 | 14.3 | 17.4 | 19.2 | 44 54.71 | 0.18 | 23.88 | 20 44 30.65 | 2.12 |
| | B. A. C. 7255 . . . | 39 | 35.7 | 37.3 | 39.9 | 51.8 | 53.5 | 55.0 | 56.7 | 58.3 | 10.2 | 12.8 | 14.3 | 49 55.05 | 0.09 | 23.88 | 20 49 31.08 | 2.93 |
| | Weisse 1370 . . . | 40 | 59.3 | 0.9 | 3.6 | 15.9 | 17.3 | 19.0 | 20.9 | 22.4 | 34.8 | 37.3 | 38.8 | 55 19.11 | 0.06 | 23.88 | 20 54 55.17 | 3.37 |
| | O. Arg. S. 21129 . | 41 | 53.5 | 55.2 | 58.0 | 11.0 | 12.5 | 14.4 | 16.3 | 17.9 | 30.9 | 33.6 | 35.1 | 1 14.40 | 0.04 | 23.88 | 21 0 50.48 | 3.64 |
| | Weisse (2) 137 . . | 42 | 47.7 | 49.4 | 52.2 | 4.8 | 6.4 | 8.1 | 10.0 | 11.5 | 24.4 | 27.0 | 28.5 | 8 8.18 | 0.12 | 23.88 | 21 7 44.18 | 2.71 |
| | Weisse 346 | 43 | 37.2 | 38.7 | 41.3 | 53.5 | 55.1 | 56.9 | 58.4 | 0.0 | 12.1 | 14.5 | 16.2 | 16 56.71 | 0.06 | 23.88 | 21 16 32.77 | 3.40 |
| | Weisse 364 | 44 | . | 15.1 | 17.8 | 19.2 | . | . | 30.4 | 33.2 | 34.8 | 36.4 | 38.4 | 18 28.16 | 28.35 | 23.88 | 21 17 35.93 | 3.41 |
| | β Aquarii | 45 | 9.9 | 11.4 | 14.1 | 25.9 | 27.6 | 29.1 | 30.8 | 32.4 | 44.3 | 46.8 | 48.3 | 25 29.15 | 0.07 | 23.88 | 21 25 5.20 | 3.32 |
| | B. A. C. 7517 . . . | 46 | 33.5 | 35.3 | 37.9 | 50.1 | 51.9 | 53.6 | 55.3 | 57.0 | 9.3 | 11.8 | 13.4 | 31 53.55 | 0.06 | 23.88 | 21 31 29.61 | 3.57 |
| | ε Pegasi | 47 | 13.4 | 14.9 | 17.6 | 29.6 | 31.1 | 32.9 | 34.5 | 36.0 | 48.0 | 50.7 | 52.2 | 38 32.81 | — | 0.10 | 21 38 8.83 | 3.07 |
| | B. A. C. 7584 . . . | 48 | 24.9 | 26.7 | 29.3 | 42.6 | 44.3 | 46.1 | 48.0 | 49.7 | . | . | . | 40 38.95 | + | 7.00 | 21 40 22.07 | 2.80 |
| | B. A. C. 7586 . . . | 49 | . | . | . | 8.7 | 10.2 | 12.0 | 13.9 | 15.5 | 28.8 | 31.5 | 33.1 | 41 19.21 | — | 7.29 | 21 40 48.04 | — 2.81 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------|--------------------|-----------------|--------|--------|
| 1876. h. | s. | s. | s. | s. |
| Oct. 9, 21.3 | — 12.39 | + 0.002 | — 0.10 | — 0.08 |
| 11, 21.6 | — 23.88 | + 0.004 | — 0.10 | — 0.08 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | | | Reduction to 1876.0. | | | |
|-------------------------|----------------------|--------------------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|---------------|-------|---------------------------------|-------|--------|-------------------------|-------|--------|--------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | h. | m. | | s. | | |
| 1876. Oct. 11 Y. | Lacaille 8952 . . . | 1 | 56.7 | 58.7 | 2.0 | 16.8 | 18.7 | 20.7 | 22.9 | 24.9 | 39.8 | 43.7 | 44.6 | m. s. | m. s. | s. | h. | m. | s. | s. | | |
| ε | Lacaille 9008 . . . | 2 | 43.0 | 44.6 | 17.7 | 1.1 | 2.8 | 4.6 | 6.6 | 8.4 | 21.8 | 24.7 | 26.2 | 56 | 4.68 | 0.04 | 23.88 | 21 | 55 | 40.76 | 4.32 | |
| | Cephei, (1st *) . . | 3 | 53.7 | 58.0 | 3.6 | | | | | | 12.2 | 18.1 | 21.7 | 0 | 37.88 | 0.37 | 23.88 | 22 | 0 | 13.63 | 4.03 | |
| | Cephei, (2d *) . . | 4 | | | | 31.2 | 35.0 | 38.5 | 42.9 | 46.4 | | | | 0 | 38.80 | 0.41 | 23.88 | 22 | 0 | 14.51 | 2.53 | |
| | B. A. C. 7744 . . . | 5 | 24.7 | 26.3 | 28.8 | 10.6 | 12.1 | 13.8 | 15.5 | 17.2 | 59.0 | 1.4 | 3.0 | 6 | 43.85 | 0.07 | 23.88 | 22 | 6 | 19.90 | 2.53 | |
| | B. A. C. 7772 . . . | 6 | 18.6 | 20.1 | 22.6 | 34.6 | 36.1 | 37.8 | 39.4 | 40.9 | 53.0 | 55.4 | 56.9 | 10 | 37.76 | 0.08 | 23.88 | 22 | 10 | 13.80 | 3.61 | |
| | *-8° 6' . . . | 7 | 53.0 | 54.5 | 56.8 | | | | | | 27.8 | 30.1 | 31.7 | 16 | 12.32 | 0.06 | 23.88 | 22 | 15 | 48.38 | 3.53 | |
| | *-8° 6' . . . | 8 | 7.0 | 8.8 | 11.5 | | | | | | 42.0 | 44.6 | 46.0 | 16 | 26.65 | 0.06 | 23.88 | 22 | 16 | 2.71 | 3.63 | |
| | *-31° 5' . . . | 9 | 18.1 | 20.5 | 23.3 | 37.2 | 38.7 | 40.9 | 42.8 | 44.9 | 58.4 | 1.6 | 3.2 | 23 | 40.90 | 0.03 | 23.88 | 22 | 23 | 16.99 | 3.63 | |
| | η Aquarii . . . | 10 | 7.3 | 8.9 | 10.4 | 23.4 | 25.0 | 26.5 | 28.0 | 29.8 | 41.6 | 44.0 | 45.7 | 29 | 26.42 | - | 0.08 | 23.88 | 22 | 29 | 2.46 | 4.21 |
| | α | O. Arg. S. 22383 . | 11 | 43.3 | 44.8 | 47.5 | 0.0 | 1.7 | 3.4 | 4.8 | 6.5 | | | | 38 | 56.50 | + | 6.91 | 23.88 | 22 | 38 | 39.53 |
| Pegasi . . . | | 12 | 42.6 | 44.3 | 46.9 | 59.2 | 0.7 | 2.5 | 4.1 | 5.7 | 18.0 | 20.6 | 22.2 | 59 | 2.44 | - | 0.11 | 23.87 | 22 | 58 | 38.46 | 3.96 |
| 12 δ | Aquilæ . . . | 13 | 22.1 | 23.8 | 26.4 | 38.3 | 39.8 | 41.4 | 43.1 | 44.7 | 56.5 | 58.1 | 0.5 | 19 | 41.34 | 0.08 | 24.10 | 19 | 19 | 17.16 | 3.97 | |
| | B. A. C. 6711 . . . | 14 | 18.6 | 20.7 | 23.9 | | | | | | 2.2 | 5.4 | 7.2 | 29 | 43.00 | 0.16 | 24.10 | 19 | 29 | 18.74 | 2.46 | |
| | O. Arg. S. 19941 . | 15 | 30.1 | 32.0 | 34.8 | 48.3 | 50.0 | 51.9 | 53.7 | 55.5 | 8.8 | 11.7 | 13.1 | 39 | 51.81 | 0.05 | 24.10 | 19 | 39 | 27.66 | 1.57 | |
| | *-10° 19' . . . | 16 | 29.5 | 31.2 | 33.8 | 45.9 | 47.4 | 49.0 | 50.7 | 52.2 | 4.6 | 7.0 | 8.5 | 43 | 49.07 | 0.07 | 24.10 | 19 | 43 | 24.90 | 3.28 | |
| | Weisse 1259 . . . | 17 | 35.4 | 36.9 | 39.4 | 51.9 | 53.3 | 55.2 | 56.9 | 58.4 | 11.1 | 14.1 | 15.8 | 51 | 55.22 | 0.06 | 24.11 | 19 | 51 | 31.05 | 2.88 | |
| | *-22° 27' . . . | 18 | 24.9 | 26.7 | 29.3 | 41.9 | 43.7 | 45.3 | 47.2 | 48.9 | 2.2 | 4.7 | 6.3 | 54 | 45.56 | 0.05 | 24.11 | 19 | 54 | 21.40 | 3.03 | |
| | 64 Sagittarii . . . | 19 | 21.9 | 23.8 | 26.2 | 38.4 | 40.0 | 41.6 | 43.4 | 45.0 | 57.2 | 59.7 | 1.4 | 58 | 41.69 | 0.07 | 24.11 | 19 | 58 | 17.51 | 3.25 | |
| | Weisse (2) 189 . . | 20 | 48.5 | 50.4 | 53.5 | 9.0 | 10.7 | 12.8 | 14.6 | 16.8 | 32.5 | 35.5 | 37.4 | 6 | 12.88 | 0.17 | 24.11 | 20 | 5 | 48.60 | 3.01 | |
| | O. Arg. N. 20223 . | 21 | | | | 47.5 | 49.9 | 52.6 | 55.1 | 57.4 | | | | 9 | 52.50 | 0.24 | 24.11 | 20 | 9 | 28.15 | 1.81 | |
| | κ Cephei, (2d *) . . | 22 | | | | 12.0 | 19.8 | 26.7 | 34.2 | 41.7 | | | | 13 | 26.88 | 0.77 | 24.11 | 20 | 13 | 2.00 | 1.46 | |
| γ | *+64° 17' . . . | 23 | 41.5 | 45.4 | 51.2 | 18.4 | 21.9 | 26.1 | 29.8 | 33.1 | 0.9 | 6.6 | 9.9 | 17 | 25.89 | 0.35 | 24.11 | 20 | 17 | 1.43 | + 1.95 | |
| | *+64° 17' . . . | 24 | 57.6 | 1.4 | 7.2 | 34.6 | 38.0 | 41.6 | 45.7 | 49.1 | 16.6 | 22.3 | 26.4 | 19 | 41.86 | 0.35 | 24.11 | 20 | 19 | 17.40 | - 0.55 | |
| | B. A. C. 7087 . . . | 25 | 25.0 | 26.7 | 29.2 | 41.6 | 43.2 | 44.9 | 46.7 | 48.3 | 0.5 | 3.0 | 4.5 | 27 | 44.87 | 0.06 | 24.12 | 20 | 27 | 20.69 | 0.58 | |
| | *+37° 47' . . . | 26 | 1.4 | 3.4 | 6.8 | 21.8 | 23.6 | 25.9 | 27.7 | 29.9 | 45.2 | 48.0 | 50.0 | 34 | 25.79 | 0.16 | 24.12 | 20 | 34 | 1.51 | 3.22 | |
| | Delphini, (1st *) . | 27 | 0.2 | 1.9 | 4.7 | 17.1 | 18.5 | 20.1 | 22.0 | 23.6 | 36.2 | 38.7 | 40.0 | 41 | 20.27 | 0.11 | 24.12 | 20 | 40 | 56.04 | 2.05 | |
| | 2 Delphini, (2d *) . | 28 | 41.8 | 43.8 | 45.6 | 47.1 | 49.7 | | 52.4 | 55.0 | 56.6 | 58.4 | 0.3 | 41 | 21.07 | 0.03 | 24.12 | 20 | 40 | 56.92 | 2.63 | |
| | γ Equulei, (1st *) . | 29 | | | | 29.6 | 31.1 | 32.6 | 34.4 | 36.0 | | | | 56 | 32.74 | 0.10 | 24.12 | 20 | 56 | 8.52 | 2.90 | |
| | 2 Equulei, (2d *) . | 30 | 13.4 | 15.1 | 17.5 | | | | | | 48.3 | 50.7 | 52.1 | 56 | 32.85 | 0.08 | 24.12 | 20 | 56 | 8.65 | 2.90 | |
| | O. Arg. S. 21129 . | 31 | 54.0 | 55.9 | 58.4 | 11.3 | 13.1 | 14.9 | 16.6 | 18.2 | 31.4 | 34.0 | 35.6 | 1 | 14.85 | 0.05 | 24.12 | 21 | 0 | 50.68 | 3.62 | |
| | B. A. C. 7363 . . . | 32 | 4.7 | 9.3 | 17.5 | 54.0 | 58.4 | 3.6 | 8.7 | 13.5 | 51.1 | 57.3 | 2.0 | 6 | 3.65 | 0.47 | 24.12 | 21 | 5 | 39.06 | 0.66 | |
| 15 β | Aquarii . . . | 33 | 49.1 | 50.7 | 53.0 | 4.9 | 6.5 | 8.0 | 9.7 | 11.3 | 23.4 | 25.8 | 27.3 | 12 | 8.15 | 0.07 | 24.13 | 21 | 11 | 43.95 | 3.23 | |
| | Weisse 346 . . . | 34 | 37.4 | 39.0 | 41.4 | 53.5 | 55.2 | 56.8 | 58.6 | 0.2 | 12.3 | 14.8 | 16.3 | 16 | 56.86 | 0.07 | 24.13 | 21 | 16 | 32.66 | 3.39 | |
| | Weisse 364 . . . | 35 | 40.5 | 42.3 | 44.9 | 57.1 | 58.5 | 0.0 | 1.7 | 3.6 | 15.5 | 18.5 | 19.9 | 18 | 0.23 | 0.07 | 24.13 | 21 | 17 | 36.03 | 3.39 | |
| | *-23° 42' . . . | 36 | 6.2 | 8.0 | 10.4 | 23.9 | 25.5 | 27.3 | 29.2 | 31.0 | 43.5 | 46.4 | 48.2 | 23 | 27.24 | 0.05 | 24.13 | 21 | 23 | 3.06 | 3.75 | |
| | Cephei . . . | 37 | 32.3 | 37.7 | 45.2 | 19.3 | 24.1 | 28.9 | 33.4 | 38.3 | 13.5 | 20.5 | 24.8 | 27 | 28.91 | 0.46 | 24.13 | | | | | |
| | *-35° 6' . . . | 38 | 32.3 | 34.1 | 37.3 | 51.8 | 53.8 | 56.0 | 57.7 | 59.7 | 14.2 | 17.1 | 19.1 | 33 | 55.74 | 0.04 | 24.13 | 21 | 33 | 31.57 | 4.19 | |
| | ε Pegasi . . . | 39 | 13.7 | 15.2 | 17.8 | 30.0 | 31.4 | 32.9 | 34.7 | 36.3 | 48.2 | 50.9 | 52.5 | 38 | 33.05 | 0.09 | 24.13 | 21 | 38 | 8.83 | 3.06 | |
| | B. A. C. 7678 . . . | 40 | 51.0 | 59.4 | 14.4 | 21.6 | 29.5 | 39.0 | 48.0 | 57.0 | 3.7 | 17.0 | 25.1 | 56 | 38.70 | 0.89 | 24.14 | 21 | 56 | 13.67 | 0.75 | |
| | O. Arg. N. 23425 . | 41 | 11.7 | 14.7 | 19.1 | 39.4 | 41.8 | 44.3 | 47.2 | 49.5 | 9.0 | 13.4 | 16.0 | 0 | 44.19 | 0.24 | 24.14 | 22 | 0 | 19.81 | 2.41 | |
| | B. A. C. 7744 . . . | 42 | 24.9 | 26.5 | 29.0 | 40.8 | 42.4 | 44.0 | 45.8 | 47.3 | 59.3 | 1.8 | 3.3 | 6 | 44.10 | - | 0.07 | 24.14 | 22 | 6 | 19.89 | 3.47 |
| 26 η | *-35° 7' . . . | 43 | 29.0 | 31.5 | 33.5 | 35.4 | 38.3 | | 52.0 | 55.3 | 57.0 | 59.1 | 1.5 | 15 | 15.26 | + | 0.05 | 24.14 | 22 | 14 | 51.17 | 4.33 |
| | *-35° 7' . . . | 44 | 58.9 | 1.0 | 4.0 | 18.8 | 20.4 | 22.5 | 24.6 | 26.7 | 41.0 | 44.0 | 45.9 | 15 | 22.53 | - | 0.04 | 24.14 | 22 | 14 | 58.35 | 4.33 |
| | Cephei . . . | 45 | 48.2 | 52.8 | 58.2 | 25.8 | 28.9 | 32.9 | 37.1 | 40.6 | 8.5 | 14.1 | 17.5 | 23 | 33.15 | 0.35 | 24.15 | 22 | 23 | 8.65 | 2.45 | |
| | Aquarii . . . | 46 | 7.6 | 9.2 | 11.7 | 23.6 | 25.0 | 26.7 | 28.3 | 30.0 | 42.0 | 44.3 | 46.0 | 29 | 26.76 | 0.08 | 24.15 | 22 | 29 | 2.53 | 3.47 | |
| | Piazzi 169 . . . | 47 | 41.5 | 43.0 | 45.7 | 57.4 | 59.0 | 0.6 | 2.2 | 3.9 | 15.7 | 18.3 | 19.8 | 33 | 0.65 | - | 0.09 | 24.15 | 22 | 32 | 36.41 | 3.41 |
| | *-14° 18' . . . | 48 | 12.4 | 14.1 | 16.1 | 18.0 | 20.4 | | 22.1 | 25.0 | 26.8 | 28.6 | 30.4 | 38 | 51.39 | + | 0.02 | 24.15 | 22 | 38 | 27.26 | 3.77 |
| | *-14° 18' . . . | 49 | 32.8 | 34.4 | 36.7 | 48.7 | 50.3 | 52.5 | 54.3 | 56.2 | 8.0 | 10.3 | 11.9 | 38 | 52.37 | - | 0.06 | -24.15 | 22 | 38 | 28.16 | - 3.77 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|---------------------------|-----------------|---------------|--------------|--------------|
| 1876. h. Oct. 12, 22.0 | s. - 24.14 | s. - 0.016 | s. - 0.08 | s. - 0.08 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | |
|-------------------------|--------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|----------|---------------|-------|---------------------------------|-------------------------|--------|-------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | |
| | | | m. | s. | m. | s. | s. | h. | m. | s. | s. | | | | | | | | |
| 1876. Oct. 12 Y. | Lacaille 9271 . . . | 1 | 59.6 | 1.7 | 4.6 | 29.1 | 30.8 | 32.7 | 34.8 | 36.6 | 50.7 | 54.1 | 55.9 | 43 32.78 | — | 0.04 | 22 43 8.59 | — | 4.34 |
| | Lalande 44548 . . . | 2 | 37.4 | 39.9 | 41.7 | 43.9 | 46.9 | ... | 0.5 | 3.8 | 5.7 | 7.4 | 9.9 | 49 23.71 | — | 0.07 | 22 48 59.49 | — | 3.09 |
| | *+35° 19' . . . | 3 | 54.4 | 56.6 | 58.8 | 0.6 | 3.8 | ... | 17.3 | 20.6 | 22.7 | 24.7 | 26.9 | 49 40.64 | — | 0.07 | 22 49 16.42 | — | 3.10 |
| | *+35° 21' . . . | 4 | 19.9 | 22.0 | 24.9 | 39.5 | 41.3 | 43.2 | 45.2 | 47.2 | ... | ... | ... | 49 35.40 | + | 7.78 | 22 49 19.03 | — | 3.10 |
| | a Pegasi . . . | 5 | 42.8 | 44.3 | 47.2 | 59.5 | 1.0 | 2.7 | 4.3 | 5.9 | 18.4 | 20.8 | 22.4 | 59 2.66 | — | 0.10 | 22 58 38.40 | — | 3.37 |
| | φ Gruis . . . | 6 | 21.9 | 24.0 | 27.5 | 43.3 | 45.5 | 47.7 | 49.8 | 51.8 | 7.9 | 11.3 | 13.1 | 11 47.62 | — | 0.04 | 23 11 23.42 | — | 4.70 |
| | θ Piscium . . . | 7 | 49.1 | 50.7 | 53.3 | 5.1 | 6.8 | 8.5 | 10.1 | 11.8 | 23.7 | 26.4 | 27.8 | 22 8.48 | — | 0.09 | 23 21 44.23 | — | 3.56 |
| 13 | δ Aquilæ . . . | 8 | 22.4 | 24.0 | 26.6 | 38.5 | 40.0 | 41.6 | 43.3 | 44.8 | 56.8 | 59.2 | 0.6 | 19 41.62 | — | 0.08 | ... | — | 2.45 |
| | ε Aquilæ . . . | 9 | 18.4 | 20.1 | 22.6 | 34.5 | 36.1 | 37.7 | 39.4 | 40.9 | 52.9 | 55.4 | 56.9 | 24 37.72 | — | 0.08 | 19 24 13.26 | — | 2.60 |
| | B. A. C. 6752 . . . | 10 | 2.6 | 7.9 | 15.6 | 52.7 | 57.8 | 2.8 | 7.8 | 12.6 | 50.2 | 57.9 | 2.4 | 36 2.75 | — | 0.40 | 19 35 37.97 | — | 1.19 |
| | ε Draconis . . . | 11 | 3.0 | 7.8 | 15.1 | 49.7 | 54.2 | 58.9 | 3.8 | 8.4 | 43.5 | 50.5 | 54.5 | 48 59.04 | — | 0.37 | ... | — | 0.67 |
| | Weisse (2) 1729 . . . | 12 | 15.6 | 17.7 | 21.0 | 36.2 | 38.2 | 40.2 | 42.4 | 44.4 | 45.9 | 8.3 | 0.6 | 53 40.30 | — | 0.14 | 19 53 15.77 | — | 1.69 |
| | Weisse (2) 1753 . . . | 13 | ... | 34.0 | 37.3 | 39.1 | ... | ... | 53.0 | 56.5 | 58.5 | 0.6 | 3.1 | 54 50.26 | — | 35.89 | 19 53 49.98 | — | 1.69 |
| | Lacaille 8341 . . . | 14 | 35.6 | 37.7 | 40.8 | 55.7 | 57.5 | 59.5 | 1.5 | 3.5 | 18.3 | 21.4 | 23.1 | 59 59.51 | — | 0.06 | 19 59 35.06 | — | 3.69 |
| | Lalande 38708 . . . | 15 | 0.3 | 3.0 | 5.0 | 7.0 | 10.4 | 24.3 | 26.5 | 29.6 | ... | ... | ... | 5 13.26 | + | 35.58 | 20 5 24.45 | — | 1.78 |
| | Weisse (2) 189 . . . | 16 | 48.6 | 50.8 | 54.0 | 9.0 | 10.9 | 13.0 | 15.0 | 17.3 | 32.5 | 35.7 | 37.6 | 6 13.13 | — | 0.14 | 20 5 48.60 | — | 1.79 |
| 33 | γ Cygni . . . | 17 | 22.1 | 24.8 | 29.4 | 50.6 | 53.5 | 56.5 | 59.4 | 2.4 | 23.5 | 28.0 | 30.6 | 10 56.44 | — | 0.22 | 20 10 31.83 | — | 1.05 |
| | κ Cephei, (2d *) . . . | 18 | ... | 35.7 | 46.4 | 53.3 | ... | ... | 43.1 | 55.2 | 2.4 | 9.8 | 18.4 | 15 33.04 | — | 2 07.21 | 20 13 1.44 | — | 2.05 |
| | *+64° 17' . . . | 19 | 57.7 | 1.3 | 6.8 | 34.3 | 37.9 | 41.4 | 45.3 | 49.1 | 16.3 | 22.1 | 25.8 | 19 41.64 | — | 0.20 | 20 19 17.01 | — | 0.54 |
| | *+64° 17' . . . | 20 | ... | ... | ... | 31.7 | 34.9 | 38.7 | 42.2 | 46.0 | ... | ... | ... | 20 38.70 | — | 0.31 | 20 20 14.00 | — | 0.55 |
| | *-21° 40' . . . | 21 | ... | 6.0 | 8.7 | 10.3 | ... | ... | 22.7 | 25.1 | 26.6 | 28.2 | 30.2 | 27 19.72 | — | 29.94 | 20 26 25.39 | — | 3.40 |
| | *+27° 21' . . . | 22 | 23.5 | 25.3 | 28.3 | ... | ... | ... | ... | 2.3 | 4.9 | 6.7 | 32 45.17 | — | 0.11 | 20 32 20.67 | — | 2.29 | |
| | *+27° 21' . . . | 23 | 32.5 | 34.1 | 36.3 | ... | ... | ... | ... | 10.7 | 14.5 | 16.1 | 32 54.03 | — | 0.11 | 20 32 29.53 | — | 2.29 | |
| | *+38° 49' . . . | 24 | 30.3 | 32.5 | 35.7 | 51.0 | 52.8 | 55.0 | 57.2 | 58.3 | 14.6 | 17.7 | 19.7 | 44 54.98 | — | 0.14 | 20 44 30.45 | — | 2.07 |
| | *-19° 30' . . . | 25 | 47.1 | 48.7 | 51.5 | ... | ... | ... | ... | 23.5 | 26.2 | 27.7 | 49 7.45 | — | 0.06 | 20 48 42.99 | — | 3.45 | |
| | *-19° 31' . . . | 26 | 9.0 | 10.7 | 13.4 | ... | ... | ... | ... | 45.7 | 48.1 | 49.7 | 49 29.43 | — | 0.06 | 20 49 4.97 | — | 3.46 | |
| | 2 Equulei, (1st *) . . . | 27 | 54.7 | 56.7 | 58.3 | 59.9 | 2.5 | ... | 3.0 | 5.6 | 7.2 | 8.9 | 10.9 | 56 32.77 | — | 0.02 | 20 56 8.35 | — | 2.88 |
| | 2 Equulei, (2d *) . . . | 28 | 13.7 | 15.5 | 17.9 | 29.7 | 31.4 | 33.0 | 34.6 | 36.3 | 48.3 | 50.9 | 52.2 | 56 33.05 | — | 0.09 | 20 56 8.56 | — | 2.88 |
| | O. Arg. S. 21115 . . . | 29 | 2.4 | 4.0 | 6.4 | 19.1 | 20.5 | 22.2 | 24.0 | 25.6 | 38.1 | 40.6 | 42.0 | 0 22.27 | — | 0.07 | 20 59 57.80 | — | 3.42 |
| | B. A. C. 7349 . . . | 30 | 18.6 | 20.7 | 24.0 | 39.8 | 41.6 | 44.0 | 46.4 | 48.1 | 4.0 | 7.2 | 9.3 | 1 43.97 | — | 0.06 | 21 4 19.51 | — | 4.28 |
| | μ Microscopii . . . | 31 | 52.6 | 54.8 | 58.0 | 13.8 | 15.6 | 17.9 | 20.4 | 22.4 | 38.2 | 41.5 | 43.2 | 13 18.04 | — | 0.06 | 21 12 43.58 | — | 4.35 |
| | Weisse 357 . . . | 32 | ... | 12.7 | 15.1 | 27.4 | 29.0 | 30.7 | 32.4 | 33.9 | 46.1 | 49.6 | ... | 17 30.75 | — | 0.07 | 21 17 6.28 | — | 3.38 |
| | *-23° 42' . . . | 33 | 6.5 | 8.0 | 10.7 | 24.2 | 25.9 | 27.7 | 29.9 | 31.6 | 43.9 | 46.6 | 48.3 | 23 27.57 | — | 0.06 | 21 23 3.11 | — | 3.74 |
| T. | β Arietis . . . | 34 | 27.4 | ... | 39.1 | 57.0 | ... | 15.8 | ... | 34.5 | ... | 52.0 | 3.9 | 48 15.67 | — | 0.06 | 1 47 51.47 | — | 3.90 |
| | α Arietis . . . | 35 | 50.0 | ... | 2.2 | 20.4 | ... | 39.1 | ... | 58.3 | ... | 16.1 | 28.4 | 0 39.21 | — | 0.07 | 2 0 15.00 | — | 3.95 |
| | ξ Ceti . . . | 36 | 8.1 | ... | 19.1 | 36.3 | ... | 53.9 | ... | 11.9 | ... | 28.2 | 39.4 | 6 53 84 | — | 0.03 | 2 6 29.67 | — | 3.84 |
| | Neptune . . . | 37 | 7.0 | ... | 18.2 | 35.1 | ... | 53.1 | ... | 11.0 | ... | 28.0 | 39.0 | 10 53.06 | — | 0.05 | 2 10 28.87 | — | ... |
| | ξ Ceti . . . | 38 | 16.3 | ... | 27.5 | 44.0 | ... | 2.0 | ... | 20.0 | ... | 36.5 | 47.5 | 22 1.97 | — | 0.05 | 2 22 37.78 | — | 3.83 |
| 16 | δ Aquilæ . . . | 39 | 21.3 | 22.9 | 25.6 | 37.3 | 38.8 | 40.4 | 42.2 | 43.8 | 55.7 | 58.1 | 59.6 | 19 40.52 | — | 0.09 | 19 19 17.11 | — | 2.40 |
| Y. | B. A. C. 6752 . . . | 40 | 1.6 | 6.9 | 14.4 | 52.2 | 57.0 | 2.4 | 7.5 | 11.6 | 49.2 | 56.6 | 1.4 | 36 1.89 | — | 0.46 | 19 35 38.11 | — | 1.33 |
| | γ Urse Minoris . . . | 41 | ... | ... | ... | 57.0 | 17.0 | 46.0 | 16.0 | 10.0 | ... | ... | ... | 47 47.20 | — | 8.49 | ... | — | 61.55 |
| | 63 Sagittarii . . . | 42 | 8.2 | 9.9 | 12.7 | 24.9 | 26.4 | 28.0 | 29.7 | 31.3 | 43.7 | 46.4 | 47.8 | 54 28.09 | — | 0.08 | 19 54 4.69 | — | 2.97 |
| | *+38° 7' . . . | 43 | 39.0 | 41.2 | 44.5 | 59.5 | 1.3 | 3.3 | 5.6 | 7.8 | 22.7 | 25.8 | 27.7 | 1 3.40 | — | 0.16 | 20 0 40.01 | — | 1.70 |
| | *+26° 21' . . . | 44 | 49.9 | 51.8 | 54.6 | 8.0 | 9.6 | 11.3 | 13.4 | 15.0 | 28.5 | 31.1 | 32.8 | 7 11.45 | — | 0.13 | 20 6 48.00 | — | 2.10 |
| | α Capricorni . . . | 45 | 17.0 | 18.8 | 21.5 | 33.5 | 35.1 | 36.8 | 38.6 | 40.6 | 52.4 | 54.9 | 56.5 | 11 36.83 | — | 0.08 | 20 11 13.43 | — | 3.04 |
| | 25 Vulpeculæ . . . | 46 | 48.1 | 50.0 | 52.8 | 5.6 | 7.2 | 9.2 | 10.8 | 12.7 | 25.6 | 28.5 | 30.1 | 17 9.15 | — | 0.13 | 20 16 45.70 | — | 2.22 |
| | *+37° 25' . . . | 47 | 43.1 | 45.3 | 48.7 | 3.4 | 5.2 | 7.3 | 9.5 | 11.4 | 26.5 | 29.6 | 31.3 | 30 7.39 | — | 0.16 | 20 29 43.91 | — | 1.94 |
| | *+37° 45' . . . | 48 | 0.5 | 2.7 | 5.9 | 21.0 | 22.9 | 25.0 | 27.4 | 29.2 | 44.4 | 47.2 | 49.4 | 34 25.05 | — | 0.16 | 20 34 1.57 | — | 1.96 |
| | O. Arg. S. 20805 . . . | 49 | 7.0 | 8.6 | 11.5 | 24.5 | 25.9 | 27.7 | 29.6 | 31.5 | 44.8 | 47.1 | 48.9 | 38 27.92 | — | 0.07 | 20 38 4.53 | — | 3.49 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|---------------|-----------------|--------------|--------|--------|
| 1876. h. | s. | s. | s. | s. |
| Oct. 13, 19.3 | — 24.38 | — 0.011 | — 0.05 | — 0.08 |
| 13, 2.1 | — 24.14 | — 0.011 | — 0.05 | — 0.08 |
| 16, 21.7 | — 23.32 | — 0.002 | — 0.06 | — 0.09 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. |
|-------------------------|---------------------|---------|--------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|--------|--------|---------------------------------|-------------------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | |
| 1876. Oct. 16 Y. | *+33° 55' . . . | 1 | | 50.4 | 52.1 | 54.5 | 56.5 | 58.5 | | | | | | m. s. | m. s. | s. | h. m. s. | s. |
| | Lacaille 8609 . . . | 2 | | | | | | | | | | | | 42 54.40 | — 0.16 | —23.32 | 20 42 30.92 | — 2.13 |
| | *+0° 0' | 3 | 40.0 | 41.6 | 44.1 | 55.8 | 57.4 | 59.0 | 0.8 | 2.3 | 14.4 | 16.7 | 18.2 | 50 59.12 | 8.15 | 23.32 | 20 45 52.20 | 3.95 |
| | Weisse 1269 . . . | 4 | | 31.5 | 33.9 | 35.3 | | | | | | | | 51 44.02 | 0.09 | 23.32 | 20 50 35.71 | 2.95 |
| | Equulei, (1st *) . | 5 | 12.5 | 14.1 | 16.7 | 28.7 | 30.1 | 31.8 | 33.6 | 35.0 | 47.2 | 49.6 | 51.1 | 56 31.85 | 27.85 | 23.32 | 20 50 52.85 | 2.96 |
| | | | | | | | | | | | | | | | 0.10 | 23.32 | 20 56 8.43 | 2.84 |
| | Equulei, (2d *) . | 6 | 53.9 | 55.9 | 57.6 | 59.1 | 1.6 | | 2.3 | 4.8 | 6.4 | 8.0 | 10.0 | 56 31.96 | 0.03 | 23.32 | 20 56 8.61 | 2.84 |
| | B. A. C. 7349 . . . | 7 | 17.5 | 19.8 | 23.1 | 38.8 | 40.8 | 42.9 | 45.2 | 47.0 | 2.9 | 6.3 | 8.1 | 4 42.95 | 0.07 | 23.32 | 21 4 19.56 | 4.23 |
| | Lacaille 8737 . . . | 8 | 18.1 | 20.4 | 23.8 | 39.4 | 41.7 | 43.8 | 46.1 | 48.1 | 3.9 | 7.3 | 9.2 | 7 43.80 | 0.07 | 23.32 | 21 7 20.41 | 4.25 |
| | O. Arg. S. 21290 . | 9 | 52.7 | 54.5 | 57.3 | 10.1 | 11.7 | 13.5 | 15.1 | 17.0 | 29.9 | 32.8 | 34.3 | 12 13.54 | 0.07 | 23.32 | 21 11 50.15 | 3.61 |
| | Weisse 357 | 10 | 10.2 | 11.7 | 14.3 | 26.4 | 27.9 | 29.5 | 31.1 | 32.7 | 45.1 | 47.9 | 49.8 | 17 29.69 | 0.08 | 23.32 | 21 17 6.29 | 3.34 |
| | *-23° 42' | 11 | 5.6 | 7.4 | 10.0 | 23.4 | 24.9 | 26.5 | 28.3 | 30.2 | | | | 23 19.54 | + | 7.00 | 21 23 3.22 | 3.69 |
| | Cephei, (1st *) . | 12 | 29.7 | 34.2 | 41.4 | 16.5 | 20.3 | 25.7 | 30.5 | 34.8 | 10.1 | 17.5 | 21.4 | 27 25.65 | — 0.37 | 23.32 | 21 27 1.06 | 0.99 |
| | Lacaille 8873 . . . | 13 | 3.4 | 5.2 | 8.3 | | | | | | | | | 33 26.78 | 0.06 | 23.32 | 21 33 3.40 | 4.12 |
| | *-35° 6' | 14 | 31.2 | 33.3 | 36.1 | | | | | | | | | 33 54.68 | 0.06 | 23.32 | 21 33 31.30 | 4.13 |
| | Pegasi | 15 | 12.6 | 14.4 | 16.9 | 29.0 | 30.5 | 32.2 | 33.8 | 35.3 | 47.4 | 50.0 | 51.6 | 38 32.15 | 0.10 | 23.32 | 21 38 8.73 | 3.01 |
| | *-21° 15' | 16 | 55.6 | 57.5 | 59.9 | 12.6 | 14.0 | 15.7 | 17.3 | 18.7 | 32.1 | 34.0 | 35.5 | 53 15.72 | 0.07 | 23.32 | 21 52 52.33 | 3.75 |
| | O. Arg. N. 23425 . | 17 | 11.0 | 13.5 | 18.0 | 37.5 | 40.4 | 43.0 | 45.8 | 48.3 | 7.3 | 12.0 | 14.9 | 0 42.88 | 0.23 | 23.32 | 22 0 19.33 | 2.31 |
| | *-12° 14' | 18 | 42.3 | 44.0 | 46.3 | 58.9 | 0.3 | 1.8 | 3.7 | 5.1 | 17.5 | 20.1 | 21.6 | 6 1.96 | 0.08 | 23.32 | 22 5 38.56 | 3.58 |
| | *-35° 7' | 19 | 51.0 | 53.0 | 56.1 | 10.4 | 12.3 | 14.5 | 16.4 | 18.5 | 33.0 | 36.0 | 37.7 | 15 14.45 | — 0.07 | 23.32 | 22 14 51.06 | 4.28 |
| | *-35° 5' | 20 | 35.5 | 37.8 | 39.8 | 41.7 | 44.2 | | 58.3 | 1.5 | 3.6 | 5.6 | 8.0 | 15 21.60 | + | 0.02 | 22 14 58.30 | 4.28 |
| | Aquarii | 21 | 4.2 | 5.8 | 8.4 | 20.2 | 21.7 | 23.4 | 25.1 | 26.6 | 38.5 | 41.1 | 42.6 | 19 23.42 | — 0.09 | 23.32 | 22 19 0.01 | 3.37 |
| | O. Arg. S. 22197 . | 22 | 30.7 | 32.4 | 35.2 | 48.2 | 50.0 | 51.7 | 53.5 | 55.2 | 8.4 | 11.0 | 12.6 | 24 51.72 | 0.07 | 23.32 | 22 24 28.33 | 3.93 |
| | *-28° 12' | 23 | 16.5 | 17.9 | 20.5 | 34.8 | 36.5 | 38.2 | 40.0 | 41.9 | 55.6 | 58.4 | 0.3 | 28 38.24 | 0.07 | 23.32 | 22 28 14.85 | 4.08 |
| | *-28° 54' | 24 | 1.4 | 3.3 | 5.8 | 19.8 | 21.5 | 23.4 | 25.4 | 27.1 | 40.8 | 43.6 | 45.2 | 32 23.39 | 0.07 | 23.32 | 22 32 0.00 | 4.11 |
| | Pegasi | 25 | 0.9 | 2.7 | 5.5 | 19.1 | 20.8 | 22.7 | 24.7 | 26.4 | 40.0 | 42.8 | 44.5 | 36 22.74 | 0.14 | 23.32 | 22 35 59.28 | 3.15 |
| | *+50° 47' | 26 | | | | | | | | | | | | | | | | |
| | Lacaille 9286 . . . | 27 | 25.4 | 27.6 | 31.0 | 46.5 | 48.4 | 50.6 | 52.8 | 55.0 | 10.4 | 13.8 | 15.7 | 45 50.65 | 0.07 | 23.32 | 22 45 27.26 | 2.79 |
| | Lalande 44860 . . | 28 | 34.3 | 36.0 | 38.6 | 51.6 | 53.3 | 54.8 | 56.7 | 58.5 | 11.2 | 13.8 | 15.4 | 50 54.93 | 0.07 | 23.32 | 22 50 31.54 | 4.57 |
| | Lacaille 9338 . . . | 29 | 0.2 | 2.0 | 4.8 | 17.7 | 19.2 | 20.9 | 22.7 | 24.4 | 37.6 | 40.4 | 41.9 | 55 21.07 | 0.07 | 23.32 | 22 54 57.68 | 3.93 |
| | Weisse 1232 . . . | 30 | 32.4 | 34.0 | 36.5 | 48.7 | 50.4 | 52.0 | 53.6 | 55.2 | 7.4 | 9.8 | 11.4 | 59 51.95 | 0.07 | 23.32 | 22 54 57.68 | 4.00 |
| | | | | | | | | | | | | | | | — 0.08 | 23.32 | 22 59 28.55 | 3.74 |
| | Lalande 45323 . . | 31 | 8.5 | 10.8 | 14.0 | 29.2 | 31.2 | 33.2 | 35.3 | 37.4 | | | | 3 24.95 | + | 8.08 | 23 3 9.71 | 3.13 |
| | Gruis | 32 | 21.3 | 23.6 | 26.9 | 42.9 | 44.8 | 47.0 | 49.0 | 51.2 | 7.4 | 10.5 | 12.4 | 11 47.00 | — 0.07 | 23.32 | 23 11 23.61 | 4.67 |
| | Piscium | 33 | 48.5 | 49.9 | 52.6 | 4.4 | 6.0 | 7.7 | 9.3 | 10.9 | 23.0 | 25.4 | 26.9 | 22 7.69 | 0.10 | 23.32 | 23 21 44.27 | 3.54 |
| | Weisse 528 | 34 | 23.0 | 25.2 | 27.1 | 38.9 | 40.5 | 42.0 | 43.9 | 44.1 | 57.2 | 59.8 | 1.9 | 28 42.14 | 0.11 | 23.32 | 23 28 18.71 | 3.47 |
| | Piscium | 35 | 42.1 | 43.7 | 46.4 | 58.3 | 59.7 | 1.5 | 3.1 | 4.6 | 16.5 | 19.1 | 20.6 | 34 1.42 | 0.10 | 23.32 | 23 33 38.00 | 3.62 |
| 18 | Aquilæ | 36 | 11.7 | 13.3 | 16.0 | 27.8 | 29.4 | 31.0 | 32.6 | 34.2 | 46.3 | 48.7 | 50.2 | 58 31.02 | 0.10 | 23.45 | 19 58 7.47 | 2.49 |
| | Capricorni | 37 | 12.3 | 14.0 | 16.6 | 28.6 | 30.3 | 32.0 | 33.7 | 35.3 | 47.6 | 50.1 | 51.6 | 5 32.01 | 0.08 | 23.45 | 20 5 8.48 | 2.98 |
| | *+36° 44' | 38 | 12.2 | 14.3 | 17.2 | | | | | | | | | 11 36.17 | 0.15 | 23.45 | 20 11 12.57 | 1.78 |
| | *+36° 46' | 39 | 21.8 | 23.8 | 26.8 | | | | | | | | | 11 45.77 | 0.15 | 23.45 | 20 11 22.17 | 1.78 |
| | *+64° 17' | 40 | 40.3 | 44.4 | 50.2 | 17.3 | 20.9 | 24.7 | 28.6 | 32.3 | 59.4 | 5.1 | 8.8 | 17 24.73 | 0.33 | 23.45 | 20 17 0.95 | 0.26 |
| | *+64° 17' | 41 | 56.5 | 0.2 | 6.3 | 33.2 | 36.9 | 40.4 | 44.5 | 48.1 | 15.6 | 21.2 | 24.5 | 19 40.67 | 0.33 | 23.45 | 20 19 16.89 | 0.29 |
| | *+64° 17' | 42 | | | | 30.0 | 33.6 | 37.3 | 40.9 | 45.0 | | | | 20 37.40 | 0.35 | 23.45 | 20 20 13.60 | 0.30 |
| | B. A. C. 7087 . . . | 43 | 24.3 | 26.1 | 28.5 | 41.0 | 42.4 | 44.1 | 45.9 | 47.4 | 59.7 | 2.4 | 3.9 | 27 44.15 | 0.08 | 23.46 | 20 27 20.61 | 3.13 |
| | Lacaille 8509 . . . | 44 | 0.0 | 1.8 | 4.9 | 19.9 | 21.7 | 23.7 | 25.7 | 27.8 | 42.8 | 45.6 | 47.6 | 32 23.77 | 0.16 | 23.46 | 20 32 0.15 | 3.82 |
| | Lacaille 8537 . . . | 45 | 47.7 | 49.6 | 52.7 | 6.4 | 8.1 | 10.0 | 11.9 | 13.6 | 27.4 | 30.2 | 32.0 | 36 9.96 | 0.07 | 23.46 | 20 35 46.43 | 3.61 |
| | *-13° 57' | 46 | 33.9 | 35.4 | 38.4 | | | | | | | | | 41 53.78 | 0.07 | 23.46 | 20 41 30.25 | 3.20 |
| | Lacaille 8609 . . . | 47 | 51.7 | 53.8 | 56.9 | 11.8 | 13.7 | 15.7 | 17.8 | 19.7 | 34.7 | 37.7 | 39.4 | 46 15.72 | 0.07 | 23.46 | 20 45 52.19 | 3.91 |
| | *-19° 28' | 48 | 32.8 | 34.3 | 36.9 | 49.5 | 51.2 | 52.6 | 54.3 | 55.9 | 8.1 | 10.1 | 11.5 | 50 52.47 | 0.07 | 23.47 | 20 50 28.93 | 3.39 |
| | Weisse 1394 | 49 | 55.3 | 56.9 | 59.5 | 1.8 | 3.4 | 5.0 | 6.7 | 8.4 | 20.6 | 23.1 | 24.6 | 56 5.03 | 0.08 | 23.47 | 20 55 41.48 | 3.25 |
| | O. Arg. S. 21115 . | 50 | 1.5 | 3.3 | 5.6 | 18.1 | 19.7 | 21.4 | 23.1 | 24.8 | 37.2 | 39.7 | 41.3 | 0 21.43 | — 0.08 | —23.47 | 20 59 57.88 | — 3.35 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|---------------------------|--------------------|-----------------|--------------|--------------|
| 1876. h. Oct. 18, 22.6 | s. — 23.51 | s. — 0.025 | s. — 0.06 | s. — 0.09 |

OBSERVATIONS WITH THE MERIDIAN TRANSIT INSTRUMENT.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | | |
|-------------------------|-------------------------|--------------------|--------------------------------|------|------|------|------|------|------|-------|------|------|---------|---------------|----------|---------------------------------|-------------------------|-------------|------|------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | | | | | | |
| | | | | | | | | | | | | | | | Inst. | | | Clock. | | |
| | | | | | | | | | | | | | m. s. | m. s. | s. | h. m. s. | s. | | | |
| 1876, Oct. 18 Y. | Lacaille 8737 . . . | 1 | 18.2 | 20.5 | 23.9 | 39.6 | 41.7 | 43.8 | 45.9 | 48.1 | 3.8 | 7.2 | 9.2 | 7 43.81 | — | 0.07 | 21 7 20.27 | — | 4.21 | |
| | Lacaille 8764 . . . | 2 | 34.5 | 36.5 | 39.9 | 55.9 | 58.0 | 0.2 | 2.3 | 4.2 | 20.5 | 23.6 | 25.7 | 12 0.12 | 0.07 | 23.47 | 21 11 36.58 | — | 4.26 | |
| | Weisse 346 . . . | 3 | 36.6 | 38.4 | 40.8 | 53.0 | 54.5 | 56.2 | 57.7 | 59.4 | 1.6 | 4.2 | 5.6 | 16 56.18 | 0.08 | 23.48 | 21 16 32.62 | — | 3.31 | |
| | *+38° 6' . . . | 4 | 36.4 | 38.6 | 41.8 | 56.8 | 58.7 | 0.7 | 2.9 | 4.9 | 20.0 | 23.2 | 25.0 | 20 0.82 | 0.16 | 23.48 | 21 19 37.18 | — | 2.26 | |
| | (* 39) Washington . . . | 5 | ... | ... | ... | 31.3 | 33.0 | 35.0 | 37.0 | 38.9 | ... | ... | ... | 24 35.04 | 0.09 | 23 48 | 21 24 11.47 | — | 3.47 | |
| | B. A. C. 7509 . . . | 6 | 4.3 | 11.1 | 21.1 | 9.9 | 16.4 | 23.0 | 29.5 | 35.0 | 24.5 | 35.5 | 40.8 | 29 22.92 | 0.61 | 23.48 | 21 28 58.83 | — | 0.05 | |
| | Lacaille 8873 . . . | 7 | ... | ... | ... | 23.0 | 24.9 | 26.9 | 28.8 | 30.8 | ... | ... | ... | 33 26.88 | 0.08 | 23.48 | 21 33 3.32 | — | 4.09 | |
| | *—35° 6' . . . | 8 | ... | ... | ... | 51.0 | 52.9 | 54.9 | 56.9 | 58.8 | ... | ... | ... | 33 54.90 | 0.08 | 23.48 | 21 33 31.34 | — | 4.09 | |
| | Pegasi . . . | 9 | 12.8 | 14.5 | 17.1 | 29.1 | 30.6 | 32.3 | 34.0 | 35.5 | 47.6 | 50.2 | 51.7 | 38 32.31 | 0.10 | 23.49 | 21 38 8.72 | — | 2.98 | |
| | *—24° 14' . . . | 10 | 59.2 | 0.8 | 2.6 | 16.7 | 18.2 | 20.0 | 21.8 | 23.6 | 36.9 | 39.5 | 41.0 | 42 20.03 | 0.07 | 23.49 | 21 41 56.47 | — | 3.76 | |
| | B. A. C. 7614 . . . | 11 | ... | ... | ... | 19.0 | 21.0 | 23.1 | 24.5 | 27.4 | 42.6 | 45.9 | 47.8 | 46 31.41 | 8.49 | 23.49 | 21 45 59.43 | — | 2.46 | |
| | *—21° 22' . . . | 12 | 46.8 | 48.4 | 51.2 | 3.4 | 5.5 | 7.4 | 9.2 | 10.9 | 23.8 | 26.5 | 28.1 | 50 7.43 | 0.07 | 23.49 | 21 49 43.87 | — | 3.72 | |
| | *—12° 36' . . . | 13 | 48.6 | 50.2 | 52.4 | 5.0 | 6.5 | 8.1 | 9.8 | 11.3 | 23.4 | 25.4 | 27.0 | 54 7.97 | 0.08 | 23.49 | 21 53 44.40 | — | 3.51 | |
| | B. A. C. 7732 . . . | 14 | ... | ... | ... | 33.5 | 45.4 | 57.6 | 11.0 | 22.8 | ... | ... | ... | 2 58.06 | 1.18 | 23.50 | 22 2 33.38 | + | 0.35 | |
| | B. A. C. 7735 . . . | 15 | ... | ... | ... | 41.4 | 51.4 | 4.4 | 17.2 | 28.9 | ... | ... | ... | 3 4.60 | 1.18 | 23.50 | 22 2 39.92 | + | 0.34 | |
| | 24 Cephei . . . | 16 | 49.7 | 54.6 | 2.5 | 40.6 | 45.4 | 50.5 | 56.0 | 0.8 | 38.8 | 46.9 | 51.7 | 7 50.68 | — | 0.47 | 23.50 | 22 7 26.71 | — | 1.60 |
| | *—35° 7' . . . | 17 | 28.1 | 30.6 | 32.6 | 34.5 | 37.7 | ... | 51.4 | 54.5 | 56.5 | 58.2 | 0.7 | 15 14.48 | + | 0.02 | 23.50 | 22 14 51.00 | — | 4.25 |
| | *—35° 7' . . . | 18 | 58.3 | 0.2 | 3.5 | 18.0 | 21.9 | 24.0 | 25.6 | 40.2 | 43.3 | 46.2 | ... | 15 21.90 | — | 0.07 | 23.50 | 22 14 58.33 | — | 4.25 |
| | π Aquarii . . . | 19 | 4.4 | 6.0 | 8.5 | 20.4 | 21.8 | 23.5 | 25.1 | 26.7 | 38.6 | 41.1 | 42.6 | 19 23.52 | 0.09 | 23.50 | 22 18 59.93 | — | 3.37 | |
| | 226 Cephei . . . | 20 | 14.3 | 20.9 | 30.8 | 18.4 | 24.9 | 31.2 | 38.4 | 40.4 | 32.0 | 42.3 | 47.2 | 30 30.98 | 0.59 | 23.51 | 22 30 6.88 | — | 1.95 | |
| | *—14° 18' . . . | 21 | 53.3 | 54.9 | 57.6 | ... | ... | ... | ... | ... | 28.8 | 31.2 | 32.9 | 39 13.12 | 0.07 | 23.51 | 22 38 49.54 | — | 3.72 | |
| | *+35° 21' . . . | 22 | 53.5 | 55.9 | 57.8 | 59.9 | 2.9 | ... | 16.7 | 20.0 | 22.0 | 23.9 | 26.2 | 49 39.88 | 0.06 | 23.52 | 22 49 16.30 | — | 3.03 | |
| | *+35° 22' . . . | 23 | 19.0 | 21.0 | 24.2 | 38.7 | 40.4 | 42.4 | 44.6 | 46.5 | 1.0 | 4.0 | 6.0 | 49 42.53 | 0.15 | 23.52 | 22 19 18.86 | — | 3.03 | |
| | O. Arg. S. 22712 . . . | 24 | 13.3 | 14.9 | 17.8 | ... | ... | ... | ... | ... | 50.6 | 53.1 | 55.0 | 9 34.12 | 0.06 | 23.52 | 23 9 10.54 | — | 4.01 | |
| | α Cephei . . . | 25 | 9.7 | 14.0 | 20.6 | 51.2 | 55.6 | 59.6 | 4.2 | 8.1 | 39.5 | 45.6 | 49.5 | 13 59.78 | 0.38 | 23.53 | 23 13 35.87 | — | 3.16 | |
| | θ Piscium . . . | 26 | 48.5 | 50.1 | 52.6 | 4.7 | 6.2 | 7.8 | 9.6 | 11.0 | 23.0 | 25.5 | 26.9 | 22 7.81 | — | 0.10 | 23.53 | 23 21 44.18 | — | 3.53 |
| | Weisse 528 . . . | 27 | 22.2 | 23.7 | 26.4 | 38.5 | 40.1 | 42.0 | 43.8 | 45.4 | ... | ... | ... | 28 35.26 | + | 6.60 | 23.53 | 23 28 18.33 | — | 3.46 |
| | 75 Pegasi . . . | 28 | 48.2 | 49.8 | 52.5 | 4.8 | 6.4 | 8.1 | 10.0 | 11.5 | 24.1 | 26.7 | 28.2 | 32 8.21 | — | 0.11 | 23.53 | 23 31 44.57 | — | 3.46 |
| | B. A. C. 8273 . . . | 29 | 37.8 | 42.4 | 48.4 | 19.0 | 23.2 | 27.3 | 31.6 | 35.4 | 6.5 | 12.6 | 16.4 | 42 27.33 | 0.38 | 23.54 | 23 42 3.41 | — | 3.69 | |
| | Weisse 934 . . . | 30 | 59.5 | 1.4 | 3.8 | 15.7 | 17.3 | 18.9 | 20.6 | 22.2 | 34.1 | 36.6 | 38.2 | 47 18.94 | 0.10 | 23.54 | 23 46 55.30 | — | 3.64 | |
| | ω Piscium . . . | 31 | 4.5 | 6.2 | 8.7 | 20.7 | 22.2 | 23.9 | 25.6 | 27.0 | 39.2 | 41.6 | 43.1 | 53 23.88 | 0.10 | 23.54 | 23 53 0.24 | — | 3.65 | |
| | *+28° 21' . . . | 32 | 15.8 | 17.5 | 20.4 | 33.9 | 35.6 | 37.6 | 39.4 | 41.2 | 54.8 | 57.6 | 59.3 | 59 37.56 | 0.14 | 23.54 | 23 59 13.88 | — | 3.54 | |
| | B. A. C. 8371 . . . | 33 | 16.2 | 18.0 | 21.0 | 34.4 | 36.2 | 38.1 | 40.0 | 41.7 | 55.2 | 58.0 | 59.8 | 0 38.05 | 0.14 | 23.55 | 0 0 14.36 | — | 3.55 | |
| | *+4° 23' . . . | 34 | 37.0 | 38.6 | 41.2 | 53.1 | 54.6 | 56.2 | 57.8 | 59.6 | 11.5 | 13.7 | 15.5 | 4 56.25 | 0.10 | 23.55 | 0 4 32.60 | — | 3.70 | |
| | Weisse 97 . . . | 35 | 29.5 | 31.2 | 33.6 | 45.7 | 47.2 | 48.8 | 50.4 | 52.0 | 4.1 | 6.5 | 8.0 | 7 48.82 | 0.10 | 23.55 | 0 7 25.17 | — | 3.69 | |
| | Lalande 380 . . . | 36 | 41.3 | 43.3 | 46.5 | 1.6 | 3.4 | 5.6 | 7.7 | 9.7 | 24.5 | 27.7 | 29.9 | 15 5.56 | 0.16 | 23.55 | 0 14 41.85 | — | 3.65 | |
| | B. A. C. 105 . . . | 37 | 8.1 | 15.0 | 25.9 | 16.7 | 22.3 | 29.6 | 37.0 | 43.4 | 33.9 | 44.2 | 50.6 | 23 29.70 | 0.63 | 23.55 | 0 23 5.52 | — | 5.52 | |
| | B. A. C. 154 . . . | 38 | 46.6 | 58.4 | 16.2 | 39.1 | 50.5 | 1.3 | 13.0 | 24.1 | 47.4 | 4.8 | 15.5 | 31 1.54 | 1.05 | 23.56 | 0 30 56.93 | — | 7.75 | |
| | β Ceti . . . | 39 | 29.1 | 30.9 | 33.7 | 46.1 | 47.8 | 49.6 | 51.6 | 53.0 | 5.5 | 8.3 | 9.9 | 37 49.59 | — | 0.07 | 23.57 | 0 37 25.95 | — | 4.03 |
| | 21 | π Capricorni . . . | 40 | 17.7 | 19.3 | 21.8 | 34.3 | 36.1 | 37.7 | 39.6 | 41.2 | 53.7 | 56.4 | 58.0 | 20 37.80 | + | 0.09 | 21.42 | ... | — |
| *—21° 40' . . . | | 41 | ... | ... | ... | 41.9 | 44.2 | 46.5 | 48.6 | 50.0 | 2.3 | 5.6 | 7.0 | 26 53.26 | — | 6.87 | 21.41 | 20 26 24.98 | — | 3.27 |
| Lacaille 8509 . . . | | 42 | 57.8 | 59.6 | 2.5 | 17.4 | 19.4 | 21.5 | 23.5 | 25.4 | 10.4 | 43.5 | 45.6 | 32 21.51 | + | 0.12 | 21.41 | 20 32 0.22 | — | 3.76 |
| Lacaille 8537 . . . | | 43 | 45.5 | 47.5 | 50.3 | 4.1 | 5.9 | 7.8 | 9.7 | 11.4 | 25.1 | 28.1 | 30.0 | 36 7.77 | 0.11 | 21.41 | 20 35 46.47 | — | 3.56 | |
| *+33° 55' . . . | | 44 | 29.0 | 30.6 | 33.5 | 47.7 | 49.5 | 51.7 | 53.8 | 55.7 | 9.8 | 13.0 | 15.2 | 42 51.77 | 0.05 | 21.41 | 20 42 30.41 | — | 2.03 | |
| *—19° 30' . . . | | 45 | 6.1 | 7.6 | 10.5 | 23.0 | 24.5 | 26.3 | 28.0 | 29.7 | 42.3 | 45.1 | 46.7 | 49 26.35 | 0.09 | 21.40 | 20 49 5.04 | — | 3.34 | |
| *—19° 30' . . . | | 46 | 20.0 | 21.4 | 23.9 | 36.9 | 38.7 | 40.3 | 41.9 | 43.6 | 55.7 | 58.0 | 59.7 | 52 40.01 | + | 0.09 | 21.40 | 20 52 18.70 | — | 3.35 |
| *+37° 10' . . . | | 47 | ... | ... | ... | 21.4 | 23.6 | 25.6 | 27.7 | 29.7 | 44.5 | 47.7 | 49.8 | 56 33.75 | — | 8.07 | 21.40 | 20 56 4.28 | — | 2.01 |
| *+37° 10' . . . | | 48 | 6.9 | 9.1 | 11.3 | 13.3 | 16.6 | ... | 32.0 | 35.2 | 37.1 | 39.3 | 41.8 | 57 54.26 | — | 0.04 | 21.40 | 20 57 32.82 | — | 2.05 |
| *+37° 10' . . . | | 49 | 30.7 | 32.5 | 35.6 | 50.7 | 52.5 | 54.7 | 57.8 | 58.5 | 13.7 | 16.6 | 18.7 | 57 54.73 | + | 0.05 | 21.40 | 20 57 33.38 | — | 2.05 |
| *+70° 52' . . . | 50 | 21.2 | 25.8 | 33.4 | 9.9 | 14.4 | 19.4 | 24.4 | 29.1 | 5.1 | 12.9 | 17.8 | 3 19.40 | + | 0.07 | —21.40 | 21 2 58.07 | — | 0.04 | |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|------------------------------|-----------------|--------------|--------|--------|
| 1876. h. s. Oct. 21, 21.6 | — 21.38 | + 0.029 | — 0.05 | + 0.07 |

October 20. Image east 0°.14. Clamp west.
Image east 0°.36. Clamp east.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. |
|-------------------------|------------------------|---------|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------------|-----------------|--------------|---------------------------------|-------------------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | |
| 1876. Oct. 21 Y. | 77 Draconis . . . | 1 | 47.2 | 54.0 | 5.6 | 1.0 | 8.6 | 16.4 | 23.9 | 31.4 | 26.1 | 38.4 | 46.1 | m. s. 8 16.27 | m. s. + 0.10 | s. -21.39 | h. m. s. 21 7 54.98 | s. + 1.32 |
| | Weisse 346 . . . | 2 | 34.3 | 35.8 | 38.4 | 50.5 | 52.0 | 53.7 | 55.4 | 57.0 | 9.1 | 11.7 | 13.3 | 16 53.75 | 0.08 | 21.39 | 21 16 32.44 | - 3.27 |
| | *+23° 48' . . . | 3 | 44.5 | 45.9 | 48.6 | 1.9 | 3.4 | 5.2 | 7.0 | 8.6 | 21.5 | 23.8 | 26.0 | 19 5.13 | 0.05 | 21.39 | 21 18 43.79 | - 2.54 |
| | B. A. C. 7509 . . . | 4 | 1.7 | 7.9 | 17.7 | 7.0 | 13.1 | 18.9 | 26.4 | 32.7 | 21.6 | 31.5 | 38.5 | 29 19.82 | 0.09 | 21.38 | 21 28 58.53 | + 0.19 |
| | Rumker 9349 . . . | 5 | 45.7 | 47.3 | 50.0 | 2.2 | 3.8 | 5.6 | 7.4 | 8.8 | 21.3 | 23.8 | 25.5 | 35 5.58 | 0.09 | 21.38 | 21 34 44.29 | - 3.45 |
| | ε Pegasi . . . | 6 | 10.6 | 12.2 | 14.7 | 26.7 | 28.4 | 30.1 | 31.7 | 33.2 | 45.3 | 47.8 | 49.5 | 38 30.02 | 0.06 | 21.38 | | 2.95 |
| | *+39° 1' . . . | 7 | 56.8 | 58.6 | 1.5 | 17.0 | 19.1 | 21.4 | 23.6 | 25.3 | 40.7 | 44.1 | 46.1 | 45 21.29 | 0.05 | 21.38 | 21 44 59.96 | 2.40 |
| | *-21° 22' . . . | 8 | 44.7 | 46.3 | 48.5 | 1.7 | 3.2 | 5.0 | 7.0 | 8.8 | 20.9 | 23.9 | 25.8 | 50 5.07 | 0.09 | 21.37 | 21 49 43.79 | 3.68 |
| | *-12° 36' . . . | 9 | 46.1 | 47.8 | 50.3 | . . . | . . . | . . . | . . . | . . . | 20.9 | 23.0 | 24.6 | 54 5.45 | 0.07 | 21.37 | 21 53 44.15 | 3.48 |
| | *-27° 28' . . . | 10 | 15.0 | 16.6 | 18.9 | 32.8 | 34.2 | 36.0 | 37.9 | 39.6 | 53.3 | 56.2 | 58.0 | 58 36.23 | 0.11 | 21.37 | 21 58 14.97 | - 3.89 |
| | B. A. C. 7732 . . . | 11 | . . . | . . . | . . . | 30.3 | 41.7 | 53.8 | 6.9 | 17.6 | . . . | . . . | . . . | 2 54.06 | 0.22 | 21.37 | 22 2 32.91 | + 0.76 |
| | B. A. C. 7735 . . . | 12 | . . . | . . . | . . . | 36.4 | 47.7 | 0.5 | 12.7 | 24.4 | . . . | . . . | . . . | 3 0.34 | 0.22 | 21.37 | 22 2 39.19 | + 0.75 |
| | O. Arg. S. 22013 . . . | 13 | 55.2 | 56.6 | 59.4 | 12.4 | 14.1 | 15.9 | 17.8 | 19.6 | 32.6 | 35.3 | 37.3 | 8 16.02 | + 0.10 | 21.36 | 22 7 54.76 | - 3.84 |
| | O. Arg. S. 22051 . . . | 14 | . . . | 50.8 | 53.5 | 55.5 | . . . | . . . | 6.9 | 9.7 | 11.4 | 13.2 | 15.3 | 12 4.54 | - 29.77 | 21.36 | 22 11 13.41 | 3.76 |
| | O. Arg. S. 22060 . . . | 15 | . . . | 24.4 | 27.1 | 28.8 | . . . | . . . | 40.7 | 43.3 | 44.9 | 46.9 | 48.9 | 12 38.12 | - 29.77 | 21.36 | 22 11 46.99 | 3.76 |
| | Lacaille 9142 . . . | 16 | 4.0 | 5.6 | 8.1 | 21.3 | 22.8 | 24.9 | 26.5 | 28.2 | 41.1 | 43.8 | 45.7 | 22 24.73 | + 0.10 | 21.36 | 22 22 3.47 | 3.84 |
| | *-28° 54' . . . | 17 | 59.5 | 1.0 | 3.9 | . . . | 19.2 | 21.2 | 23.0 | . . . | 38.4 | 40.4 | 43.0 | 32 21.07 | 0.11 | 21.35 | 22 31 59.83 | 4.05 |
| | *+50° 47' . . . | 18 | 59.5 | 1.8 | 5.6 | 24.6 | 27.2 | 29.6 | 32.3 | 34.6 | 53.5 | 57.5 | 0.0 | 39 29.65 | 0.05 | 21.35 | 22 39 8.35 | 2.70 |
| | α Pegasi . . . | 19 | 40.0 | 41.5 | 44.0 | 56.4 | 57.9 | 59.6 | . . . | . . . | 15.1 | 17.9 | 19.5 | 58 59.10 | 0.64 | 21.34 | | 3.30 |
| 27 | O. Arg. S. 20884 . . . | 20 | 44.0 | 45.7 | 48.5 | 1.2 | 2.9 | 4.5 | 6.3 | 8.0 | 20.9 | 23.8 | 25.5 | 43 4.66 | 0.11 | 22.66 | 20 42 42.11 | 3.28 |
| | μ Aquarii . . . | 21 | 4.0 | 5.6 | 8.1 | 20.2 | 21.7 | 23.5 | 25.1 | 26.6 | 38.5 | 41.2 | 42.9 | 46 23.40 | 0.09 | 22.66 | 20 46 0.83 | 2.99 |
| | *-0° 0' . . . | 22 | 38.9 | 40.5 | 42.9 | . . . | . . . | . . . | . . . | . . . | 13.1 | 15.6 | 17.3 | 50 58.05 | 0.07 | 22.66 | 20 50 25.47 | 2.80 |
| | Weisse 1269 . . . | 23 | 56.1 | 57.5 | 0.1 | . . . | . . . | . . . | . . . | . . . | 30.2 | 32.7 | 34.4 | 51 15.17 | 0.07 | 22.66 | 20 50 52.58 | 2.80 |
| | *+37° 10' . . . | 24 | 2.7 | 4.4 | 7.7 | 22.6 | 24.5 | 26.7 | 28.7 | 30.7 | 45.5 | 49.0 | 50.7 | 56 26.65 | 0.06 | 22.66 | 20 56 4.05 | 1.91 |
| | *+37° 10' . . . | 25 | 7.9 | 10.3 | 12.4 | 14.4 | 17.9 | . . . | 33.2 | 36.4 | 38.2 | 40.4 | 42.7 | 57 55.38 | - 0.03 | 22.66 | 20 57 32.69 | 1.92 |
| | *+37° 10' . . . | 26 | 31.8 | 33.6 | 36.8 | 51.7 | 53.5 | 55.7 | 58.0 | 59.9 | 14.6 | 17.8 | 19.8 | 57 55.75 | + 0.06 | 22.66 | 20 57 33.15 | - 1.92 |
| | B. A. C. 7363 . . . | 27 | 2.2 | 6.3 | 14.0 | 50.6 | 55.5 | 0.6 | 5.4 | 10.1 | 40.5 | 54.1 | 59.3 | 6 0.42 | 0.10 | 22.65 | 21 5 37.87 | + 0.28 |
| | 77 Draconis . . . | 28 | . . . | . . . | . . . | 1.4 | 8.8 | 16.7 | 24.7 | 31.9 | . . . | . . . | . . . | 8 16.70 | 0.19 | 22.65 | 21 7 54.24 | + 1.93 |
| | Weisse 346 . . . | 29 | 35.5 | 37.0 | 39.5 | 51.8 | 53.2 | 55.0 | 56.7 | 58.3 | 10.5 | 12.9 | 14.7 | 16 55.01 | 0.09 | 22.65 | 21 16 32.45 | - 3.18 |
| | B. A. C. 7437 . . . | 30 | 27.8 | 29.4 | 32.0 | 45.1 | 46.7 | 48.7 | 50.4 | 52.2 | 5.0 | 8.0 | 9.7 | 18 48.64 | 0.06 | 22.65 | 21 18 26.05 | 2.44 |
| | β Cephei . . . | 31 | 30.2 | 34.6 | 41.4 | 17.0 | 21.6 | 26.3 | 31.0 | 35.6 | 10.1 | 17.6 | 22.6 | 27 26.18 | 0.10 | 22.64 | | 0.32 |
| | B. A. C. 7517 . . . | 32 | 32.0 | 33.6 | 36.1 | 48.6 | 50.3 | 51.9 | 53.5 | 55.2 | 7.4 | 10.2 | 11.7 | 31 51.86 | 0.10 | 22.64 | 21 31 29.32 | 3.36 |
| | 41 Capricorni . . . | 33 | 2.1 | 3.8 | 6.5 | 19.6 | 21.1 | 23.0 | 24.7 | 26.3 | 39.5 | 42.4 | 43.9 | 35 22.99 | 0.11 | 22.64 | 21 35 0.46 | 3.59 |
| | ε Pegasi . . . | 34 | 11.7 | 13.4 | 15.8 | 27.7 | 29.5 | 31.2 | 32.9 | 34.5 | 46.5 | 49.0 | 50.7 | 38 31.17 | 0.07 | 22.64 | 21 38 8.60 | 2.87 |
| | *+39° 1' . . . | 35 | 57.8 | 59.5 | 2.9 | 18.3 | 20.1 | 22.6 | 24.8 | 26.8 | 41.7 | 45.1 | 47.0 | 45 22.42 | 0.06 | 22.64 | 21 44 59.84 | 2.28 |
| | Weisse 1253 . . . | 36 | 7.2 | 8.7 | 11.3 | 23.5 | 25.0 | 26.8 | 28.5 | 30.2 | 42.2 | 44.9 | 46.6 | 55 26.81 | 0.09 | 22.63 | 21 55 4.27 | 3.41 |
| | Weisse 1255 . . . | 37 | 49.4 | 51.2 | 52.9 | 54.5 | 57.1 | . . . | 58.8 | 1.6 | 3.0 | 4.5 | 6.3 | 55 27.93 | 0.02 | 22.63 | 21 55 5.32 | 3.41 |
| | *+36° 48' . . . | 38 | 51.0 | 52.8 | 55.9 | 10.8 | 12.7 | 14.7 | 16.8 | 18.7 | 33.6 | 36.6 | 38.7 | 4 14.75 | 0.06 | 22.63 | 22 3 52.18 | 2.50 |
| | θ Aquarii . . . | 39 | 24.2 | 25.5 | 28.2 | 40.1 | 41.6 | 43.2 | 45.0 | 46.6 | 58.6 | 1.0 | 2.7 | 10 43.34 | 0.09 | 22.62 | 22 10.20.81 | 3.46 |
| | π Aquarii . . . | 40 | 3.3 | 4.9 | 7.4 | 19.1 | 20.7 | 22.5 | 24.0 | 25.5 | 37.5 | 40.1 | 41.7 | 19 22.43 | 0.08 | 22.62 | 22 19 59.89 | 3.26 |
| | O. Arg. S. 22197 . . . | 41 | 30.0 | 31.4 | 34.4 | 47.2 | 48.9 | 50.8 | 52.5 | 54.0 | 7.4 | 10.2 | 11.7 | 24 50.77 | + 0.11 | 22.62 | 22 24 28.26 | 3.80 |
| | *-28° 14' . . . | 42 | . . . | 55.0 | 57.7 | 59.6 | . . . | . . . | 11.9 | 14.6 | 16.6 | 18.7 | 20.8 | 29 9.36 | - 31.49 | 22.62 | 22 28 15.25 | 3.94 |
| | Lalande 44319 . . . | 43 | 29.9 | 31.5 | 34.5 | 49.5 | 51.4 | 53.6 | 55.5 | 57.4 | . . . | . . . | . . . | 33 45.41 | + 8.14 | 22.61 | 22 33 30.94 | 2.76 |
| | Weisse (2) 764 . . . | 44 | . . . | . . . | . . . | 16.1 | 18.1 | 20.1 | 22.2 | 24.1 | 38.9 | 42.1 | 44.1 | 34 28.21 | - 8.01 | 22.61 | 22 33 57.59 | 2.77 |
| | Lacaille 9271 . . . | 45 | 8.3 | 9.9 | 12.7 | 27.3 | 29.1 | 31.0 | 33.0 | 35.0 | 49.0 | 52.2 | 54.0 | 43 31.05 | + 0.13 | 22.61 | 22 43 8.57 | 4.16 |
| | Lalande 44848 . . . | 46 | 58.6 | 0.4 | 3.5 | . . . | . . . | . . . | . . . | . . . | 40.3 | 43.3 | 45.3 | 49 21.90 | 0.05 | 22.61 | 22 48 59.34 | 2.92 |
| | *+35° 20' . . . | 47 | 15.5 | 17.0 | 20.3 | . . . | . . . | . . . | . . . | . . . | 57.4 | 0.7 | 2.6 | 49 38.91 | 0.05 | 22.61 | 22 49 16.35 | 2.92 |
| | Lacaille 9338 . . . | 48 | 59.3 | 1.0 | 3.9 | 16.7 | 18.3 | 20.1 | 21.9 | 23.5 | 36.7 | 39.3 | 41.2 | 55 20.17 | + 0.11 | 22.60 | 22 54 57.68 | 3.89 |
| | Lalande 45323 . . . | 49 | . . . | . . . | . . . | 28.2 | 30.0 | 32.3 | 34.5 | 36.5 | 51.5 | 55.0 | 56.7 | 3 40.59 | - 8.18 | 22.60 | 23 3 9.81 | 3.01 |
| | O. Arg. S. 22712 . . . | 50 | 12.3 | 13.9 | 16.6 | 29.4 | 30.9 | 33.2 | 35.0 | 36.5 | 49.0 | 52.2 | 53.8 | 9 32.98 | + 0.11 | -22.60 | 23 9 10.49 | - 3.93 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|---------------------------|--------------------|-----------------|--------------|--------------|
| 1876. h. Oct. 27, 22.7 | s. - 22.61 | s. + 0.026 | s. - 0.05 | s. + 0.08 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. | | |
|-------------------------|------------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|---------------|-------|--------|---------------------------------|-------------------------|----|------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | | |
| | | | m. | s. | m. | s. | m. | s. | m. | s. | m. | s. | m. | s. | m. | s. | | | h. | m. |
| 1876. Oct. 27 Y. | +66 15' . . . | 1 | 1.5 | 6.1 | 12.0 | 41.7 | 45.5 | 49.6 | 53.8 | 57.2 | 26.9 | 33.1 | 37.2 | 20 49.51 | + | 0.08 | -22.59 | 23 20 27.00 | - | 3.03 |
| | Piscium . . . | 2 | 41.5 | 43.0 | 45.3 | 57.4 | 58.8 | 0.5 | 2.3 | 3.7 | 15.5 | 18.1 | 19.6 | 34 0.52 | | 0.08 | 22.59 | 23 33 38.01 | | 3.56 |
| | B. A. C. 8285 . . . | 3 | 57.7 | 59.3 | 1.8 | 13.7 | 15.2 | 17.1 | 18.8 | 20.4 | 32.5 | 35.1 | 36.7 | 44 17.12 | | 0.09 | 22.59 | 23 43 51.62 | | 3.79 |
| | Piscium . . . | 4 | 3.5 | 5.0 | 7.5 | 19.5 | 21.0 | 22.7 | 24.4 | 25.9 | 38.1 | 40.5 | 42.2 | 53 22.75 | | 0.08 | 22.58 | 23 53 0.25 | - | 3.63 |
| 31 | B. A. C. 7363 . . . | 5 | 3.4 | 7.9 | 15.4 | 51.9 | 56.9 | 1.9 | 6.9 | 11.8 | 48.0 | 55.6 | 0.7 | 6 1.85 | | 0.33 | 24.21 | 21 5 37.97 | + | 0.54 |
| 18 | Aquarii . . . | 6 | 32.5 | 34.1 | 36.7 | 48.9 | 50.5 | 52.2 | 54.0 | 55.5 | 7.7 | 10.3 | 12.0 | 17 52.22 | | 0.09 | 24.21 | 21 17 28.10 | - | 3.19 |
| | *+35° 18' . . . | 7 | 14.3 | 16.0 | 19.0 | 33.7 | 35.6 | 37.6 | 39.7 | 41.5 | 50.1 | 59.2 | 1.2 | 21 37.63 | | 0.12 | 24.22 | 21 21 13.53 | | 2.10 |
| β | Aquarii . . . | 8 | 9.8 | 11.4 | 13.8 | 25.7 | 27.3 | 29.0 | 30.6 | 32.2 | 44.1 | 46.7 | 48.3 | 25 28.99 | | 0.09 | 24.22 | 21 25 4.86 | | 3.06 |
| | B. A. C. 7517 . . . | 9 | 33.6 | 35.0 | 37.8 | 50.1 | 51.5 | 53.4 | 55.1 | 56.7 | 9.0 | 11.7 | 13.3 | 31 53.38 | | 0.09 | 24.22 | 21 31 29.28 | | 3.31 |
| κ | Capricorni . . . | 10 | 51.3 | 52.7 | 55.4 | 8.1 | 9.7 | 11.5 | 13.2 | 14.8 | 27.3 | 30.1 | 31.9 | 36 11.45 | | 0.09 | 24.22 | 21 35 47.32 | | 3.43 |
| ε | Pegasi . . . | 11 | 13.3 | 14.8 | 17.3 | 29.5 | 31.0 | 32.6 | 34.4 | 35.9 | 47.9 | 50.6 | 52.2 | 38 32.68 | | 0.10 | 24.22 | 21 38 8.56 | | 2.81 |
| | *-18° 57' . . . | 12 | 32.4 | 33.8 | 36.7 | 49.2 | 50.8 | 52.6 | 54.4 | 56.0 | 8.6 | 11.2 | 12.9 | 41 52.60 | + | 0.09 | 24.22 | 21 41 28.47 | | 3.44 |
| | Weisse (2) 1100 . . . | 13 | | | | 7.8 | 9.7 | 12.0 | 14.1 | 16.1 | 31.3 | 34.6 | 36.7 | 46 20.29 | - | 8.20 | 24.22 | 21 45 47.87 | | 2.21 |
| | Weisse (2) 1102 . . . | 14 | 35.1 | 37.5 | 39.7 | 41.7 | 45.1 | | 2.6 | 5.7 | 7.7 | 9.9 | 12.3 | 46 23.73 | + | 0.04 | 24.22 | 21 45 59.55 | - | 2.22 |
| | B. A. C. 7678 . . . | 15 | | | | 17.2 | 25.7 | 35.1 | 43.8 | 52.8 | | | | 56 34.92 | | 0.67 | 24.23 | 21 56 11.36 | + | 1.32 |
| ξ | Cephei, (1st *) . . . | 16 | 53.5 | 56.7 | 2.2 | 29.4 | 32.9 | 36.7 | 40.6 | 43.8 | 11.1 | 17.1 | 20.6 | 0 36.78 | | 0.25 | 24.23 | 22 0 12.80 | - | 1.38 |
| | Cephei, (2d *) . . . | 17 | 54.3 | 57.7 | 3.3 | 30.3 | 34.1 | 37.7 | 41.5 | 44.9 | 12.0 | 17.8 | 21.8 | 0 37.76 | | 0.25 | 24.23 | 22 0 13.78 | | 1.38 |
| | *-12 14' . . . | 18 | 42.9 | 44.4 | 46.9 | 59.3 | 0.8 | 2.5 | 4.1 | 5.7 | 18.1 | 20.4 | 22.2 | 6 2.48 | | 0.09 | 24.23 | 22 5 38.34 | | 3.40 |
| 44 | Aquarii . . . | 19 | 46.3 | 47.7 | 50.3 | 2.2 | 3.8 | 5.5 | 7.2 | 8.7 | 20.6 | 23.3 | 24.8 | 11 5.49 | | 0.09 | 24.23 | 22 10 41.35 | | 3.30 |
| | *-8° 6' . . . | 20 | 52.9 | 54.4 | 56.6 | 8.9 | 10.5 | 12.3 | 13.8 | 15.4 | | | | 16 5.60 | + | 6.63 | 24.23 | 22 15 48.00 | | 3.36 |
| | *-8 6' . . . | 21 | | | | 23.2 | 24.8 | 26.5 | 28.2 | 29.7 | 41.8 | 44.4 | 45.7 | 16 33.04 | - | 6.45 | 24.23 | 22 16 2.36 | | 3.36 |
| | Weisse (2) 672 . . . | 22 | 50.9 | 52.9 | 56.0 | 10.8 | 12.8 | 14.9 | 17.0 | 18.9 | 33.7 | 37.0 | 39.1 | 31 14.91 | + | 0.13 | 24.24 | 22 30 50.80 | | 2.67 |
| | Pegasi . . . | 23 | 24.6 | 26.1 | 28.6 | 40.7 | 42.2 | 44.0 | 45.7 | 47.3 | 59.4 | 1.8 | 3.5 | 35 43.99 | | 0.10 | 24.24 | 22 35 19.85 | | 3.15 |
| | *-14° 18' . . . | 24 | 53.7 | 55.4 | 57.8 | 10.4 | 11.8 | 13.6 | 15.1 | 16.8 | 29.2 | 31.0 | 32.7 | 39 13.41 | | 0.09 | 24.24 | 22 38 49.26 | | 3.59 |
| | Weisse 1017 . . . | 25 | 27.4 | 29.0 | 31.5 | 43.6 | 45.2 | 47.0 | 48.6 | 50.1 | 2.2 | 4.8 | 6.4 | 50 46.89 | | 0.09 | 24.24 | 22 50 22.74 | | 3.57 |
| | Lacaille 9338 . . . | 26 | 0.7 | 2.3 | 5.0 | 18.1 | 19.8 | 21.6 | 23.6 | 25.1 | 37.9 | 40.8 | 42.6 | 55 21.59 | | 0.09 | 24.24 | 22 54 57.44 | | 3.85 |
| | Weisse 1232 . . . | 27 | 33.0 | 34.4 | 37.0 | 49.2 | 50.8 | 52.6 | 54.1 | 55.7 | 7.8 | 10.5 | 12.1 | 59 52.47 | | 0.09 | 24.24 | 22 59 28.32 | | 3.61 |
| | Lalande 45323 . . . | 28 | 9.5 | 11.5 | 14.5 | 29.6 | 31.5 | 33.7 | 36.0 | 37.8 | 52.9 | 56.2 | 58.4 | 3 33.78 | | 0.13 | 24.25 | 23 3 9.66 | | 2.95 |
| 7 | Andromedæ . . . | 29 | 59.7 | 52.9 | 56.7 | 14.8 | 17.1 | 19.8 | 22.2 | 24.5 | 42.4 | 46.4 | 48.8 | 7 19.66 | | 0.16 | 24.25 | 23 6 55.57 | | 2.87 |
| | *-6° 17' . . . | 30 | 29.7 | 31.2 | 33.7 | | | | | | 4.0 | 6.6 | 8.2 | 11 48.90 | | 0.08 | 24.25 | 23 11 24.73 | | 3.58 |
| | *-6° 20' . . . | 31 | 39.8 | 41.3 | 44.0 | | | | | | 14.3 | 16.8 | 18.5 | 11 59.12 | | 0.08 | 24.25 | 23 11 34.95 | | 3.58 |
| 12 | Andromedæ . . . | 32 | 57.3 | 59.2 | 2.3 | 17.5 | 19.3 | 21.4 | 23.4 | 25.5 | 40.4 | 43.6 | 45.7 | 15 21.42 | | 0.13 | 24.25 | 23 14 57.30 | | 3.07 |
| | B. A. C. 8180 . . . | 33 | 34.4 | 38.8 | 46.0 | 20.5 | 25.1 | 29.8 | 34.5 | 38.5 | 12.8 | 20.3 | 25.0 | 22 29.61 | | 0.31 | 24.25 | 23 22 5.67 | | 2.94 |
| | Weisse 528 . . . | 34 | 22.7 | 24.3 | 26.8 | 39.1 | 40.6 | 42.2 | 44.0 | 45.8 | 58.1 | 0.6 | 2.4 | 28 42.42 | | 0.10 | 24.25 | 23 28 18.27 | | 3.38 |
| 18 | Andromedæ . . . | 35 | 5.8 | 8.3 | 12.0 | 30.5 | 33.0 | 35.6 | 38.0 | 40.4 | 45.8 | 7.2 | 5.1 | 33 35.45 | | 0.16 | 24.25 | 23 33 11.36 | | 3.18 |
| | Lalande 46496, (1st *) . . . | 36 | 26.9 | 28.7 | 30.5 | 32.1 | 34.7 | | | | | | | 37 30.58 | | 34.37 | 24.26 | 23 37 40.69 | | 3.52 |
| | Lalande 46496, (2d *) . . . | 37 | 45.7 | 47.2 | 49.6 | 1.7 | 3.3 | 5.0 | 6.6 | 8.1 | 20.0 | 22.6 | 24.2 | 38 4.91 | | 0.09 | 24.26 | 23 37 40.74 | | 3.52 |
| | B. A. C. 8285 . . . | 38 | 59.1 | 0.6 | 3.3 | 15.3 | 16.9 | 18.6 | 20.4 | 21.8 | 33.9 | 36.6 | 38.3 | 44 18.62 | | 0.09 | 24.26 | 23 43 54.45 | | 3.76 |
| | Lalande 46836 . . . | 39 | 50.6 | 52.7 | 55.7 | 11.0 | 12.0 | 15.2 | 17.2 | 19.3 | 34.4 | 37.6 | 39.8 | 48 15.05 | | 0.13 | 24.26 | 23 47 50.92 | | 3.36 |
| ω | Piscium . . . | 40 | 5.2 | 6.7 | 9.2 | 21.2 | 22.6 | 24.5 | 26.1 | 27.6 | 39.5 | 42.1 | 43.8 | 53 24.41 | | 0.09 | 24.26 | 23 53 0.24 | | 3.60 |
| 2 | Ceti . . . | 41 | 31.1 | 32.8 | 35.4 | 47.8 | 49.4 | 51.2 | 53.0 | 54.6 | 7.1 | 9.7 | 11.4 | 57 51.23 | | 0.09 | 24.26 | 23 57 27.06 | | 3.92 |
| 4 | Ceti . . . | 42 | 31.7 | 33.1 | 35.7 | 47.5 | 49.0 | 50.7 | 52.5 | 53.8 | 5.8 | 8.5 | 10.0 | 1 50.75 | | 0.09 | 24.26 | 0 1 26.58 | | 3.72 |
| | Weisse 89 . . . | 43 | 48.4 | 50.1 | 52.4 | 4.5 | 6.2 | 7.8 | 9.4 | 10.9 | 22.9 | 25.4 | 27.0 | 7 7.73 | + | 0.09 | 24.26 | 0 6 43.56 | | 3.65 |
| | Weisse 97 . . . | 44 | | | | 46.0 | 47.6 | 49.3 | 50.9 | 52.6 | 4.4 | 7.0 | 8.7 | 7 55.81 | - | 6.42 | 24.26 | 0 7 25.13 | | 3.65 |
| | *+37° 31' . . . | 45 | 34.9 | 36.9 | 40.0 | 55.0 | 57.0 | 59.2 | 1.1 | 3.1 | 18.0 | 22.2 | 23.4 | 13 59.16 | + | 0.13 | 24.27 | 0 13 35.02 | | 3.59 |
| | *+0° 27' . . . | 46 | 59.6 | 1.1 | 3.6 | 15.4 | 17.1 | 18.7 | 20.4 | 21.9 | 33.8 | 36.4 | 38.0 | 20 18.73 | | 0.09 | 24.27 | 0 19 51.55 | | 3.75 |
| κ | Cassiopeæ . . . | 47 | 45.0 | 48.4 | 53.4 | 18.8 | 22.4 | 26.2 | 29.7 | 33.0 | 58.4 | 3.9 | 7.5 | 26 26.06 | | 0.23 | 24.27 | 0 26 2.02 | | 4.11 |
| | B. A. C. 154 . . . | 48 | | | | 37.0 | 48.0 | 0.4 | 11.6 | 22.6 | | | | 30 59.92 | | 0.84 | 24.27 | 0 30 36.49 | | 7.09 |
| | *+1° 4' . . . | 49 | 40.8 | 42.4 | 44.9 | 56.8 | 58.3 | 0.0 | 1.7 | 3.2 | 15.0 | 17.6 | 19.2 | 35 59.99 | | 0.09 | 24.27 | 0 35 35.81 | | 3.80 |
| | Weisse 694 . . . | 50 | 25.2 | 26.6 | 28.8 | 41.3 | 42.7 | 44.4 | 45.9 | 47.5 | 59.4 | 2.0 | 3.5 | 41 44.30 | + | 0.09 | -24.28 | 0 41 20.11 | - | 3.81 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|------------------------|--------------------|-----------------|--------------|--------------|
| 1876. Oct. 31, 23.3 | h. s. - 24.25 | s. - 0.018 | s. + 0.02 | s. + 0.09 |

4. Very unsteady.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. | |
|---------------------------------|-----------------------|---------------------|--------------------------------|------|------|------|------|------|------|-------|------|------|----------|------------------|----------|-------------|---------------------------------|-------------------------|--------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | |
| 1876. Oct. 31 Y. | Weisse (2) 1172 . . . | 1 | 44.1 | 45.7 | 48.9 | 3.8 | 5.7 | 7.8 | 9.8 | 11.9 | 26.7 | 29.9 | 31.8 | m. s. 47 7.83 | + | 0.13 | —24.28 | h. m. s. 0 46 43.68 | — 3.85 |
| | 64 Ceti | 2 | 39.8 | 41.3 | 43.8 | 50.1 | 57.6 | 59.3 | 1.0 | 2.5 | 14.7 | 17.4 | 18.9 | 52 59.31 | 0.09 | 24.28 | 0 52 35.12 | 3.95 | |
| | ε Piscium | 3 | 39.2 | 40.8 | 43.2 | 55.3 | 56.8 | 58.5 | 0.2 | 1.7 | 13.6 | 16.2 | 17.8 | 56 58.48 | 0.09 | 24.28 | 0 56 34.29 | 3.83 | |
| | Weisse 1078 | 4 | 7.0 | 8.5 | 11.1 | 23.3 | 24.8 | 26.4 | 28.1 | 29.6 | 41.7 | 44.2 | 45.9 | 2 26.42 | 0.10 | 24.28 | 1 2 24.24 | 3.85 | |
| | 34 Ceti. | 5 | 33.8 | 35.4 | 37.8 | 49.8 | 51.4 | 53.0 | 54.8 | 56.2 | 8.1 | 10.6 | 12.2 | 5 53.01 | 0.09 | 24.28 | 1 5 28.82 | 3.90 | |
| | Rumker 572 | 6 | 27.8 | 29.3 | 31.8 | 43.8 | 45.3 | 46.9 | 48.7 | 50.2 | 2.0 | 4.6 | 6.3 | 10 46.97 | 0.09 | 24.28 | 1 10 22.78 | 3.88 | |
| | Polaris | 7 | .. | .. | .. | .. | 13.0 | 28.0 | 35.0 | .. | .. | .. | .. | 14 25.33 | 4.91 | 24.29 | .. | 44.83 | |
| | η Piscium | 8 | 59.4 | 0.9 | 3.5 | 15.7 | 17.5 | 19.2 | 20.8 | 22.4 | 34.7 | 37.2 | 38.9 | 25 19.11 | 0.10 | 24.29 | 1 24 54.92 | 3.94 | |
| | Nov. 1 | μ Aquarii | 9 | 5.1 | 6.6 | 9.0 | 21.2 | 22.7 | 24.5 | 26.1 | 27.6 | 39.7 | 42.3 | 43.9 | 46 24.43 | 0.08 | 23.75 | 20 46 0.76 | 2.91 |
| | | *—19° 37' | 10 | 6.9 | 8.3 | 11.0 | 23.7 | 25.2 | 27.1 | 28.9 | 30.4 | 43.1 | 45.7 | 47.5 | 52 27.07 | 0.08 | 23.75 | 20 52 3.40 | 3.19 |
| η Microscopii | | 11 | 22.8 | 24.8 | 28.2 | 44.2 | 46.3 | 48.5 | 50.7 | 52.8 | 8.8 | 12.1 | 14.4 | 58 48.51 | 0.08 | 23.71 | 20 58 24.85 | — 3.91 | |
| 77 Draconis | | 12 | 48.3 | 54.9 | 6.6 | 2.6 | 9.6 | 17.4 | 25.3 | 32.4 | 27.6 | 39.4 | 46.8 | 8 17.35 | 0.64 | 23.74 | 21 7 54.25 | + 2.44 | |
| Weisse (2) 322 | | 13 | 26.1 | 28.0 | 31.1 | .. | .. | .. | .. | .. | 9.6 | 12.8 | 14.7 | 14 50.38 | 0.15 | 23.73 | 21 14 26.80 | — 1.93 | |
| Weisse (2) 328 | | 14 | 43.3 | 45.2 | 48.4 | .. | .. | .. | .. | .. | 26.8 | 29.9 | 32.0 | 15 7.60 | + | 0.15 | 23.73 | 21 14 44.02 | 1.93 |
| 18 Aquarii | | 15 | .. | .. | .. | 48.2 | 49.8 | 51.6 | 53.3 | 54.9 | 7.1 | 9.8 | 11.4 | 17 58.26 | — | 6.57 | 23.73 | 21 17 27.96 | — 3.17 |
| O. Arg. N. 22321 | | 16 | 11.6 | 15.9 | 22.9 | 57.9 | 2.5 | 7.3 | 12.2 | 16.6 | 51.1 | 58.3 | 3.3 | 24 7.24 | + | 0.40 | 23.72 | 21 23 43.92 | + 0.03 |
| B. A. C. 7509 | | 17 | 2.9 | 9.0 | 19.1 | 8.1 | 14.1 | 21.0 | 27.7 | 34.1 | 22.9 | 33.0 | 39.7 | 29 21.05 | 0.57 | 23.72 | 21 28 57.90 | + 1.12 | |
| Weisse (2) 816 | | 18 | 36.9 | 38.7 | 42.1 | 58.4 | 0.5 | 2.7 | 4.9 | 7.2 | 23.4 | 26.7 | 29.0 | 34 2.77 | 0.17 | 23.72 | 21 33 39.22 | — 1.96 | |
| *+36° 58' | | 19 | 1.0 | 2.9 | 6.0 | 20.9 | 22.8 | 25.0 | 27.0 | 28.9 | 43.7 | 46.9 | 49.0 | 37 24.92 | 0.15 | 23.72 | 21 37 1.35 | 2.17 | |
| *—18° 57' | | 20 | 31.9 | 33.5 | 36.1 | 48.7 | 50.3 | 51.9 | 53.7 | 55.4 | 8.0 | 10.7 | 12.3 | 41 52.05 | 0.08 | 23.71 | 21 41 28.42 | 3.43 | |
| μ Capricorni | | 21 | 39.4 | 40.8 | 43.4 | 55.6 | 57.3 | 59.0 | 0.8 | 2.3 | 14.5 | 17.1 | 18.9 | 46 59.01 | 0.08 | 23.71 | 21 46 35.38 | 3.36 | |
| Rumker 163 | | 22 | 30.5 | 32.0 | 34.7 | 47.7 | 49.1 | 50.9 | 52.9 | 54.4 | 7.1 | 9.7 | 11.5 | 51 50.95 | 0.08 | 23.71 | 21 51 27.32 | 3.54 | |
| O. Arg. S. 21800 | | 23 | 8.2 | 9.6 | 12.2 | 25.2 | 26.6 | 28.2 | 30.1 | 32.0 | 44.7 | 47.5 | 49.0 | 54 28.48 | 0.08 | 23.70 | 21 54 4.86 | 3.54 | |
| B. A. C. 7675 | | 24 | 39.0 | 40.8 | 43.5 | 57.1 | 58.9 | 0.7 | 2.6 | 4.3 | 17.6 | 20.5 | 22.3 | 58 0.66 | 0.08 | 23.70 | 21 57 37.04 | 3.73 | |
| B. A. C. 7810, (1st*) | | 25 | .. | .. | .. | 21.2 | 24.0 | 29.0 | 33.2 | 36.8 | .. | .. | .. | 18 29.02 | 0.36 | 23.69 | 22 18 5.69 | 1.55 | |
| B. A. C. 7810, (2d*) | | 26 | 42.4 | 46.3 | 52.3 | .. | .. | .. | .. | .. | 6.7 | 13.6 | 17.2 | 18 29.65 | 0.31 | 23.69 | 22 18 6.27 | 1.55 | |
| 37 Pegasi | | 27 | 49.5 | 51.0 | 53.5 | 5.4 | 7.0 | 8.6 | 10.3 | 11.7 | 23.7 | 26.2 | 27.9 | 24 8.62 | + | 0.09 | 23.68 | 22 23 45.03 | 3.17 |
| O. Arg. S. 22224 | | 28 | .. | .. | .. | .. | .. | .. | .. | .. | 55.2 | 58.2 | 0.0 | 28 57.80 | — | 19.53 | 23 68 | 22 28 14.59 | 3.88 |
| *+37° 10' | 29 | .. | 33.8 | 37.1 | 39.0 | .. | .. | 53.0 | 56.1 | 58.0 | 0.0 | 2.7 | 31 49.96 | — | 34.80 | 23 68 | 22 30 51.48 | 2.65 | |
| B. A. C. 7941 | 30 | 31.6 | 40.6 | 55.9 | 9.9 | 19.7 | 30.3 | 40.0 | 49.8 | 3.5 | 19.1 | 29.3 | 39 29.97 | + | 0.87 | 23.67 | 22 39 7.17 | 0.46 | |
| Lalande 44860 | 31 | 34.5 | 36.1 | 38.5 | 50.4 | 53.0 | 55.0 | 56.8 | 58.4 | 11.0 | 13.7 | 15.5 | 50 54.8 | 0.08 | 23.66 | 22 50 31.23 | 3.77 | | |
| Lacaille 9336 | 32 | 49.4 | 51.0 | 53.7 | 6.6 | 8.4 | 10.2 | 11.9 | 13.7 | 26.6 | 29.4 | 31.1 | 55 10.18 | 0.08 | 23.66 | 22 54 46.60 | 3.85 | | |
| Weisse 1232 | 33 | 32.5 | 34.0 | 36.6 | 48.6 | 50.3 | 51.9 | 53.6 | 55.2 | 7.4 | 9.8 | 11.5 | 59 51.95 | 0.08 | 23.66 | 22 59 28.37 | 3.60 | | |
| O. Arg. S. 22666 | 34 | 38.5 | 40.4 | 42.3 | 43.9 | 46.7 | .. | 50.0 | 52.5 | 54.3 | 56.0 | 57.8 | 6 18.24 | 0.00 | 23.65 | 23 5 54.59 | 3.76 | | |
| O. Arg. S. 22670 | 35 | 50.0 | 51.8 | 53.6 | 55.2 | 57.9 | .. | 1.1 | 3.8 | 5.5 | 7.4 | 9.2 | 6 29.55 | 0.00 | 23.65 | 23 6 5.90 | 3.76 | | |
| ψ Gruis | 36 | 21.3 | 23.3 | 26.8 | 42.5 | 44.5 | 46.8 | 49.0 | 51.2 | 7.0 | 10.4 | 12.6 | 11 46.85 | 0.08 | 23 65 | 23 11 23.28 | 4.46 | | |
| Lalande 45758 | 37 | 8.6 | 10.1 | 12.5 | 24.5 | 26.0 | 27.7 | 29.3 | 30.8 | 42.8 | 45.3 | 46.9 | 16 27.68 | 0.09 | 23.65 | 23 16 4.12 | 3.51 | | |
| B. A. C. 8180 | 38 | 33.8 | 38.4 | 45.3 | 19.5 | 24.2 | 29.1 | 33.8 | 38.1 | 12.4 | 19.6 | 24.3 | 22 28.95 | 0.39 | 23.64 | 23 22 5.70 | 2.90 | | |
| Lacaille 9524 | 39 | 22.5 | 24.4 | 27.3 | 42.1 | 43.9 | 45.9 | 48.0 | 49.9 | 4.6 | 7.7 | 9.8 | 28 46.01 | 0.08 | 23.64 | 23 28 22.45 | 4.29 | | |
| ι Piscium | 40 | 42.3 | 43.8 | 46.2 | 58.2 | 59.8 | 1.5 | 3.2 | 4.7 | 16.5 | 19.0 | 20.8 | 34 1.45 | 0.09 | 23.63 | 23 33 37.91 | 3.54 | | |
| B. A. C. 8273 | 41 | 37.4 | 41.3 | 47.5 | 18.1 | 22.0 | 26.5 | 30.8 | 34.7 | 5.2 | 11.6 | 16.0 | 42 26.46 | 0.35 | 23.63 | 23 42 3.18 | 3.36 | | |
| B. A. C. 8296 | 42 | 12.2 | 13.8 | 16.5 | 29.4 | 30.9 | 32.7 | 34.6 | 36.2 | 48.9 | 51.7 | 53.4 | 46 32.75 | + | 0.11 | 23.63 | 23 46 9.23 | 3.43 | |
| *+20° 59' | 43 | 5.4 | 8.0 | 9.9 | .. | .. | 21.6 | 24.3 | 25.9 | 27.7 | 29.9 | .. | 47 19.09 | — | 29.72 | 23.63 | 23 46 25.74 | 3.43 | |
| ψ Pegasi | 44 | 32.6 | 34.2 | 36.9 | 50.0 | 51.7 | 53.5 | 55.3 | 57.0 | 10.2 | 12.8 | 14.5 | 51 53.52 | + | 0.12 | 23.62 | 23 51 30.02 | 3.44 | |
| Lacaille 9701 | 45 | 43.6 | 45.2 | 48.3 | 3.0 | 4.9 | 6.9 | 8.8 | 10.7 | 25.3 | 28.6 | 30.5 | 57 6.89 | 0.08 | 23.62 | 23 56 43.35 | 4.32 | | |
| Lacaille 9723 | 46 | 23.7 | 25.4 | 28.5 | 43.3 | 45.0 | 47.1 | 49.3 | 51.2 | 6.2 | 9.4 | 11.3 | 0 47.31 | 0.08 | 23.62 | 0 0 23.77 | 4.36 | | |
| *+4° 23' | 47 | 37.0 | 38.5 | 41.0 | 52.9 | 54.5 | 56.1 | 57.8 | 58.4 | 11.3 | 13.8 | 15.6 | 4 56.08 | 0.09 | 23.61 | 0 4 32.56 | 3.65 | | |
| Weisse 97 | 48 | 29.5 | 31.0 | 33.5 | 45.5 | 47.0 | 48.7 | 50.4 | 51.8 | 3.8 | 6.3 | 8.0 | 7 48.68 | 0.10 | 23 61 | 0 7 25.17 | 3.65 | | |
| Weisse 164 | 49 | 15.7 | 17.2 | 19.6 | 31.6 | 33.1 | 34.8 | 36.4 | 37.9 | 49.8 | 52.4 | 54.1 | 11 34.78 | + | 0.09 | —23.61 | 0 11 11.26 | — 3.72 | |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------------------|--------------------|-----------------|--------------|--------------|
| 1876. h. Nov. 1, 23.7 | s. — 23.63 | s. + 0.041 | s. + 0.05 | s. + 0.09 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | |
|-------------------------|--------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|----------|---------------|-------|---------------------------------|-------------------------|-------------|--------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | |
| | | | m. | s. | m. | s. | s. | h. | m. | s. | s. | | | | | | | | |
| 1876. Nov. 1 Y. | Weisse 245 . . . | 1 | 37.0 | 38.6 | 41.0 | 53.0 | 54.6 | 56.3 | 57.9 | 59.4 | 11.3 | 13.8 | 15.5 | 15 56.22 | + | 0.10 | -23.61 | 0 15 32.71 | - 3.69 |
| | *+0° 27' . . . | 2 | 59.1 | 0.7 | 3.0 | 15.0 | 16.5 | 18.1 | 19.8 | 21.4 | 33.2 | 35.8 | 37.5 | 20 18.19 | | 0.09 | 23.60 | 0 19 54.68 | 3.74 |
| | Groombridge 73 . | 3 | 23.9 | 25.9 | 29.3 | 45.5 | 47.6 | 49.7 | 52.2 | 54.2 | 10.4 | 13.8 | 16.1 | 24 49.87 | | 0.17 | 23.60 | 0 24 26.44 | 3.71 |
| | (127) Washington. | 4 | 23.4 | 25.0 | 27.4 | 39.2 | 40.8 | 42.5 | 44.1 | 45.7 | 57.5 | 0.1 | 1.6 | 29 42.48 | | 0.09 | 23.60 | 0 29 18.97 | 3.78 |
| | *+1° 4' . . . | 5 | 40.4 | 41.8 | 44.4 | 56.3 | 57.8 | 59.4 | 1.1 | 2.7 | 14.6 | 17.1 | 18.7 | 35 59.48 | | 0.09 | 23.59 | 0 35 35.98 | 3.79 |
| | β Ceti | 6 | 29.4 | 30.9 | 33.4 | 45.9 | 47.6 | 49.5 | 51.2 | 52.8 | 5.3 | 8.1 | 9.7 | 37 49.44 | | 0.08 | 23.59 | 0 37 25.93 | 4.02 |
| | O. Arg. S. 443 . | 7 | 21.9 | 23.4 | 26.2 | 38.1 | 39.7 | 41.3 | 42.9 | 44.5 | 59.2 | 2.1 | 3.8 | 43 42.77 | | 0.07 | 23.59 | 0 43 19.25 | 4.09 |
| | O. Arg. S. 447 . | 8 | 33.9 | 35.5 | 38.1 | 50.0 | 51.6 | 53.2 | 54.8 | 56.4 | 11.2 | 13.8 | 15.6 | 43 54.68 | | 0.07 | 23.59 | 0 43 31.16 | 4.09 |
| | *+1° 55' . . . | 9 | 9.5 | 11.0 | 13.4 | 25.5 | 26.9 | 28.7 | 30.3 | 31.9 | 43.9 | 16.2 | 47.8 | 52 28.65 | | 0.09 | 23.58 | 0 52 5.16 | 3.84 |
| | Weisse 972 . . . | 10 | 43.1 | 44.6 | 47.0 | 59.1 | 0.7 | 2.4 | 4.1 | 5.7 | 17.7 | 20.3 | 21.9 | 57 2.42 | + | 0.10 | 23.58 | 0 56 38.94 | 3.83 |
| | Weisse 980 . . . | 11 | 47.5 | 50.1 | 51.7 | 63.8 | 65.4 | 67.0 | 68.6 | 70.2 | 82.2 | 8.7 | 10.7 | 58 0.52 | - | 28.13 | 23.58 | 0 57 8.81 | 3.83 |
| | 34 Ceti | 12 | 33.3 | 34.8 | 37.4 | 49.4 | 50.8 | 52.6 | 54.3 | 55.8 | 7.6 | 10.2 | 11.8 | 5 52.55 | + | 0.09 | 23.57 | 1 5 29.07 | 3.90 |
| | Weisse 89 . . . | 13 | 56.5 | 58.0 | 0.5 | 12.5 | 13.8 | 15.6 | 17.2 | 18.8 | 30.7 | 33.4 | 35.0 | 8 15.64 | | 0.09 | 23.57 | 1 7 52.16 | 3.89 |
| | Polaris | 14 | 5.0 | 5.0 | 5.0 | 13.0 | 13.0 | 13.0 | 13.0 | 13.0 | 40.0 | 40.0 | 40.0 | 14 23.00 | | 6.41 | 23.57 | 1 14 23.00 | 44.75 |
| | *+15° 0' . . . | 15 | 32.4 | 34.0 | 36.6 | 48.8 | 50.5 | 52.3 | 53.8 | 55.4 | 7.7 | 10.4 | 12.2 | 26 52.19 | | 0.11 | 23.56 | 1 26 28.74 | 3.94 |
| | Weisse 557 . . . | 16 | 3.7 | 5.6 | 7.4 | 9.0 | 11.5 | 13.7 | 16.3 | 18.0 | 19.7 | 21.7 | 33 42.66 | | 0.03 | 23.56 | 1 33 19.13 | 3.97 | |
| | Weisse 558 . . . | 17 | 23.6 | 25.0 | 27.6 | 40.0 | 41.5 | 43.2 | 45.0 | 46.6 | 58.8 | 1.3 | 3.0 | 33 43.24 | | 0.11 | 23.56 | 1 33 19.79 | 3.97 |
| | α Piscium . . . | 18 | 59.0 | 0.5 | 3.0 | 15.0 | 16.6 | 18.4 | 20.0 | 21.5 | 33.5 | 36.1 | 37.7 | 39 18.30 | | 0.10 | 23.55 | 1 38 54.85 | 3.97 |
| | *+36° 44' . . . | 19 | 44.8 | 47.1 | 49.1 | 51.2 | 54.5 | 57.8 | 61.1 | 64.4 | 12.7 | 14.6 | 16.8 | 45 1.97 | | 0.06 | 23.55 | 1 44 38.48 | 4.26 |
| | *+36° 40' . . . | 20 | 12.7 | 14.5 | 17.6 | 32.5 | 35.4 | 36.6 | 38.8 | 40.8 | 55.4 | 58.5 | 0.3 | 45 36.65 | | 0.15 | 23.55 | 1 45 13.25 | 4.26 |
| | β Arietis . . . | 21 | 54.6 | 56.4 | 58.8 | 70.5 | 72.1 | 73.8 | 75.4 | 77.0 | 89.4 | 91.8 | 94.1 | 48 15.01 | | 0.11 | 23.54 | 1 47 51.58 | 4.06 |
| | 3 ζ Cygni | 22 | 42.4 | 44.1 | 47.0 | 0.6 | 2.5 | 4.4 | 6.2 | 8.0 | 21.7 | 24.7 | 26.5 | 8 4.37 | | 0.14 | 22.79 | 21 7 41.72 | 2.09 |
| | Weisse (2) 322 . | 23 | 45.3 | 47.4 | 49.0 | 61.1 | 62.7 | 64.3 | 65.9 | 67.5 | 8.6 | 11.9 | 13.9 | 14 57.76 | + | 0.17 | 22.80 | 21 14 26.88 | 1.88 |
| | Weisse (2) 328 . | 24 | 25.9 | 29.0 | 31.3 | 45.2 | 48.5 | 50.5 | 52.6 | 54.8 | 12.7 | 14.6 | 16.8 | 15 42.22 | - | 35.31 | 22.80 | 21 14 44.11 | 1.89 |
| | *+38° 4' . . . | 25 | 53.3 | 55.0 | 58.0 | 70.5 | 72.1 | 73.8 | 75.4 | 77.0 | 89.4 | 91.8 | 94.1 | 19 17.42 | + | 0.17 | 22.80 | 21 18 54.79 | 1.93 |
| | *+38° 4' . . . | 26 | 24.9 | 26.9 | 29.1 | 41.2 | 43.2 | 45.2 | 47.2 | 49.2 | 61.2 | 63.2 | 65.2 | 20 29.02 | | 0.18 | 22.80 | 21 20 6.40 | 1.94 |
| | *-25° 45' . . . | 27 | 39.4 | 41.0 | 43.6 | 57.2 | 58.6 | 60.0 | 61.4 | 62.8 | 74.2 | 76.6 | 78.0 | 27 0.61 | + | 0.09 | 22.81 | 21 26 37.89 | 3.50 |
| | *+38° 4' . . . | 28 | 4.4 | 7.4 | 9.7 | 23.6 | 27.0 | 28.9 | 31.2 | 33.7 | 30.7 | 32.7 | 34.7 | 30 20.74 | - | 35.31 | 22.81 | 21 29 22.72 | 2.03 |
| | 41 Capricorni . | 29 | 2.1 | 3.6 | 6.5 | 19.5 | 21.2 | 22.9 | 24.9 | 26.5 | 39.5 | 42.4 | 44.1 | 35 23.02 | + | 0.09 | 22.82 | 21 35 0.29 | 3.49 |
| | ε Pegasi | 30 | 28.0 | 29.5 | 31.1 | 43.2 | 44.7 | 46.3 | 47.8 | 49.4 | 61.4 | 63.9 | 65.8 | 38 37.79 | - | 6.45 | 22.82 | 21 38 8.52 | 2.78 |
| | B. A. C. 7599 . | 31 | 5.2 | 6.6 | 9.2 | 21.6 | 23.0 | 24.8 | 26.5 | 28.0 | 40.3 | 42.8 | 44.5 | 43 24.77 | + | 0.09 | 22.83 | 21 43 2.03 | 3.27 |
| | μ Capricorni . | 32 | 38.3 | 39.8 | 42.5 | 54.6 | 56.2 | 58.0 | 59.7 | 1.3 | 13.6 | 16.0 | 17.8 | 46 57.98 | | 0.09 | 22.83 | 21 46 35.24 | 3.34 |
| | Weisse (2) 1196 . | 33 | 5.4 | 7.4 | 10.3 | 24.9 | 26.9 | 29.0 | 31.0 | 32.9 | 47.4 | 50.6 | 52.5 | 50 28.94 | + | 0.16 | 22.83 | 21 50 6.27 | 2.28 |
| | *-12° 36' . . . | 34 | 21.9 | 25.0 | 26.6 | 38.2 | 40.5 | 42.1 | 44.1 | 46.3 | 58.8 | 61.1 | 63.3 | 54 35.59 | - | 28.45 | 22.83 | 21 53 44.31 | 3.31 |
| | 42 Aquarii . . . | 35 | 16.0 | 17.5 | 20.0 | 32.4 | 33.9 | 35.7 | 37.4 | 38.9 | 51.2 | 53.7 | 55.5 | 10 35.65 | + | 0.09 | 22.85 | 22 10 12.89 | 3.41 |
| | Weisse (2) 349 . | 36 | 41.3 | 43.2 | 46.3 | 58.8 | 60.7 | 62.6 | 64.5 | 66.4 | 78.8 | 80.7 | 82.6 | 17 5.23 | | 0.16 | 22.86 | 22 16 42.53 | 2.50 |
| | *+36° 36' . . . | 37 | 47.1 | 49.3 | 51.5 | 63.8 | 65.4 | 67.0 | 68.6 | 70.2 | 82.2 | 84.8 | 86.4 | 17 51.36 | | 0.17 | 22.86 | 22 17 28.67 | 2.51 |
| | *+36° 33' . . . | 38 | 56.6 | 58.6 | 1.4 | 16.5 | 18.4 | 20.4 | 22.4 | 24.3 | 39.0 | 42.3 | 44.3 | 21 20.38 | | 0.16 | 22.86 | 22 20 57.68 | 2.54 |
| | 8 Lacertae (1st *) | 39 | 58.3 | 0.6 | 2.5 | 4.7 | 8.4 | 12.1 | 15.8 | 19.5 | 30.7 | 32.7 | 35.2 | 30 46.72 | | 0.08 | 22.87 | 22 30 23.93 | 2.58 |
| | 8 Lacertae (2d *) | 40 | 22.3 | 24.1 | 27.3 | 42.5 | 44.7 | 46.7 | 49.0 | 50.9 | 6.2 | 9.5 | 11.5 | 30 46.79 | | 0.17 | 22.87 | 22 30 24.09 | 2.58 |
| | ζ Pegasi | 41 | 23.2 | 24.6 | 27.1 | 39.2 | 40.8 | 42.6 | 44.3 | 45.9 | 57.8 | 0.4 | 2.2 | 35 42.55 | | 0.11 | 22.87 | 22 35 19.79 | 3.11 |
| | 4 ε Aquarii . . . | 42 | 16.3 | 17.8 | 20.4 | 32.3 | 33.9 | 35.6 | 37.2 | 38.8 | 51.0 | 53.5 | 54.9 | 31 35.61 | + | 0.09 | 23.60 | 21 31 12.10 | 3.09 |
| | 41 Capricorni . | 43 | 40.5 | 43.2 | 45.0 | 57.0 | 59.7 | 1.4 | 3.0 | 5.3 | 35.4 | 37.9 | 39.4 | 35 54.39 | - | 30.36 | 23.60 | 21 35 0.43 | 3.48 |
| | B. A. C. 7584 . | 44 | 24.2 | 25.9 | 28.5 | 41.8 | 43.5 | 45.3 | 47.2 | 48.8 | 1.9 | 4.6 | 6.5 | 40 45.29 | + | 0.13 | 23.60 | 21 40 21.82 | 2.44 |
| | B. A. C. 7586 . | 45 | 28.0 | 30.8 | 32.4 | 44.5 | 47.3 | 49.0 | 50.8 | 53.0 | 65.1 | 67.8 | 69.5 | 41 41.98 | - | 30.59 | 23.60 | 21 40 47.79 | 2.44 |
| | μ Capricorni . | 46 | 39.1 | 40.8 | 43.3 | 55.4 | 57.0 | 58.8 | 60.4 | 62.2 | 74.4 | 76.0 | 78.6 | 46 58.82 | + | 0.09 | 23.60 | 21 46 35.31 | 3.32 |
| | B. A. C. 7644 . | 47 | 43.9 | 49.0 | 53.8 | 59.2 | 64.5 | 69.8 | 75.1 | 80.4 | 92.8 | 95.1 | 97.4 | 50 54.08 | | 0.50 | 23.61 | 21 50 30.97 | - 0.14 |
| | B. A. C. 7678 . | 48 | 47.4 | 55.7 | 9.2 | 16.1 | 24.5 | 34.2 | 43.5 | 51.9 | 58.8 | 12.8 | 22.5 | 56 34.24 | | 0.83 | 23.61 | 21 56 11.46 | + 1.73 |
| | B. A. C. 7732 . | 49 | 31.0 | 42.9 | 54.8 | 7.3 | 17.7 | 29.6 | 41.5 | 53.4 | 65.3 | 77.2 | 89.1 | 2 54.74 | | 1.18 | 23.61 | 22 2 32.31 | 2.86 |
| | B. A. C. 7735 . | 50 | 37.3 | 48.7 | 1.4 | 13.1 | 24.5 | 35.9 | 47.3 | 58.7 | 70.1 | 81.5 | 92.9 | 3 1.00 | + | 1.18 | -23.61 | 22 2 38.57 | + 2.86 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------|--------------------|-----------------|--------|--------|
| 1876. h. s. | s. | s. | s. | s. |
| Nov. 3, 21.8 | - 22.83 | - 0.053 | + 0.05 | + 0.10 |
| 4, 22.8 | - 23.63 | - 0.026 | + 0.05 | + 0.10 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | |
|-------------------------|----------------------|------------------|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------------|--------------|--------|---------------------------------|-------------------------|-------------|------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | | |
| 1876. Nov. 4 Y. | B. A. C. 7759 . . . | 1 | 42.8 | 45.7 | 50.6 | 15.0 | 18.0 | 21.6 | 24.9 | 27.8 | 51.4 | 57.0 | 0.3 | m. s. | m. | s. | h. m. s. | s. | | |
| | O. Arg. S. 22070 . . | 2 | . . . | . . . | . . . | 57.3 | 59.0 | 0.6 | 2.5 | 4.3 | 17.2 | 20.0 | 21.8 | 13 7.84 | + | 0.29 | -23.61 | 22 7 58.05 | - 1.60 | |
| | Weisse (2) 349. . . | 3 | 42.4 | 44.5 | 47.5 | . . . | . . . | . . . | . . . | . . . | 24.7 | 28.2 | 30.2 | 17 6.17 | + | 0.15 | 23.62 | 22 12 37.21 | 3.67 | |
| | Pegasi . . . | 4 | 49.4 | 50.6 | 53.3 | 5.2 | 6.8 | 8.5 | 10.0 | 11.7 | 23.5 | 26.2 | 27.7 | 24 8.47 | | 0.10 | 23.62 | 22 16 42.70 | 2.48 | |
| | B. A. C. 7861 . . . | 5 | 41.9 | 43.5 | 46.2 | 58.3 | 59.8 | 1.5 | 3.2 | 4.7 | 16.8 | 19.5 | 21.0 | 28 1.49 | | 0.09 | 23.62 | 22 23 44.95 | 3.14 | |
| 9 | Lacertæ . . . | 6 | 12.5 | 14.9 | 19.0 | 38.0 | 40.4 | 43.1 | 45.7 | 48.1 | 6.7 | 11.0 | 13.5 | 32 42.99 | | 0.22 | 23.62 | 22 27 37.96 | 3.41 | |
| | *+50° 47' . . . | 7 | . . . | . . . | . . . | 28.6 | 31.0 | 33.9 | 36.0 | 38.5 | . . . | . . . | . . . | 38 33.60 | | 0.24 | 23.63 | 22 32 19.59 | 2.31 | |
| | Lalande 44918 . . | 8 | 55.1 | 57.0 | 0.1 | 15.1 | 17.4 | 19.5 | 21.7 | 23.6 | 38.7 | 42.1 | 44.0 | 52 19.48 | | 0.17 | 23.63 | 22 38 10.21 | 2.39 | |
| | Pegasi . . . | 9 | 42.1 | 43.8 | 46.2 | 58.5 | 0.1 | 1.7 | 3.5 | 5.1 | 17.4 | 20.1 | 21.7 | 59 1.84 | | 0.12 | 23.63 | 22 51 56.02 | 2.75 | |
| | O. Arg. S. 22666 . . | 10 | 57.8 | 59.4 | 1.8 | . . . | . . . | . . . | 33.9 | 36.5 | 38.2 | . . . | . . . | 6 17.93 | | 0.08 | 23.64 | 22 59 38.32 | 3.17 | |
| a | O. Arg. S. 22670 . . | 11 | 9.3 | 10.8 | 13.1 | . . . | . . . | . . . | 45.3 | 47.9 | 49.6 | . . . | . . . | 6 29.33 | | 0.08 | 23.64 | 23 5 54.37 | 3.73 | |
| | *-6° 17' . . . | 12 | 29.0 | 30.6 | 3.0 | . . . | . . . | . . . | 3.3 | 5.9 | 7.5 | . . . | . . . | 11 48.22 | | 0.09 | 23.64 | 23 6 5.77 | 3.73 | |
| | *-6° 15' . . . | 13 | 39.1 | 40.7 | 43.2 | . . . | . . . | . . . | 13.6 | 16.3 | 17.8 | . . . | . . . | 11 58.44 | | 0.09 | 23.64 | 23 11 24.67 | 3.54 | |
| | *+66° 22' . . . | 14 | . . . | . . . | . . . | 31.6 | 35.3 | 39.5 | 43.8 | 47.6 | . . . | . . . | . . . | 17 39.56 | | 0.39 | 23.64 | 23 11 34.89 | 3.54 | |
| | B. A. C. 8180 . . . | 15 | 34.3 | 35.9 | 45.9 | 20.0 | 24.7 | 29.3 | 33.9 | 38.5 | 13.0 | 20.0 | 24.6 | 22 29.57 | | 0.42 | 23.64 | 23 17 16.31 | 2.71 | |
| ε | Piscium . . . | 16 | 42.8 | 43.8 | 46.3 | 58.2 | 59.7 | 1.5 | 3.0 | 4.5 | 16.5 | 18.9 | 20.5 | 34 1.38 | | 0.11 | 23.64 | 23 22 6.15 | 2.78 | |
| | Aquarii, (1st *) . | 17 | 21.7 | 23.6 | 25.5 | 27.0 | 30.0 | . . . | 33.6 | 36.4 | 38.1 | 39.9 | 41.9 | 40 1.77 | | 0.01 | 23.65 | 23 48 29.46 | 3.62 | |
| | Aquarii, (2d *) . | 18 | 41.6 | 43.1 | 45.9 | 58.6 | 0.1 | 1.9 | 3.7 | 5.4 | 17.9 | 20.7 | 22.4 | 40 1.94 | | 0.09 | 23.65 | 23 43 54.36 | 3.74 | |
| | B. A. C. 8285 . . . | 19 | 58.4 | 59.6 | 2.5 | 14.7 | 16.2 | 18.0 | 19.6 | 21.1 | 33.3 | 35.8 | 37.6 | 44 17.92 | | 0.09 | 23.65 | 23 48 29.46 | 3.62 | |
| | B. A. C. 8311 . . . | 20 | 33.9 | 35.3 | 38.0 | 49.7 | 51.4 | 53.0 | 54.7 | 56.3 | 8.0 | 10.6 | 12.3 | 48 53.02 | | 0.10 | 23.66 | 23 53 0.32 | 3.59 | |
| ω | Piscium . . . | 21 | 4.6 | 6.2 | 8.7 | 20.6 | 22.1 | 23.9 | 25.7 | 27.2 | 39.0 | 41.5 | 43.1 | 53 23.87 | | 0.11 | 23.66 | 1 0 7.11 | 4.31 | |
| | Cassiopeæ . . . | 22 | 57.6 | 0.5 | 4.7 | 25.0 | 27.7 | 30.6 | 33.4 | 36.1 | 56.4 | 0.7 | 3.3 | 0 30.55 | | 0.24 | 23.68 | . . . | 47.38 | |
| | Polaris . . . | 23 | . . . | . . . | . . . | 16.0 | 22.0 | 33.0 | 42.0 | 49.0 | . . . | . . . | . . . | 14 32.40 | + | 6.70 | 23.69 | . . . | . . . | |
| | 7 | Pegasi . . . | 24 | 14.3 | 16.2 | 18.6 | 30.9 | 32.2 | 33.7 | 35.6 | 37.2 | 49.3 | 51.8 | 53.6 | 38 33.93 | - | 0.17 | 25.31 | 21 38 8.45 | 2.72 |
| | | Capricorni . . . | 25 | 40.9 | 42.6 | 45.3 | 57.6 | 59.1 | 0.8 | 2.5 | 4.2 | 16.5 | 19.0 | 20.6 | 47 0.83 | | 0.10 | 25.31 | 21 46 35.42 | 3.28 |
| B. A. C. 7644 . . . | | 26 | . . . | 59.7 | 8.1 | 46.4 | 51.2 | 56.1 | 1.6 | 6.6 | 45.3 | 53.3 | . . . | 50 56.48 | | 1.05 | 25.31 | 21 50 30.12 | 0.06 | |
| Weisse (2) 1331 . . | | 27 | 58.1 | 0.1 | 3.2 | 17.5 | 19.3 | 21.4 | 23.6 | 25.3 | 39.5 | 42.6 | 44.5 | 55 21.37 | | 0.29 | 25.32 | 21 54 55.76 | 2.29 | |
| Pegasi . . . | | 28 | 3.8 | 5.6 | 8.6 | 22.1 | 23.8 | 25.7 | 27.5 | 29.2 | 42.5 | 45.6 | 47.4 | 0 25.64 | | 0.26 | 25.32 | 22 0 0.06 | 2.47 | |
| 50 | *+36° 48' . . . | 29 | 53.5 | 55.5 | 58.7 | 13.4 | 15.5 | 17.5 | 19.7 | 21.5 | 36.5 | 39.5 | 41.4 | 4 17.52 | | 0.31 | 25.32 | 22 3 51.89 | 2.30 | |
| | Piazzi 33 . . . | 30 | 29.0 | 30.8 | 33.5 | 45.9 | 47.5 | 49.2 | 50.9 | 52.6 | 5.0 | 7.6 | 9.1 | 8 49.19 | | 0.20 | 25.32 | 22 8 23.67 | 2.77 | |
| | Aquarii . . . | 31 | 53.8 | 55.8 | 58.6 | 11.5 | 13.0 | 15.0 | 16.8 | 18.3 | 31.3 | 33.7 | 35.6 | 15 14.85 | | 0.08 | 25.32 | 22 14 49.45 | 3.58 | |
| | Aquarii . . . | 32 | 57.5 | 59.2 | 1.7 | 14.1 | 15.6 | 17.3 | 19.0 | 20.5 | 32.0 | 35.5 | 37.0 | 18 17.30 | | 0.10 | 25.32 | 22 17 51.88 | 3.41 | |
| | Lacaille 9196 . . . | 33 | 51.2 | 53.5 | 56.6 | 11.9 | 14.1 | 16.2 | 18.2 | 20.3 | 25.6 | 28.8 | 40.8 | 32 16.11 | | 0.03 | 25.32 | 22 31 50.76 | 4.15 | |
| 12 | *-21° 28' . . . | 34 | . . . | 21.0 | 23.0 | 25.4 | . . . | . . . | 37.2 | 40.0 | 41.7 | 43.4 | 45.6 | 39 34.77 | | 29.91 | 25.32 | 22 38 39.54 | 3.66 | |
| | O. Arg. N. 24689 . . | 35 | 28.0 | 30.8 | 35.6 | 57.7 | 1.1 | 4.1 | 7.1 | 10.1 | 32.4 | 37.3 | 40.0 | 43 4.02 | | 0.56 | 25.32 | 22 42 38.14 | 2.18 | |
| | Lacaille 9292 . . . | 36 | 32.2 | 34.6 | 37.4 | 53.0 | 55.0 | 57.2 | 59.1 | 1.2 | 17.0 | 20.2 | 22.2 | 46 57.19 | | 0.03 | 25.32 | 22 46 31.84 | 4.24 | |
| | Weisse 1232 . . . | 37 | 34.2 | 35.9 | 38.4 | 50.5 | 52.0 | 53.7 | 55.4 | 56.9 | 9.2 | 11.6 | 13.3 | 59 53.74 | | 0.11 | 25.33 | 22 59 28.30 | 3.54 | |
| | Weisse (2) 34 . . . | 38 | 10.4 | 12.6 | 15.7 | 30.5 | 32.5 | 34.4 | 36.5 | 38.2 | 53.0 | 56.2 | 58.0 | 4 34.36 | | 0.31 | 25.33 | 23 4 8.72 | 2.89 | |
| 19 | Weisse (2) 35 . . . | 39 | 50.1 | 53.2 | 55.5 | 57.4 | 0.4 | . . . | 15.0 | 18.2 | 20.0 | 22.0 | 24.5 | 4 37.69 | | 0.22 | 25.33 | 23 4 12.14 | 2.89 | |
| | O. Arg. S. 22712 . . | 40 | 14.9 | 16.9 | 19.5 | 32.3 | 34.1 | 35.8 | 37.5 | 39.3 | 52.3 | 54.9 | 56.6 | 9 35.83 | | 0.08 | 25.33 | 23 9 10.42 | 3.82 | |
| | *+66° 17' . . . | 41 | 24.0 | 28.6 | 34.3 | . . . | . . . | . . . | . . . | . . . | 49.2 | 55.6 | 59.3 | 20 11.83 | | 0.74 | 25.33 | 23 19 45.76 | 2.67 | |
| | Andromedæ . . . | 42 | 58.7 | 0.7 | 4.0 | 18.8 | 20.7 | 22.9 | 24.8 | 26.9 | 42.0 | 45.0 | 46.9 | 15 22.85 | | 0.33 | 25.33 | 23 14 57.19 | 2.98 | |
| | *+66° 15' . . . | 43 | 5.1 | 8.7 | 15.3 | . . . | . . . | . . . | . . . | . . . | 30.2 | 36.5 | 40.0 | 20 52.63 | | 0.74 | 25.33 | 23 20 26.56 | 2.69 | |
| ω | Lalande 46188 . . | 44 | 39.1 | 41.1 | 44.4 | 59.2 | 1.1 | 3.3 | 5.3 | 7.2 | 22.0 | 25.3 | 27.3 | 29 3.21 | | 0.31 | 25.33 | 23 28 37.57 | 3.12 | |
| | Andromedæ . . . | 45 | 7.1 | 9.7 | 13.7 | 32.1 | 34.3 | 37.0 | 39.3 | 41.7 | 0.4 | 4.4 | 6.5 | 33 36.93 | | 0.43 | 25.33 | 23 33 11.17 | 3.07 | |
| | B. A. C. 8252 . . . | 46 | 1.0 | 3.3 | 7.5 | 27.1 | 29.6 | 32.5 | 35.2 | 37.8 | 57.5 | 1.3 | 3.9 | 37 32.43 | | 0.47 | 25.33 | 23 37 6.63 | 3.11 | |
| | Groombridge 4142 . . | 47 | 11.8 | 16.0 | 19.7 | 23.1 | 28.6 | . . . | 41.7 | 47.5 | 51.2 | 54.8 | 59.2 | 42 35.36 | | 0.50 | 25.33 | 23 42 9.53 | 3.17 | |
| | *+63° 6' . . . | 48 | 0.2 | 4.2 | 10.1 | 36.6 | 40.1 | 43.1 | 46.9 | 50.5 | 16.8 | 22.3 | 25.7 | 42 43.32 | | 0.66 | 25.33 | 23 42 17.33 | 3.17 | |
| ω | B. A. C. 8311 . . . | 49 | 35.8 | 37.3 | 39.9 | 51.8 | 53.2 | 55.0 | 56.6 | 58.1 | 10.1 | 11.5 | 14.0 | 48 54.86 | | 0.14 | 25.33 | 23 48 29.39 | 3.60 | |
| | Piscium . . . | 50 | 6.3 | 8.0 | 10.6 | 22.6 | 24.0 | 25.7 | 27.3 | 28.9 | 41.0 | 43.5 | 44.9 | 53 25.71 | - | 0.16 | -25.33 | 23 53 0.22 | - 3.57 | |

CORRECTIONS, &c.

November 6. Image east of 34. Clamp east.
Image of 00. Clamp west.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------------------|-----------------|---------------|--------------|--------------|
| 1876. h. Nov. 7, 23.4 | s. - 25.33 | s. - 0.010 | s. - 0.18 | s. - 0.14 |

| Date and ob- server. | OBJECT | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0 | | |
|-------------------------|-----------------------|---------|--------------------------------|------|------|------|----------|------|------|-------|----------|------|------|---------------|-------|---------------------------------|------------------------|-------------|--------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | |
| | | | m. s. | | s. | | h. m. s. | | s. | | h. m. s. | | s. | | m. s. | | | h. m. s. | |
| 1876. Nov. 7 Y. | Lacaille 9701 . . . | 1 | 45.0 | 47.1 | 50.3 | 4.7 | 6.7 | 8.8 | 10.8 | 12.6 | 27.3 | 30.3 | 32.2 | 57 8.71 | — | 0.04 | —25.34 | 23 56 43.33 | — 4.26 |
| | Lacaille 9723 . . . | 2 | 25.2 | 27.0 | 30.3 | 45.1 | 47.0 | 48.9 | 51.1 | 53.1 | 8.1 | 11.1 | 13.0 | 0 49.08 | — | 0.04 | 25.34 | 0 0 23.70 | 4.30 |
| | Pegasi . . . | 3 | 0.4 | 1.9 | 4.6 | 16.9 | 18.5 | 20.1 | 21.7 | 23.5 | 35.9 | 38.4 | 39.9 | 7 20.16 | — | 0.19 | 25.34 | 0 6 54.63 | 3.56 |
| | Andromedæ . . . | 4 | 41.6 | 43.9 | 47.0 | 2.0 | 3.9 | 6.0 | 8.3 | 10.0 | 25.1 | 28.4 | 30.1 | 11 6.03 | — | 0.32 | 25.34 | 0 10 40.37 | 3.51 |
| | Weisse 245 . . . | 5 | 38.8 | 40.6 | 43.0 | 55.0 | 56.5 | 58.2 | 59.8 | 1.4 | 13.4 | 16.0 | 17.5 | 15 58.20 | — | 0.16 | 25.34 | 0 15 32.70 | 3.66 |
| | B. A. C. 105 . . . | 6 | 9.9 | 16.8 | 27.0 | 18.1 | 24.0 | 31.7 | 38.5 | 45.0 | 35.2 | 46.3 | 52.3 | 23 31.35 | — | 1.33 | 25.34 | 0 23 4.68 | 4.88 |
| | B. A. C. 134 . . . | 7 | 48.0 | 59.8 | 17.6 | 40.8 | 52.0 | 4.1 | 15.2 | 25.2 | 49.0 | 7.2 | 17.8 | 31 3.42 | — | 2.23 | 25.34 | 0 30 35.85 | 6.76 |
| | B. A. C. 225 . . . | 8 | .. | .. | .. | 35.2 | 47.5 | 1.2 | 14.5 | 27.8 | .. | .. | .. | 44 1.24 | — | 2.70 | 25.34 | 0 43 33.20 | 8.41 |
| | *+1° 36' . . . | 9 | .. | .. | .. | 33.6 | 35.2 | 37.0 | 38.5 | 40.0 | .. | .. | .. | 49 36.86 | — | 0.15 | 25.34 | 0 49 11.37 | 3.82 |
| | Rumker N. F. 451 . | 10 | 25.3 | 26.7 | 29.3 | 41.2 | 42.7 | 44.6 | 46.6 | 48.3 | 58.8 | 2.1 | 3.5 | 53 44.46 | — | 0.15 | 25.34 | 0 53 18.97 | 3.83 |
| | Weisse 980 . . . | 11 | 14.9 | 16.5 | 19.0 | 31.1 | 32.6 | 34.3 | 36.0 | 37.6 | 49.7 | 52.2 | 53.6 | 57 34.32 | — | 0.17 | 25.34 | 0 57 8.81 | 3.83 |
| | Polaris . . . | 12 | .. | .. | .. | 28.0 | 34.0 | 42.0 | 54.0 | 2.0 | .. | .. | .. | 14 44.0 | — | 18.61 | 25.35 | .. | 43.50 |
| | B. A. C. 466 . . . | 13 | 28.6 | 30.6 | 33.8 | 48.8 | 50.9 | 52.9 | 55.0 | 56.6 | 11.8 | 15.0 | 17.0 | 27 52.82 | — | 0.04 | 25.35 | 1 27 27.43 | 4.33 |
| | *+7° 57' . . . | 14 | .. | .. | .. | 37.4 | 39.0 | 40.6 | 42.4 | 43.9 | 56.0 | 58.4 | 0.0 | 39 47.21 | — | 6.71 | 25.35 | 1 39 15.15 | 3.98 |
| | β Arietis . . . | 15 | 56.8 | 58.5 | 1.2 | 13.8 | 15.5 | 17.3 | 19.0 | 20.5 | 33.5 | 36.0 | 37.5 | 48 17.24 | — | 0.22 | 25.35 | 1 47 51.67 | 4.09 |
| | *+38° 6' . . . | 16 | .. | .. | .. | 16.7 | 18.6 | 20.9 | 23.2 | 25.0 | .. | .. | .. | 19 20.88 | — | 0.16 | 26.04 | 21 18 54.68 | 1.83 |
| | *+38° 6' . . . | 17 | 38.7 | 40.8 | 43.9 | 59.2 | 1.1 | 3.0 | 5.2 | 7.1 | 22.5 | 25.9 | 27.5 | 20 3.17 | — | 0.15 | 26.04 | 21 19 36.98 | 1.83 |
| | *+38° 3' . . . | 18 | .. | .. | .. | 51.4 | 54.9 | 56.3 | .. | .. | 10.4 | 13.9 | 15.5 | 17.8 | 20.2 | 35.40 | 26.04 | 21 20 6.11 | 1.84 |
| | B. A. C. 7467 . . . | 19 | 24.3 | 26.0 | 28.9 | 42.1 | 43.5 | 45.7 | 47.5 | 49.2 | 2.4 | 5.1 | 6.9 | 23 45.60 | — | 0.17 | 26.05 | 21 23 19.38 | 3.41 |
| | *+38° 2' . . . | 20 | .. | .. | .. | 6.5 | 8.1 | 9.8 | 12.2 | 13.8 | 29.3 | 32.6 | 34.4 | 29 18.34 | — | 8.38 | 26.05 | 21 28 43.91 | 1.92 |
| | Weisse (2) 871 . . . | 21 | 53.3 | 55.3 | 58.5 | .. | .. | .. | .. | .. | 34.9 | 37.8 | 39.6 | 36 16.57 | — | 0.13 | 26.05 | 21 35 50.39 | 2.10 |
| | *+34° 6' . . . | 22 | 11.2 | 13.0 | 16.2 | .. | .. | .. | .. | .. | 52.7 | 55.8 | 57.6 | 36 34.42 | — | 0.13 | 26.05 | 21 36 8.24 | 2.11 |
| | Pegasi . . . | 23 | .. | .. | .. | 50.0 | 52.5 | 53.9 | .. | .. | 4.9 | 7.8 | 9.3 | 10.9 | 12.9 | 28.27 | 26.05 | 21 38 8.45 | 2.71 |
| | B. A. C. 7599 . . . | 24 | 8.5 | 10.1 | 12.9 | 25.1 | 26.7 | 28.3 | 29.9 | 31.6 | 43.8 | 46.5 | 47.9 | 43 28.30 | — | 0.16 | 26.05 | 21 43 2.09 | 3.21 |
| | Lacaille 8952 . . . | 25 | 58.5 | 0.6 | 3.6 | 18.5 | 20.5 | 22.5 | 24.5 | 26.5 | 41.3 | 44.5 | 46.4 | 47 22.49 | — | 0.21 | 26.06 | 21 46 56.22 | 3.85 |
| | Rumker 163 . . . | 26 | 33.0 | 34.7 | 37.5 | 50.2 | 51.7 | 53.7 | 55.3 | 57.0 | 9.8 | 12.6 | 14.3 | 51 53.62 | — | 0.17 | 26.06 | 21 51 27.39 | 3.44 |
| | B. A. C. 7678 . . . | 27 | .. | .. | .. | 20.0 | 28.2 | 36.8 | 46.8 | 55.2 | .. | .. | .. | 56 37.40 | — | 0.62 | 26.06 | .. | 2.20 |
| | Cephei, (1st *) . . . | 28 | 12.0 | 16.7 | 20.2 | 23.7 | 29.8 | .. | .. | .. | 47.5 | 53.1 | 57.0 | 0.4 | 4.8 | 0.07 | 26.06 | 22 0 12.39 | 1.05 |
| | Cephei, (2d *) . . . | 29 | 55.7 | 59.6 | 5.0 | 32.3 | 36.0 | 39.7 | 43.1 | 47.1 | 14.3 | 19.8 | 23.4 | 0 39.64 | — | 0.24 | 26.06 | 22 0 13.34 | 1.05 |
| | O. Arg. S. 21972 . | 30 | 4.4 | 6.0 | 9.2 | 21.6 | 23.0 | 24.9 | 27.1 | 28.5 | 41.4 | 43.7 | 45.6 | 6 25.04 | — | 0.17 | 26.07 | 22 5 58.80 | 3.53 |
| | O. Arg. S. 21979 . | 31 | 11.2 | 13.0 | 15.8 | .. | .. | .. | .. | .. | 48.4 | 51.0 | 53.0 | 6 32.07 | — | 0.16 | 26.07 | 22 6 5.84 | 3.53 |
| | Aquarii . . . | 32 | 31.2 | 32.9 | 35.5 | 47.6 | 49.1 | 50.9 | 52.8 | 54.2 | 6.5 | 9.0 | 10.6 | 12 50.94 | — | 0.16 | 26.07 | 22 12 24.71 | 3.37 |
| | Weisse (2) 349 . . . | 33 | 44.2 | 46.7 | 51.3 | 4.5 | 6.4 | 8.3 | 10.2 | 12.3 | 27.7 | 31.2 | 33.0 | 17 8.72 | — | 0.14 | 26.07 | 22 16 42.51 | 2.41 |
| | *-31° 5' . . . | 34 | 20.7 | 22.3 | 25.3 | 39.4 | 41.0 | 42.8 | 44.6 | 46.6 | 0.5 | 3.5 | 5.0 | 23 42.88 | — | 0.14 | 26.08 | 22 23 16.66 | 3.84 |
| | η Aquarii . . . | 35 | 9.3 | 10.9 | 13.4 | 25.3 | 26.8 | 28.5 | 30.3 | 31.6 | 43.6 | 46.0 | 47.5 | 29 28.47 | — | 0.14 | 26.08 | 22 29 2.25 | 3.21 |
| | ζ Pegasi . . . | 36 | 26.4 | 28.0 | 30.6 | 42.8 | 44.3 | 46.0 | 47.6 | 49.1 | 1.5 | 3.9 | 5.3 | 35 45.95 | — | 0.14 | 26.08 | 22 35 19.73 | 3.06 |
| | *-14° 18' . . . | 37 | .. | .. | .. | 43.5 | 45.0 | 46.6 | 48.5 | 50.7 | .. | .. | .. | 38 46.86 | — | 0.15 | 26.08 | 22 38 20.63 | 3.50 |
| | *-14° 18' . . . | 38 | .. | .. | .. | 31.3 | 33.8 | 35.5 | .. | .. | 46.5 | 49.2 | 50.8 | 52.6 | 55.1 | 28.78 | 26.08 | 22 38 49.49 | 3.50 |
| | O. Arg. N. 24689 . | 39 | 28.3 | 30.6 | 36.2 | .. | 1.6 | 4.8 | 7.7 | .. | 33.3 | 37.8 | 40.5 | 43 4.53 | — | 0.20 | 26.09 | 22 42 38.24 | 2.15 |
| | O. Arg. S. 22514 . | 40 | 10.7 | 12.6 | 15.4 | 28.7 | 30.4 | 32.4 | 34.0 | 35.9 | 49.3 | 52.0 | 53.6 | 51 32.27 | — | 0.18 | 26.09 | 22 51 6.00 | 3.83 |
| | Weisse 47 . . . | 41 | 4.4 | 6.0 | 8.7 | 20.4 | 22.0 | 23.6 | 25.4 | 26.9 | 38.9 | 41.2 | 42.9 | 5 23.67 | — | 0.14 | 26.10 | 23 4 57.43 | 3.34 |
| | B. A. C. 8094 . . . | 42 | 21.4 | 23.0 | 25.5 | 37.4 | 39.0 | 40.7 | 42.4 | 43.9 | 55.8 | 58.3 | 59.7 | 9 40.65 | — | 0.14 | 26.10 | 23 9 14.41 | 3.46 |
| | 12 Andromedæ . . . | 43 | 59.5 | 1.2 | 4.5 | 19.5 | 21.4 | 23.4 | 25.7 | 27.6 | 42.6 | 45.8 | 47.6 | 15 23.53 | — | 0.15 | 26.10 | 23 14 57.28 | 2.97 |
| | Radcliffe 6081 . . . | 44 | 20.2 | 23.3 | 27.4 | 47.6 | 50.5 | 53.2 | 56.3 | 58.7 | 19.1 | 23.2 | 26.1 | 21 53.24 | — | 0.18 | 26.11 | 23 21 26.95 | 2.85 |
| | *+54° 8' . . . | 45 | 48.6 | 51.6 | 54.8 | 57.5 | 1.7 | .. | .. | .. | 44.6 | 49.1 | 51.6 | 54.5 | 57.7 | 0.06 | 26.11 | 23 21 27.00 | 2.85 |
| | ι Piscium . . . | 46 | 45.0 | 46.6 | 49.0 | 0.8 | 2.4 | 4.1 | 5.7 | 7.3 | 19.2 | 21.8 | 23.4 | 34 4.12 | — | 0.14 | 26.11 | 23 33 37.87 | 3.48 |
| | ω Piscium . . . | 47 | 7.2 | 8.7 | 11.4 | 23.4 | 24.7 | 26.5 | 28.0 | 29.7 | 41.8 | 44.2 | 45.7 | 53 26.48 | — | 0.14 | 26.12 | 23 53 0.22 | 3.56 |
| | o Leonis . . . | 48 | 41.9 | 43.7 | 46.3 | 58.3 | 0.0 | 1.6 | 3.3 | 4.8 | 16.7 | 19.4 | 20.9 | 35 1.54 | — | 0.14 | 26.62 | 9 34 34.78 | 2.92 |
| | ε Leonis . . . | 49 | 57.4 | 59.4 | 2.3 | 15.0 | 16.8 | 18.5 | 20.5 | 22.1 | 35.4 | 37.8 | 39.4 | 39 18.60 | — | 0.14 | 26.62 | 9 38 51.84 | 3.20 |
| | μ Leonis . . . | 50 | 50.9 | 52.9 | 55.7 | 9.0 | 10.7 | 12.5 | 14.4 | 15.2 | 29.4 | 32.2 | 33.8 | 46 12.43 | — | 0.14 | —26.62 | 9 45 45.67 | 3.19 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------|--------------------|-----------------|--------|--------|
| 1876. h. s. | s. | s. | s. | s. |
| Nov. 8, 22.8 | — 26.09 | — 0.032 | + 0.04 | — 0.14 |
| 9.9 | — 26.63 | — 0.049 | + 0.04 | — 0.14 |

42. Blurred.
47. Cloudy.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | |
|-------------------------|---------------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|---------------|--------------|--------|---------------------------------|-------------------------|-------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | |
| | | | | | | | | | | | | | | | | | | | |
| 1876. Nov. 8 T. | Uranus | 1 | 26.8 | 28.6 | 31.1 | 43.4 | 45.0 | 46.7 | 48.5 | 50.1 | 2.4 | 4.8 | 6.3 | 49 46.70 | m. s. | m. s. | s. | h. m. s. | s. |
| | π Leonis | 2 | 49.7 | 51.4 | 53.8 | 5.9 | 7.4 | 9.0 | 10.7 | 12.3 | 24.5 | 26.9 | 28.4 | 54 9.09 | 0.14 | 0.14 | 26.63 | 9 53 42.32 | 2.77 |
| | Moon II | 3 | 32.6 | 34.3 | 37.1 | 49.3 | 51.0 | 52.7 | 54.6 | 55.8 | 8.6 | 11.3 | 13.0 | 2 52.75 | 0.13 | 0.13 | 26.64 | 10 2 25.98 | . . |
| | γ ¹ Leonis | 4 | 17.3 | 18.9 | 21.4 | 34.1 | 35.9 | 37.8 | 39.5 | 41.0 | 53.8 | 56.7 | 58.2 | 13 37.69 | 0.13 | 0.13 | 26.64 | 10 13 10.92 | 2.88 |
| 22 Y. | ε Delphini | 5 | 25.5 | 27.2 | 29.8 | 41.9 | 43.4 | 45.1 | 46.7 | 48.3 | 0.4 | 3.0 | 4.6 | 27 45.08 | 0.14 | 0.14 | 25.53 | 20 27 19.41 | 2.06 |
| | Lalande 41086 | 6 | 20.3 | 22.4 | 25.7 | 40.8 | 42.7 | 44.9 | 47.0 | 48.9 | 4.2 | 7.2 | 9.0 | 4 44.83 | 0.28 | 0.28 | 25.51 | 21 4 19.04 | 1.41 |
| | 29 Capricorni | 7 | 1.1 | 3.1 | 5.7 | 18.1 | 19.7 | 21.5 | 23.2 | 24.7 | 37.2 | 39.7 | 41.3 | 9 21.39 | 0.10 | 0.10 | 25.51 | 21 8 55.78 | 2.91 |
| | 15 Aquarii | 8 | 49.7 | 51.3 | 53.8 | 5.7 | 7.3 | 8.9 | 10.7 | 12.3 | 24.3 | 26.7 | 28.2 | 12 8.99 | 0.11 | 0.11 | 25.51 | 21 11 43.37 | 2.69 |
| | 34 Vulpeculæ | 9 | 34.9 | 36.6 | 39.4 | 52.4 | 53.8 | 55.7 | 57.4 | 59.2 | 12.1 | 14.8 | 16.5 | 15 55.71 | 0.17 | 0.17 | 25.51 | 21 15 30.03 | 2.02 |
| | B. A. C. 7437 | 10 | 30.2 | 32.1 | 34.9 | 47.8 | 49.4 | 51.3 | 53.0 | 54.6 | 8.0 | 10.5 | 12.2 | 18 51.27 | 0.17 | 0.17 | 25.51 | 21 18 25.99 | 2.03 |
| | B. A. C. 7467 | 11 | 23.5 | 25.4 | 28.0 | 41.3 | 42.8 | 44.8 | 46.8 | 48.5 | 1.8 | 4.5 | 5.9 | 23 44.85 | 0.09 | 0.09 | 25.50 | 21 23 19.26 | 3.21 |
| | ρ Cygni | 12 | 19.2 | 21.2 | 24.9 | 41.7 | 44.0 | 46.4 | 48.6 | 50.8 | 7.7 | 11.2 | 13.3 | 29 46.27 | 0.27 | 0.27 | 25.50 | 21 29 20.50 | 1.34 |
| | d Aquarii | 13 | 24.8 | 26.4 | 28.9 | 40.8 | 42.4 | 44.0 | 45.6 | 47.2 | 59.1 | 1.6 | 3.1 | 33 43.99 | 0.12 | 0.12 | 25.50 | 21 33 18.37 | 2.66 |
| | ε Pegasi | 14 | 14.5 | 16.0 | 18.7 | 30.6 | 32.2 | 33.9 | 35.6 | 37.1 | 49.2 | 51.7 | 53.2 | 38 33.88 | 0.14 | 0.14 | 25.50 | 21 38 8.24 | 2.53 |
| | Weisse (2) 1031 | 15 | 58.7 | 0.4 | 3.7 | 18.4 | 20.2 | 22.2 | 24.3 | 26.1 | 41.0 | 43.8 | 46.0 | 43 22.25 | 0.22 | 0.22 | 25.50 | 21 42 56.53 | 1.85 |
| | μ Capricorni | 16 | 40.8 | 42.5 | 45.3 | 57.4 | 59.0 | 0.7 | 2.4 | 4.0 | 16.3 | 18.8 | 20.4 | 47 0.69 | 0.10 | 0.10 | 25.49 | 21 46 35.10 | 3.09 |
| | Lacaille 8981 | 17 | 28.8 | 30.7 | 33.6 | 47.2 | 49.0 | 50.8 | 52.8 | 54.6 | 8.3 | 11.1 | 12.8 | 52 50.88 | 0.09 | 0.09 | 25.49 | 21 51 25.30 | 3.45 |
| | 29 Aquarii, (1st *) | 18 | 28.3 | 30.2 | 32.0 | 33.6 | 36.4 | . . | 39.5 | 42.3 | 43.8 | 45.6 | 47.6 | 56 7.93 | 0.03 | 0.03 | 25.49 | 21 55 42.41 | 3.27 |
| | 29 Aquarii, (2d *) | 19 | 48.0 | 49.8 | 52.5 | 4.9 | 6.5 | 8.2 | 9.9 | 11.6 | 24.2 | 26.6 | 28.4 | 56 8.24 | 0.10 | 0.10 | 25.49 | 21 55 42.65 | 3.27 |
| | O. Arg. N. 23385 | 20 | 20.5 | 23.1 | 27.5 | 47.3 | 49.9 | 52.6 | 55.4 | 57.8 | 17.7 | 21.9 | 24.3 | 1 52.55 | 0.32 | 0.32 | 25.49 | 22 1 26.74 | 1.32 |
| | 42 Aquarii | 21 | 18.5 | 20.3 | 22.8 | 25.1 | 26.6 | 28.2 | 29.9 | 31.5 | 54.0 | 56.3 | 57.8 | 10 38.27 | 0.10 | 0.10 | 25.48 | 22 10 12.69 | 3.17 |
| | Weisse (2) 349 | 22 | 43.9 | 45.7 | 48.5 | 3.7 | 5.4 | 7.7 | 9.7 | 11.6 | 26.7 | 29.7 | 31.6 | 17 7.65 | 0.27 | 0.27 | 25.48 | 22 16 41.99 | 2.16 |
| | Lalande 43871 | 23 | 42.2 | 44.2 | 47.7 | 2.9 | 4.9 | 7.0 | 9.2 | 11.0 | 26.5 | 29.5 | 31.6 | 22 6.97 | 0.23 | 0.23 | 25.48 | 22 21 41.26 | 2.15 |
| | *—28° 13' | 24 | 18.3 | 19.8 | 22.8 | 36.5 | 37.8 | . . | 41.7 | 43.7 | 57.1 | 0.4 | 2.5 | 28 40.06 | 0.09 | 0.09 | 25.47 | 22 28 14.50 | 3.58 |
| | Weisse (2) 672 | 25 | . . | . . | . . | 12.1 | 13.9 | 15.9 | 18.0 | 20.0 | 35.0 | 38.1 | 40.0 | 31 24.12 | 8.35 | 8.35 | 25.47 | 22 30 50.30 | 2.30 |
| | ζ Pegasi | 26 | 25.7 | 27.3 | 29.9 | 42.0 | 43.4 | 45.1 | 46.8 | 48.5 | 0.5 | 3.1 | 4.6 | 35 45.17 | 0.14 | 0.14 | 25.47 | 22 35 19.56 | 2.90 |
| | B. A. C. 7941 | 27 | . . | . . | . . | 11.6 | 21.1 | 31.1 | 41.3 | 51.3 | . . | . . | . . | 39 31.28 | 1.36 | 1.36 | 25.47 | 22 39 4.45 | 2.10 |
| | Lacaille 9286 | 28 | 27.4 | 29.4 | 32.5 | 48.5 | 50.2 | 52.4 | 54.4 | 56.5 | 11.9 | 15.2 | 17.1 | 45 52.32 | 0.08 | 0.08 | 25.47 | 22 45 26.77 | 3.97 |
| | Lacaille 9292 | 29 | 32.0 | 34.1 | 37.3 | 52.9 | 54.9 | 57.0 | 59.2 | 1.2 | 16.8 | 20.0 | 22.0 | 46 57.04 | 0.08 | 0.08 | 25.46 | 22 46 31.50 | 3.98 |
| | O. Arg. S. 22514 | 30 | . . | . . | . . | 28.0 | 29.8 | 31.7 | 33.5 | 35.1 | . . | . . | . . | 51 31.62 | 0.10 | 0.10 | 25.46 | 22 51 6.06 | 3.64 |
| | *—26° 50' | 31 | . . | . . | . . | 49.9 | 52.7 | 54.4 | . . | . . | 6.4 | 9.7 | 11.4 | 13.1 | 31.20 | 31.20 | 25.46 | 22 51 7.44 | 3.65 |
| | *—8° 27' | 32 | 35.6 | 37.1 | 39.7 | 51.7 | 53.2 | 55.0 | 56.6 | 58.2 | 10.3 | 12.7 | 14.2 | 59 54.94 | 0.11 | 0.11 | 25.46 | 22 59 29.37 | 3.33 |
| | Weisse 47 | 33 | 3.6 | 5.3 | 7.8 | 19.7 | 21.2 | 22.9 | 24.5 | 26.1 | 38.0 | 40.6 | 42.0 | 5 22.88 | 0.12 | 0.12 | 25.46 | 23 4 57.30 | 3.19 |
| | 61 Pegasi | 34 | 49.9 | 51.7 | 54.4 | 8.1 | 9.5 | 11.4 | 13.4 | 15.1 | 28.6 | 31.3 | 33.0 | 10 11.49 | 0.18 | 0.18 | 25.45 | 23 9 45.86 | 2.86 |
| | Lalande 45758 | 35 | 10.3 | 11.9 | 14.4 | 26.3 | 27.8 | 29.4 | 31.1 | 32.7 | 44.6 | 47.0 | 48.6 | 16 29.46 | 0.12 | 0.12 | 25.45 | 23 16 3.89 | 3.31 |
| | Radcliffe 6081 | 36 | 19.1 | 22.3 | 26.5 | 46.5 | 49.4 | 52.0 | 55.0 | 57.7 | 18.1 | 22.0 | 24.8 | 21 52.15 | 0.34 | 0.34 | 25.45 | 23 21 26.36 | 2.53 |
| | Lalande 46188 | 37 | 39.0 | 40.9 | 44.4 | 59.1 | 1.0 | 3.0 | 5.2 | 7.1 | 22.1 | 25.4 | 27.0 | 29 3.11 | 0.22 | 0.22 | 25.44 | 23 28 37.45 | 2.91 |
| | 18 Andromedæ | 38 | 6.8 | 9.3 | 13.3 | 31.7 | 34.1 | 36.5 | 39.0 | 41.7 | 0.2 | 3.9 | 6.2 | 33 36.61 | 0.29 | 0.29 | 25.44 | 23 33 10.88 | 2.79 |
| | B. A. C. 8257 | 39 | 38.9 | 40.4 | 43.0 | 55.0 | 56.5 | 58.0 | 59.8 | 1.4 | 13.4 | 15.8 | 17.3 | 38 58.14 | 0.13 | 0.13 | 25.44 | 23 38 32.57 | 3.34 |
| | 79 Pegasi | 40 | 30.0 | 31.7 | 34.5 | 48.1 | 49.9 | 51.6 | 53.5 | 55.2 | 9.0 | 11.7 | 13.2 | 43 51.67 | 0.18 | 0.18 | 25.44 | 23 43 26.05 | 3.16 |
| | Lalande 46836 | 41 | 51.8 | 53.8 | 57.3 | 12.1 | 14.2 | 16.3 | 18.4 | 20.4 | 35.7 | 38.7 | 40.9 | 48 16.33 | 0.23 | 0.23 | 25.43 | 23 47 50.67 | 3.11 |
| | ω Piscium | 42 | 6.3 | 8.4 | 10.4 | 22.4 | 23.8 | 25.6 | 27.3 | 28.8 | 40.9 | 43.3 | 44.8 | 53 25.60 | 0.13 | 0.13 | 25.43 | 23 53 0.04 | 3.45 |
| | Lalande 181 | 43 | 41.6 | 43.5 | 46.7 | 1.7 | 3.6 | 5.6 | 7.8 | 9.8 | 24.7 | 27.8 | 29.6 | 9 5.67 | 0.22 | 0.22 | 25.43 | 0 8 40.02 | 3.34 |
| | Lacaille 48 | 44 | 41.5 | 43.3 | 46.2 | 59.2 | 0.9 | 2.6 | 4.5 | 6.2 | 19.2 | 21.8 | 23.5 | 15 2.63 | 0.09 | 0.09 | 25.42 | 0 14 37.12 | 3.89 |
| | B. A. C. 105 | 45 | 9.6 | 15.9 | 26.3 | 16.7 | 23.4 | 30.4 | 37.6 | 43.8 | 34.7 | 44.9 | 51.3 | 23 30.42 | 0.88 | 0.88 | 25.42 | 0 23 4.12 | 4.16 |
| | (* 127) Washington | 46 | 25.3 | 26.8 | 29.4 | 41.4 | 42.9 | 44.4 | 46.1 | 47.7 | 59.5 | 2.2 | 3.6 | 29 44.48 | 0.12 | 0.12 | 25.42 | 0 29 18.94 | 3.66 |
| | B. A. C. 175 | 47 | 24.8 | 28.6 | 34.4 | 3.3 | 6.7 | 11.1 | 14.9 | 18.7 | 47.5 | 53.4 | 57.2 | 35 10.96 | 0.49 | 0.49 | 25.41 | 0 34 45.06 | 3.98 |
| | B. A. C. 225 | 48 | . . | 33.6 | 53.7 | . . | . . | . . | . . | . . | 4.8 | 23.5 | . . | 43 58.90 | 1.51 | 1.51 | 25.41 | 0 43 31.98 | 7.02 |
| | Polaris | 49 | . . | . . | . . | 19.0 | 24.0 | 32.0 | 43.0 | 49.0 | . . | . . | . . | 14 33.49 | 9.44 | 9.44 | 25.40 | | 37.39 |
| | 7 Piscium | 50 | 0.7 | 2.4 | 4.8 | 17.3 | 18.8 | 20.4 | 22.2 | 23.8 | 36.1 | 38.7 | 40.3 | 25 20.46 | — | 0.15 | —25.39 | 1 24 54.92 | — |

CORRECTIONS, &c.

1. Quite faint.
3. Unsteady.

| Date. | Error of clock. | Hourly rate. | n | c |
|---------------------------|--------------------|-----------------|--------------|--------------|
| 1876. h. Nov. 22, 22.6 | s. — 25.47 | s. + 0.029 | s. — 0.09 | s. — 0.12 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | |
|-------------------------|-----------------------|---------|--------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------------|-----------|---------------------------------|-------------------------|--------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. |
| 1876. Nov. 29 Y. | Aquarii. | 1 | 20.7 | 22.6 | 25.0 | 37.1 | 38.6 | 40.2 | 42.0 | 43.6 | 55.5 | 58.0 | 59.7 | m. s. 46 40.27 | — 0.10 | —28.37 | | — 3.19 |
| | B. A. C. 8094 . . . | 2 | 23.3 | 25.0 | 27.4 | 39.4 | 40.9 | 42.7 | 44.3 | 45.8 | 58.0 | 0.1 | 1.6 | 9 42.59 | 0.13 | 28.38 | 23 9 14.08 | 3.12 |
| | Cephei | 3 | | | | 55.0 | 58.8 | 3.4 | 7.4 | 11.4 | | | | 14 3.20 | 0.68 | 28.38 | 23 13 34.14 | 1.58 |
| | Lalande 46097 . . | 4 | 0.8 | 2.8 | 5.8 | 20.0 | 23.1 | 25.1 | 27.2 | 29.1 | 44.4 | 47.5 | 49.4 | 26 25.10 | 0.26 | 28.38 | 23 25 56.46 | 2.77 |
| | B. A. C. 8225 . . . | 5 | 48.0 | 49.9 | 52.4 | 4.6 | 6.3 | 7.9 | 9.8 | 11.3 | 23.8 | 26.4 | 27.9 | 32 8.03 | 0.08 | 28.38 | 23 31 39.57 | 3.53 |
| | 77 Pegasi | 6 | 15.9 | 17.5 | 20.0 | 32.3 | 33.9 | 35.3 | 37.1 | 38.7 | 50.7 | 53.1 | 54.7 | 37 35.38 | 0.15 | 28.38 | 23 37 6.85 | 3.23 |
| | 3 Ceti | 7 | 33.7 | 35.5 | 38.1 | 50.9 | 52.3 | 54.1 | 56.0 | 57.6 | 10.2 | 12.8 | 14.3 | 37 54.14 | 0.08 | 28.38 | 0 37 25.68 | 3.84 |
| | O. Arg. S. 442. . . | 8 | 26.4 | 28.1 | 30.8 | 44.3 | 45.7 | 47.4 | 49.1 | 50.8 | 4.0 | 6.9 | 8.6 | 43 47.46 | — 0.07 | 28.38 | 0 43 19.01 | 3.90 |
| | 91 Ceti | 9 | 43.7 | 45.4 | 48.1 | 0.2 | 1.8 | 3.4 | 5.1 | 6.7 | | | | 53 56.80 | + 6.53 | 28.39 | 0 53 34.94 | 3.82 |
| | Polaris | 10 | 53.0 | 2.0 | 51.0 | 21.0 | 26.0 | | | | | | | 6 30.60 | + 7 52.40 | 28.39 | | 33.57 |
| | 11 Piscium | 11 | 3.6 | | 7.8 | 20.2 | 21.6 | | 25.0 | 26.8 | 39.0 | | 43.2 | 25 23.40 | — 0.16 | 28.40 | | 3.92 |
| Dec. 1 | 6 Cephei | 12 | 13.5 | 18.1 | 25.2 | 55.4 | 59.4 | 3.9 | 7.9 | 12.1 | 42.9 | 50.1 | 54.0 | 14 3.86 | 1.04 | 28.97 | 23 13 33.85 | 1.48 |
| | 67 Pegasi | 13 | 56.2 | 58.4 | 1.1 | 15.4 | 17.2 | 19.0 | 21.2 | 22.8 | 36.6 | 39.7 | 41.5 | 19 19.01 | 0.32 | 28.98 | 23 18 49.71 | 2.76 |
| | 14 Piscium | 14 | | 28.3 | 30.6 | 32.3 | | | 43.3 | 45.8 | 47.4 | 49.1 | 51.0 | 22 40.97 | 28.04 | 28.98 | 23 22 43.95 | 3.15 |
| | 15 Piscium | 15 | 59.0 | 0.7 | 3.9 | 16.3 | 18.2 | 19.8 | 21.7 | 23.2 | 36.1 | 38.5 | 40.4 | 27 19.80 | 0.01 | 28.98 | 23 26 50.81 | 3.58 |
| | B. A. C. 8225 . . . | 16 | 48.8 | 50.4 | 53.0 | | | | | | 24.5 | 27.1 | 28.7 | 32 8.75 | 0.03 | 28.99 | 23 31 39.73 | 3.50 |
| | 17 Aquarii. | 17 | 30.0 | 31.7 | 34.6 | 46.7 | 48.2 | 49.8 | 51.6 | 53.3 | 5.5 | 8.3 | 0.8 | 36 49.95 | 0.04 | 28.99 | 23 36 20.92 | 3.52 |
| | O. Arg. S. 23052 . | 18 | 58.4 | 59.9 | 2.4 | 15.2 | 16.6 | 18.4 | 20.2 | 22.1 | 7.34 | 3.37 | 0.38 | 42 18.43 | 0.03 | 29.00 | 23 41 49.40 | 3.57 |
| | B. A. C. 8296 . . . | 19 | 17.5 | 19.2 | 21.8 | 34.8 | 36.4 | 38.2 | 39.8 | 41.6 | 54.5 | 56.9 | 58.4 | 46 38.10 | 0.24 | 29.00 | 23 46 8.86 | 3.15 |
| | 20 Piscium | 20 | 9.7 | 11.5 | 13.9 | 25.9 | 27.4 | 29.0 | 30.6 | 32.1 | 44.4 | 46.8 | 48.5 | 53 29.07 | 0.15 | 29.01 | 23 52 59.91 | 3.37 |
| | 21 Pegasi | 21 | 3.8 | 5.4 | 8.2 | 20.3 | 21.9 | 23.7 | 25.4 | 27.0 | 39.2 | 41.8 | 43.4 | 7 23.65 | 0.20 | 29.01 | 0 6 54.44 | 3.37 |
| | Lalande 383 . . . | 22 | 48.2 | 50.5 | 53.1 | 7.7 | 9.6 | 11.8 | 13.9 | 15.6 | 30.2 | 33.5 | 35.3 | 15 11.76 | 0.36 | 29.02 | 0 14 42.38 | 3.31 |
| | B. A. C. 105 . . . | 23 | 13.7 | 19.2 | 30.7 | 21.1 | 27.8 | 34.0 | 41.3 | 48.7 | 38.7 | 48.9 | 54.6 | 23 34.43 | 1.74 | 29.03 | 0 23 3.66 | 3.60 |
| | Polaris | 24 | | | | 27.0 | 33.0 | 43.0 | 54.0 | 2.0 | | | | 14 43.80 | 18.37 | 29.07 | | . . . |
| | 25 Piscium | 25 | 4.4 | 6.0 | 8.5 | 20.9 | 22.4 | 24.0 | 25.5 | 27.6 | 39.9 | 42.2 | 43.9 | 25 24.15 | 0.20 | 29.08 | 1 24 54.87 | 3.90 |
| | 26 Cephei | 26 | | | | 56.5 | 0.4 | 4.8 | 9.1 | 13.1 | | | | 14 4.78 | 0.77 | 30.53 | 23 13 33.48 | 1.30 |
| | 27 Piscium | 27 | 55.0 | 56.7 | 59.2 | 11.0 | 12.7 | 14.3 | 16.0 | 17.7 | 29.6 | 32.0 | 33.5 | 22 14.34 | 0.13 | 30.52 | 23 21 43.60 | 3.11 |
| | 28 Aquarii. | 28 | 0.3 | 2.1 | 4.6 | 17.8 | 19.4 | 21.1 | 22.6 | 24.4 | 37.3 | 40.0 | 41.6 | 27 21.05 | 0.04 | 30.52 | 23 26 50.49 | 3.53 |
| | B. A. C. 8225 . . . | 29 | 50.1 | 51.8 | 54.5 | 6.9 | 8.4 | 10.2 | 11.8 | 13.4 | 25.9 | 28.4 | 30.0 | 32 10.13 | 0.06 | 30.52 | 23 31 39.55 | 3.46 |
| | 30 Aquarii. | 30 | 22.1 | 23.9 | 26.5 | 39.2 | 40.9 | 42.5 | 44.4 | 45.9 | 58.4 | 1.0 | 2.5 | 35 42.48 | 0.05 | 30.51 | 23 35 11.92 | 3.52 |
| | 31 Aquarii, (1st *) . | 31 | 48.0 | 49.7 | 52.3 | 5.2 | 6.7 | 8.4 | 10.2 | 11.7 | 24.5 | 27.0 | 28.5 | 40 8.38 | — 0.05 | 30.51 | 23 39 37.82 | 3.55 |
| | 32 Aquarii, (2d *) . | 32 | 28.5 | 30.5 | 32.4 | 33.9 | 36.6 | | 40.5 | 43.1 | 44.7 | 46.6 | 48.5 | 40 8.53 | + 0.03 | 30.51 | 23 39 38.05 | 3.55 |
| | O. Arg. S. 23082 . | 33 | 36.3 | 38.0 | 40.6 | 53.2 | 54.8 | 56.5 | 58.3 | 59.9 | 12.6 | 15.3 | 16.7 | 44 56.56 | — 0.05 | 30.51 | 23 44 26.00 | 3.56 |
| | O. Arg. S. 23156 . | 34 | 59.0 | 0.9 | 3.4 | 16.4 | 18.0 | 19.7 | 21.6 | 23.2 | 36.2 | 39.0 | 40.5 | 52 19.81 | 0.04 | 30.50 | 23 51 49.27 | 3.65 |
| | B. A. C. 8355 (1st *) | 35 | | | | 41.5 | 45.7 | 49.2 | 53.3 | 57.4 | | | | 56 49.42 | 0.70 | 30.50 | 23 56 18.22 | 2.57 |
| | B. A. C. 8355 (2d *) | 36 | 5.6 | 9.6 | 15.5 | | | | | | 28.0 | 33.9 | 37.6 | 56 51.70 | — 0.66 | 30.50 | 25 56 20.54 | 2.57 |
| | B. A. C. 8375 . . . | 37 | 43.7 | 45.8 | 49.0 | 4.5 | 6.8 | 8.9 | 11.0 | 13.0 | 28.4 | 31.6 | 33.6 | 1 8.76 | + 0.01 | 30.49 | 0 0 38.28 | 3.98 |
| | Lacaille 9737 . . . | 38 | | 20.6 | 23.7 | 25.6 | | | 38.6 | 42.2 | 44.2 | 46.0 | 48.2 | 3 36.14 | — 34.08 | 30.49 | 0 2 31.57 | 3.90 |
| | Pegasi | 39 | 5.4 | 7.0 | 9.8 | 21.7 | 23.6 | 25.2 | 26.9 | 28.6 | 41.0 | 43.3 | 44.9 | 7 25.22 | 0.16 | 30.49 | 0 6 54.57 | 3.33 |
| | Lalande 335 . . . | 40 | 40.9 | 43.0 | 46.1 | 1.2 | 3.2 | 5.0 | 7.3 | 9.2 | 24.4 | 27.5 | 29.2 | 14 5.18 | 0.26 | 30.49 | 0 13 34.43 | 3.23 |
| | 16 Cassiopeæ . . . | 41 | | | | 39.8 | 43.0 | 47.2 | 51.4 | 55.4 | | | | 27 47.36 | 0.72 | 30.47 | 0 27 16.17 | 3.40 |
| | *+4 3 | 42 | | | | 27.4 | 28.9 | 31.0 | 32.8 | 34.6 | 46.1 | 48.4 | 49.8 | 36 37.37 | 6.62 | 30.47 | 0 36 0.28 | 3.56 |
| | B. A. C. 225 . . . | 43 | 24.3 | 37.9 | 58.1 | 36.5 | 48.3 | 2.5 | 16.3 | 29.0 | 7.0 | 27.2 | 40.0 | 44 2.46 | 2.45 | 30.46 | 0 43 29.55 | 5.42 |
| | B. A. C. 274 . . . | 44 | 39.0 | 40.7 | 43.3 | 55.0 | 56.7 | 58.3 | 0.0 | 1.4 | 13.5 | 16.9 | 17.5 | 53 58.39 | 0.12 | 30.45 | 0 53 27.82 | 3.69 |
| | Polaris | 45 | | | | 19.0 | 23.0 | 33.0 | 45.0 | 52.0 | | | | 14 34.40 | 12.91 | 30.44 | | 29.94 |
| | 3 Arietis | 46 | 1.7 | 3.4 | 6.2 | 18.7 | 20.3 | 22.2 | 24.1 | 25.7 | 38.3 | 40.9 | 42.6 | 48 22.19 | 0.19 | 30.41 | 1 47 51.59 | 4.08 |
| | Andromedæ, (1st *) | 47 | 27.0 | 29.3 | 32.8 | | 50.6 | 52.9 | 55.1 | | 13.1 | 16.4 | 18.5 | 56 52.85 | 0.33 | 30.41 | 1 56 22.11 | 4.47 |
| | Andromedæ, (2d *) | 48 | 2.9 | 5.6 | 7.9 | 10.0 | 13.3 | | 33.9 | 37.5 | 39.6 | 41.8 | 44.0 | 56 53.65 | 0.23 | 30.41 | 1 56 23.01 | 4.47 |
| | 3 Trianguli | 49 | 21.8 | 23.8 | 26.6 | 41.0 | 42.9 | 45.0 | 47.1 | 48.9 | 3.3 | 6.3 | 8.0 | 2 44.97 | 0.27 | 30.40 | 2 2 14.30 | 4.37 |
| | 20 Arietis | 50 | 53.7 | 55.7 | 58.4 | 11.6 | 13.1 | 15.1 | 16.9 | 18.5 | 31.8 | 34.4 | 36.2 | 9 15.04 | 0.21 | 30.40 | 2 8 44.43 | 4.28 |
| | Weisse 188 | 51 | 8.7 | 10.4 | 13.1 | 25.3 | 26.9 | 28.5 | 30.1 | 31.8 | 44.2 | 46.6 | 48.1 | 14 28.52 | — 0.16 | —30.39 | 2 13 57.97 | — 4.17 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------|-----------------|--------------|--------|--------|
| 1876. h. | s. | s. | s. | s. |
| Nov. 29, 0.3 | — 28.39 | — 0.012 | — 0.14 | — 0.12 |
| D. c. 1, 0.2 | — 29.02 | — 0.047 | — 0.30 | — 0.12 |
| 5, 1.4 | — 30.43 | + 0.046 | — 0.19 | — 0.11 |

10. Cloudy.

34. One to southward; one follows same declination.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. |
|-------------------------|-------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|----------|----------|-------------------|-----------------|--------------|------------------------|---------------------------------|-------------------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | |
| 1876. Dec. 5 Y. | O. Arg. S. 1558 | 1 | 27.8 | 29.5 | 32.5 | 45.4 | 47.1 | 48.8 | 50.7 | 52.5 | 5.6 | 8.1 | 9.9 | m. s. 20 48.90 | m. s. — 0.03 | s. —30.39 | h. m. s. 2 20 18.48 | s. — 4.06 | |
| | Weisse (2) 702 | 2 | 51.0 | 54.0 | 9.1 | 11.0 | 13.0 | 15.2 | 17.2 | 32.2 | 35.3 | 31 | 13.11 | 31 13.11 | 0.30 | 30.38 | 2 30 42.43 | 4.70 | |
| | Ceti | 3 | 8.0 | 9.7 | 12.3 | 24.0 | 25.6 | 27.1 | 28.7 | 30.6 | 42.4 | 44.9 | 16.3 | 37 27.24 | 0.12 | 30.37 | 2 36 56.75 | 4.18 | |
| | Weisse (2) 1018 | 4 | 14.6 | 16.4 | 19.2 | 32.3 | 34.0 | 35.8 | 37.6 | 39.3 | 52.7 | 55.2 | 56.9 | 43 35.82 | 0.21 | 30.37 | 2 43 5.24 | 4.51 | |
| | B. A. C. 896 | 5 | 44.8 | 53.7 | 6.6 | 8.3 | 16.7 | 25.0 | 33.9 | 41.6 | 43.6 | 56.5 | 4.3 | 50 24.55 | 1.54 | 30.36 | 2 49 52.65 | 11.50 | |
| | Ceti | 6 | 3.4 | 5.1 | 7.7 | 21.1 | 22.6 | 26.0 | 26.0 | 37.8 | 40.3 | 41.8 | 56 22.87 | 0.29 | 30.36 | 2 56 52.22 | 4.27 | | |
| 6 | γ Cassiopeæ. | 7 | 42.8 | 45.9 | 49.3 | 52.5 | 55.7 | 58.9 | 62.1 | 65.3 | 68.5 | 71.7 | 74.9 | 49 49.24 | + | 0.11 | 31.02 | 0 49 18.33 | 3.82 |
| | ε Piscium | 8 | 46.0 | 47.5 | 50.0 | 1.9 | 3.6 | 5.3 | 6.9 | 8.4 | 20.3 | 22.9 | 24.5 | 57 5.21 | 0.07 | 31.02 | 0 56 34.26 | 3.90 | |
| | B. A. C. 366 | 9 | 12.3 | 14.1 | 17.1 | 31.7 | 33.8 | 36.0 | 37.8 | 39.8 | 54.3 | 57.6 | 59.5 | 7 35.82 | 0.11 | 31.03 | 1 7 4.90 | 4.04 | |
| | Polaris | 10 | 43.0 | 48.0 | 32.0 | 33.0 | 34.0 | 35.0 | 36.0 | 37.0 | 48.0 | 49.0 | 2.0 | 14 20.17 | 1.21 | 31.04 | 2 14.52 | 29.17 | |
| | Ceti | 11 | 33.1 | 37.2 | 49.7 | 51.3 | 53.1 | 54.8 | 56.5 | 58.2 | 8.8 | 13.1 | 38 53.07 | 0.08 | 31.06 | 1 38 22.09 | 3.94 | | |
| | β Arietis | 12 | 2.3 | 3.9 | 6.5 | 19.2 | 20.8 | 22.7 | 24.4 | 25.9 | 38.7 | 41.4 | 43.2 | 48 22.64 | + | 0.06 | 31.07 | 1 47 51.63 | 4.07 |
| | γ Andromedæ, (1st *) | 13 | 2.6 | 5.2 | 7.5 | 9.6 | 13.3 | 33.8 | 37.3 | 39.5 | 41.5 | 44.2 | 56 53.45 | — | 0.03 | 31.07 | 1 56 22.35 | 4.46 | |
| | γ Andromedæ, (2d *) | 14 | 28.5 | 30.5 | 33.7 | 49.9 | 51.8 | 54.2 | 56.5 | 58.4 | 14.5 | 17.7 | 19.8 | 56 54.14 | + | 0.07 | 31.07 | 1 56 23.14 | 4.46 |
| | β Trianguli | 15 | 22.4 | 27.2 | 41.7 | 43.5 | 45.5 | 47.5 | 49.3 | 3.7 | 9.2 | 2 45.53 | 0.06 | 31.07 | 2 2 14.52 | 4.37 | 4.53 | | |
| | ξ Ceti | 16 | 41.4 | 42.9 | 45.5 | 57.6 | 59.2 | 0.8 | 2.5 | 4.0 | 16.2 | 18.6 | 20.4 | 7 0.83 | 0.07 | 31.08 | 2 6 29.82 | 4.10 | |
| | B. A. C. 718 | 17 | 12.1 | 14.9 | 18.9 | 41.2 | 44.0 | 47.0 | 50.2 | 52.8 | 14.4 | 19.0 | 21.9 | 13 46.95 | 0.08 | 31.09 | 2 13 15.94 | 5.30 | |
| | *+56° 40' | 18 | 38.4 | 41.2 | 44.1 | 47.3 | 50.0 | 52.8 | 55.6 | 58.4 | 10.7 | 26.1 | 37.2 | 14 44.20 | 0.10 | 31.09 | 2 14 13.21 | 5.32 | |
| | B. A. C. 740 | 19 | 28.0 | 39.3 | 44.6 | 12.0 | 21.9 | 32.4 | 42.6 | 53.6 | 10.7 | 26.1 | 37.2 | 20 31.78 | 0.26 | 31.09 | 2 20 0.95 | 11.65 | |
| | Weisse 415 | 20 | 28.2 | 29.6 | 32.0 | 44.0 | 45.5 | 47.2 | 48.6 | 50.4 | 2.3 | 4.8 | 6.5 | 26 47.21 | 0.07 | 31.10 | 2 26 16.18 | 4.15 | |
| | Weisse (2) 702 | 21 | 49.6 | 51.5 | 54.5 | 9.5 | 11.6 | 13.5 | 15.6 | 17.6 | 32.5 | 35.8 | 37.8 | 31 13.59 | 0.07 | 31.10 | 2 30 42.56 | 4.70 | |
| | γ Ceti | 22 | 8.7 | 10.2 | 12.7 | 24.5 | 26.1 | 27.8 | 29.3 | 31.6 | 42.7 | 45.3 | 47.0 | 37 27.84 | 0.07 | 31.11 | 2 36 56.80 | 4.18 | |
| | η Persei | 23 | 43.2 | 45.7 | 50.0 | 11.2 | 13.4 | 16.7 | 19.5 | 22.4 | 43.2 | 47.6 | 50.6 | 42 16.68 | 0.08 | 31.11 | 2 41 45.65 | 5.66 | |
| | Weisse 790 | 24 | 22.7 | 24.1 | 26.7 | 38.6 | 40.2 | 42.0 | 43.6 | 45.1 | 57.2 | 59.7 | 1.6 | 47 41.95 | 0.07 | 31.11 | 2 47 10.91 | 4.29 | |
| Rumker 755 | 25 | 37.5 | 39.1 | 41.7 | 54.0 | 55.6 | 57.3 | 58.9 | 0.7 | 13.0 | 15.6 | 17.2 | 51 57.33 | 0.06 | 31.12 | 2 51 26.27 | 4.40 | | |
| α Ceti | 26 | 4.1 | 5.5 | 7.9 | 21.1 | 22.6 | 26.0 | 26.0 | 37.8 | 40.7 | 42.4 | 56 23.13 | 0.06 | 31.12 | 2 55 52.07 | 4.27 | | | |
| 65 | B. A. C. 975 | 27 | 16.5 | 18.1 | 20.6 | 32.6 | 34.1 | 35.8 | 37.5 | 38.9 | 51.0 | 53.5 | 55.3 | 2 35.81 | + | 0.07 | 31.12 | 3 2 4.76 | 4.34 |
| | Lalande 5997 | 28 | 18.3 | 20.9 | 22.6 | 34.1 | 35.8 | 37.5 | 38.9 | 40.3 | 51.0 | 53.5 | 55.3 | 8 31.72 | — | 29.22 | 31.13 | 3 7 31.37 | 4.13 |
| | 6 Persei | 29 | 19.0 | 21.2 | 24.4 | 40.8 | 42.8 | 45.0 | 47.5 | 49.4 | 5.4 | 9.0 | 11.3 | 13 45.07 | + | 0.07 | 31.13 | 3 13 14.01 | 5.31 |
| | 65 Arietis | 30 | 29.9 | 32.5 | 34.0 | 49.4 | 51.0 | 52.6 | 54.6 | 56.2 | 8.0 | 11.6 | 13.3 | 17 53.12 | 0.06 | 31.14 | 3 17 22.04 | 4.62 | |
| | 66 Arietis | 31 | 26.8 | 28.5 | 31.2 | 44.0 | 45.7 | 47.5 | 49.4 | 51.1 | 3.8 | 6.5 | 8.3 | 21 47.53 | 0.06 | 31.14 | 3 21 16.45 | 4.68 | |
| | 7 Tauri | 32 | 21.1 | 22.6 | 25.4 | 38.4 | 39.9 | 41.8 | 43.7 | 45.4 | 58.4 | 1.1 | 3.0 | 27 41.89 | 0.06 | 31.14 | 3 27 10.81 | 4.75 | |
| | 24 Tauri | 33 | 14.2 | 15.8 | 18.4 | 31.3 | 33.1 | 34.8 | 36.6 | 38.3 | 51.4 | 54.2 | 55.9 | 40 34.91 | 0.06 | 31.15 | 3 40 3.82 | 4.81 | |
| | η Tauri | 34 | 22.0 | 23.6 | 26.2 | 39.3 | 41.0 | 42.8 | 44.7 | 46.3 | 59.5 | 2.1 | 4.0 | 40 42.86 | 0.06 | 31.15 | 3 40 11.77 | 4.81 | |
| | μ Pegasi | 35 | 20.5 | 21.9 | 24.5 | 36.7 | 38.2 | 39.9 | 41.6 | 43.1 | 55.1 | 57.7 | 59.4 | 38 39.87 | 0.08 | 31.82 | 21 38 8.13 | 2.36 | |
| | α Capricorni. | 36 | 46.9 | 48.5 | 51.0 | 3.4 | 4.9 | 6.6 | 8.3 | 9.9 | 22.3 | 24.8 | 26.6 | 47 6.65 | 0.09 | 31.82 | 21 46 34.92 | 2.93 | |
| 7 | α Aquarii. | 37 | 40.2 | 41.7 | 44.2 | 56.2 | 57.7 | 59.4 | 1.0 | 2.5 | 14.4 | 16.0 | 18.6 | 59 59.35 | 0.08 | 31.82 | 21 59 27.61 | 2.71 | |
| | π Aquarii. | 38 | 12.2 | 13.6 | 16.0 | 28.0 | 29.5 | 31.2 | 32.5 | 34.4 | 46.3 | 48.7 | 50.4 | 19 31.19 | 0.08 | 31.82 | 22 18 59.45 | 2.79 | |
| | 226 Cephei | 39 | 18.4 | 24.3 | 34.2 | 22.0 | 28.7 | 35.2 | 41.4 | 47.8 | 35.6 | 45.7 | 52.4 | 30 35.06 | 0.24 | 31.82 | 22 30 3.48 | 1.83 | |
| | ζ Pegasi | 40 | 31.8 | 33.3 | 35.7 | 47.8 | 49.4 | 51.1 | 52.8 | 54.3 | 6.3 | 8.8 | 10.5 | 35 51.07 | 0.08 | 31.83 | 22 35 19.32 | — 2.72 | |
| | *+50° 47' | 41 | 24.5 | 26.7 | 30.6 | 49.4 | 52.0 | 54.6 | 57.0 | 59.6 | 18.4 | 22.5 | 24.8 | 40 54.55 | 0.10 | 31.83 | 22 40 22.82 | 1.62 | |
| | Lalande 44918 | 42 | 2.4 | 4.5 | 7.5 | 22.8 | 24.9 | 27.0 | 29.1 | 31.1 | 46.3 | 49.6 | 51.6 | 52 26.98 | 0.09 | 31.83 | 22 51 55.24 | 2.22 | |
| | Weisse 1204 | 43 | 15.1 | 16.6 | 19.1 | 31.4 | 33.0 | 34.7 | 36.3 | 38.0 | 50.2 | 52.8 | 54.4 | 58 34.69 | 0.09 | 31.83 | 22 55 2.95 | 3.23 | |
| | 1 Cassiopeæ | 44 | 49.9 | 52.9 | 56.0 | 59.3 | 2.1 | 3.6 | 5.1 | 6.6 | 18.4 | 22.5 | 24.8 | 1 56.04 | 0.14 | 31.83 | 23 1 24.35 | 1.56 | |
| | 7 Andromedæ | 45 | 57.4 | 59.7 | 3.5 | 21.6 | 23.8 | 26.1 | 28.8 | 31.3 | 49.3 | 53.0 | 56.5 | 7 26.48 | 0.10 | 31.83 | 23 6 54.75 | 2.11 | |
| | Lalande 45588. | 46 | 10.8 | 12.7 | 15.9 | 30.9 | 32.8 | 35.0 | 37.0 | 39.0 | 53.9 | 56.9 | 59.2 | 11 34.92 | 0.08 | 31.83 | 23 11 3.17 | 2.48 | |
| 67 | Pegasi | 47 | 58.8 | 0.4 | 3.5 | 17.5 | 19.2 | 21.1 | 23.2 | 24.9 | 38.9 | 41.9 | 43.9 | 19 21.21 | 0.08 | 31.83 | 23 18 49.46 | 2.68 | |
| | 11 Piscium | 48 | 21.0 | 22.5 | 24.9 | 36.7 | 38.4 | 40.1 | 41.7 | 43.2 | 55.1 | 57.5 | 59.4 | 23 40.05 | 0.08 | 31.83 | 23 23 8.30 | 3.21 | |
| | Lalande 46188. | 49 | 45.2 | 47.0 | 50.1 | 5.0 | 7.0 | 9.0 | 11.1 | 13.1 | 28.0 | 31.2 | 33.2 | 29 9.08 | 0.09 | 31.83 | 23 28 37.34 | 2.68 | |
| | A ¹ Aquarii. | 50 | 23.6 | 25.2 | 27.8 | 40.3 | 41.7 | 43.7 | 45.5 | 47.0 | 59.7 | 2.3 | 4.0 | 35 43.71 | + | 0.09 | —31.83 | 23 35 11.97 | — 3.50 |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|------------------------------------|--------------------------|--------------------------|------------------------|------------------------|
| 1876. h. Dec. 6, 2.3 7, 23.1 | s. - 31.09 - 31.83 | s. - 0.047 - 0.008 | s. - 0.03 - 0.02 | s. + 0.07 + 0.08 |

December 6. Image east 0°.47. Clamp west.
Image east 0°.72. Clamp east.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | | | | | | |
|-------------------------|----------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|---------------|-------|---------------------------------|-------------------------|--------|-------|----|-------|-------|-------|------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | | | | | | |
| 1876. | | | | | | | | | | | | | m. | s. | m. | s. | s. | h. | m. | s. | s. | | | |
| Dec. 7 | B. A. C. 8257 . . . | 1 | 45.0 | 46.6 | 49.0 | 1.0 | 2.6 | 4.2 | 5.9 | 7.5 | 19.5 | 22.0 | 23.7 | 39 | 4.27 | + | 0.08 | 31.83 | 23 | 38 | 32.52 | — | 3.20 | |
| Y. | O. Arg. S. 23082 . . | 2 | 37 6 | 39.1 | 41.8 | 54.5 | 56.0 | 57.8 | 59.4 | 1.2 | 13.7 | 16.4 | 18.0 | 44 | 57.77 | | 0.09 | 31.83 | 23 | 44 | 26.03 | | 3.54 | |
| | B. A. C. 8311 . . . | 3 | 41.8 | 43.3 | 45.7 | 57.6 | 59.3 | 0.9 | 2.5 | 4.1 | 16.0 | 18.6 | 20.0 | 49 | 0.89 | + | 0.08 | 31.84 | 23 | 48 | 29.13 | | 3.33 | |
| | *—22° 38' . . . | 4 | .. | .. | .. | 57.7 | 59.6 | 1.5 | 3.2 | 4.9 | 18.0 | 20.8 | 22.6 | 52 | 8.54 | — | 6.92 | 31.84 | 23 | 51 | 29.78 | | 3.62 | |
| 36 | Piscium . . . | 5 | 27.7 | 29.3 | 31.7 | 43.7 | 45.3 | 47.0 | 48.7 | 50.2 | 2.2 | 4.8 | 6.4 | 10 | 47.00 | + | 0.08 | 31.84 | 0 | 10 | 15.24 | | 3.39 | |
| | Lalande 409 . . . | 6 | 56.2 | 58.0 | 1.0 | 16.3 | 18.0 | 20.2 | 22.2 | 24.1 | 39.0 | 42.3 | 44.3 | 16 | 20.15 | + | 0.09 | 31.84 | 0 | 15 | 48.40 | | 3.23 | |
| | Lalande 509 . . . | 7 | .. | 58.7 | 1.7 | 3.8 | .. | .. | .. | 17.3 | 20.6 | 22.5 | 24.5 | 27.0 | 20 | 14.51 | — | 34.38 | 31.84 | 0 | 19 | 8.29 | | 3.29 |
| | B. A. C. 115 . . . | 8 | 25.1 | 26.7 | 29.3 | 42.6 | 44.2 | 46.0 | 47.8 | 49.5 | 2.6 | 5.3 | 7.0 | 24 | 46.01 | + | 0.10 | 31.84 | 0 | 24 | 14.27 | | 3.76 | |
| | Weisse 446 . . . | 9 | 50.2 | 51.6 | 54.1 | 6.0 | 7.6 | 9.4 | 10.9 | 12.5 | 24.3 | 27.0 | 28.6 | 29 | 9.29 | | 0.08 | 31.84 | 0 | 28 | 37.53 | | 3.53 | |
| | Lalande 1003 . . . | 10 | 6.6 | 8.5 | 11.6 | 26.4 | 28.1 | 30.4 | 32.4 | 34.1 | 48.9 | 52.2 | 54.2 | 33 | 30.31 | | 0.09 | 31.84 | 0 | 32 | 58.56 | | 3.44 | |
| 58 | Piscium . . . | 11 | 49.3 | 50.8 | 53.2 | 5.6 | 7.1 | 8.9 | 10.5 | 12.0 | 24.2 | 26.8 | 28.5 | 41 | 8.81 | | 0.08 | 31.84 | 0 | 40 | 37.05 | | 3.57 | |
| | Weisse (2) 1167 . . | 12 | 39.3 | 40.9 | 43.9 | 57.5 | 59.3 | 1.3 | 3.1 | 4.9 | 18.6 | 21.6 | 23.5 | 47 | 1.26 | | 0.08 | 31.84 | 0 | 46 | 29.50 | | 3.58 | |
| φ ²¹ | Ceti . . . | 13 | 4.4 | 5.8 | 8.4 | 20.6 | 22.1 | 23.7 | 25.6 | 27.1 | 39.3 | 41.8 | 43.5 | 50 | 23.84 | | 0.09 | 31.84 | 0 | 49 | 52.09 | | 3.74 | |
| | B. A. C. 274 . . . | 14 | 40.3 | 41.8 | 44.3 | 56.3 | 57.8 | 59.5 | 1.2 | 2.7 | 14.7 | 17.2 | 18.8 | 53 | 59.51 | | 0.08 | 31.84 | 0 | 53 | 27.75 | | 3.67 | |
| | Polaris . . . | 15 | 42.0 | 47.0 | 32.0 | .. | .. | .. | .. | .. | 5.0 | 52.0 | 4.0 | 14 | 20.33 | | 2.18 | 31.85 | .. | .. | .. | | 28.40 | |
| | Weisse 89 . . . | 16 | 4.8 | 6.2 | 8.6 | 20.6 | 22.0 | 23.9 | 25.5 | 27.0 | 38.7 | 41.3 | 43.0 | 8 | 23.78 | | 0.08 | 31.85 | 1 | 7 | 52.01 | | 3.77 | |
| | *+5° 57' . . . | 17 | 25.0 | 26.6 | 29.1 | 41.2 | 42.8 | 44.6 | 46.4 | 47.9 | 0.0 | 2.6 | 4.3 | 11 | 44.59 | | 0.08 | 31.85 | 1 | 11 | 12.82 | | 3.78 | |
| | *+5° 57' . . . | 18 | 38.9 | 40.3 | 42.8 | 54.9 | 56.3 | 57.7 | 59.9 | 1.1 | 13.1 | 15.7 | 17.3 | 13 | 58.02 | | 0.08 | 31.85 | 1 | 13 | 26.25 | | 3.79 | |
| | *+38° 24' . . . | 19 | 6.5 | 8.7 | 11.0 | 12.9 | 16.2 | .. | .. | .. | 36.3 | 38.3 | 40.5 | 43.0 | 17 | 54.63 | | 0.00 | 31.85 | 1 | 17 | 22.78 | | 3.95 |
| | *+38° 22' . . . | 20 | 35.1 | 37.0 | 40.1 | 55.4 | 57.3 | 59.4 | 1.4 | 3.6 | 18.6 | 21.9 | 24.0 | 17 | 59.44 | | 0.09 | 31.85 | 1 | 17 | 27.68 | | 3.95 | |
| | Weisse 557 . . . | 21 | 31.2 | 32.6 | 35.5 | .. | .. | .. | .. | .. | 6.4 | 9.0 | 10.7 | 33 | 50.90 | | 0.07 | 31.85 | 1 | 33 | 19.12 | | 3.93 | |
| | Weisse 558 . . . | 22 | .. | .. | .. | 48.2 | 49.9 | 51.5 | 53.1 | 54.9 | .. | .. | .. | 33 | 51.52 | | 0.09 | 31.85 | 1 | 33 | 19.76 | | 3.93 | |
| α | Piscium . . . | 23 | 7.2 | 8.7 | 11.2 | 23.3 | 25.0 | 26.6 | 28.4 | 29.7 | 41.8 | 44.3 | 46.0 | 39 | 26.56 | | 0.08 | 31.85 | 1 | 38 | 54.79 | | 3.96 | |
| β | Arietis . . . | 24 | 3.0 | 4.6 | 7.3 | 20.1 | 21.7 | 23.5 | 25.2 | 26.9 | 39.3 | 42.1 | 43.9 | 48 | 23.42 | | 0.08 | 31.85 | 1 | 47 | 51.65 | | 4.07 | |
| 12 | ω Piscium . . . | 25 | 16.1 | 17.6 | 20.1 | 32.1 | 33.7 | 35.5 | 37.0 | 38.5 | 50.6 | 53.1 | 54.8 | 53 | 35.37 | | 0.09 | 35.51 | 23 | 52 | 59.95 | | 3.26 | |
| | Lalande 47298 . . . | 26 | 34.3 | 36.1 | 39.1 | 54.0 | 55.9 | 57.8 | 0.0 | 1.9 | 16.7 | 19.9 | 21.7 | 57 | 57.94 | | 0.10 | 35.52 | 23 | 57 | 22.52 | | 2.95 | |
| γ | Pegasi . . . | 27 | 10.0 | 11.6 | 14.2 | 26.5 | 28.0 | 29.8 | 31.5 | 33.1 | 45.5 | 47.9 | 49.8 | 7 | 29.81 | | 0.09 | 35.53 | 0 | 6 | 54.37 | | 3.26 | |
| | Lacaille 48 . . . | 28 | 51.2 | 52.7 | 55.5 | 8.7 | 10.4 | 12.1 | 13.8 | 15.5 | 28.7 | 31.5 | 33.3 | 15 | 12.13 | | 0.11 | 35.53 | 0 | 14 | 36.71 | | 3.67 | |
| | O. Arg. S. 160 . . . | 29 | 16.8 | 18.5 | 21.2 | 34.0 | 36.0 | 37.9 | 39.7 | 41.4 | 54.3 | 57.2 | 58.8 | 18 | 37.84 | + | 0.11 | 35.54 | 0 | 18 | 2.41 | | 3.68 | |
| | O. Arg. S. 169 . . . | 30 | .. | .. | .. | 10.2 | 11.9 | 13.7 | 15.3 | 17.1 | 30.0 | 32.9 | 34.7 | 19 | 20.72 | — | 6.98 | 35.54 | 0 | 18 | 38.20 | | 3.68 | |
| | *+15° 22' . . . | 31 | 58.0 | 59.5 | 2.0 | 14.5 | 16.1 | 17.9 | 19.5 | 21.0 | 33.5 | 36.1 | 37.9 | 23 | 17.82 | + | 0.09 | 35.54 | 0 | 22 | 42.37 | | 3.38 | |
| 49 | Piscium . . . | 32 | 39.8 | 41.4 | 43.9 | 56.3 | 57.8 | 59.7 | 1.3 | 2.8 | 15.3 | 18.0 | 19.5 | 24 | 59.62 | | 0.09 | 35.54 | 0 | 24 | 21.17 | | 3.39 | |
| | B. A. C. 122 . . . | 33 | 28.1 | 29.9 | 32.4 | 44.8 | 46.5 | 48.2 | 49.9 | 51.6 | 3.8 | 6.4 | 8.1 | 25 | 48.15 | | 0.09 | 35.54 | 0 | 25 | 12.70 | | 3.40 | |
| | Lalande 863 . . . | 34 | 11.5 | 13.4 | 16.4 | 31.3 | 33.1 | 35.3 | 37.2 | 39.1 | 53.8 | 56.9 | 58.9 | 29 | 35.17 | | 0.10 | 35.54 | 0 | 28 | 59.73 | | 3.33 | |
| | B. A. C. 225 . . . | 35 | .. | .. | .. | 38.0 | 50.0 | 3.9 | 17.7 | 28.9 | .. | .. | .. | 44 | 3.70 | | 0.66 | 35.56 | 0 | 43 | 28.80 | | 4.43 | |
| | *+38° 30' . . . | 36 | .. | .. | .. | 22.2 | 24.0 | 26.2 | 28.3 | 30.3 | .. | .. | .. | 48 | 26.20 | | 0.11 | 35.56 | 0 | 47 | 50.75 | | 3.55 | |
| | *+38° 30' . . . | 37 | 1.7 | 3.8 | 6.7 | .. | .. | .. | .. | .. | 45.5 | 48.5 | 50.6 | 48 | 26.13 | | 0.09 | 35.56 | 0 | 47 | 50.66 | | 3.55 | |
| | Polaris . . . | 38 | .. | .. | .. | 3.0 | 8.0 | 18.0 | 28.0 | 33.0 | .. | .. | .. | 14 | 18.00 | + | 3.60 | 35.58 | .. | .. | .. | | 24.89 | |
| | *+15° 3' . . . | 39 | .. | .. | .. | 0.7 | 2.3 | 4.0 | 5.8 | 7.4 | 19.6 | 22.2 | 24.0 | 27 | 10.75 | — | 6.61 | 35.59 | 1 | 26 | 28.55 | | 3.85 | |
| | Weisse (2) 575 . . . | 40 | 41.3 | 42.8 | 45.3 | 57.8 | 59.2 | 1.0 | 2.7 | 4.4 | 16.8 | 19.2 | 21.0 | 28 | 1.05 | + | 0.09 | 35.59 | 1 | 27 | 25.55 | | 3.86 | |
| | Weisse 557 . . . | 41 | 34.7 | 36.4 | 39.9 | 51.3 | 52.9 | 54.6 | 56.3 | 57.8 | 10.0 | 12.9 | 14.5 | 33 | 54.66 | | 0.09 | 35.60 | 1 | 33 | 19.15 | | 3.90 | |
| | Weisse 558 . . . | 42 | 16.3 | 18.1 | 19.8 | 21.3 | 24.2 | .. | .. | .. | 29.0 | 30.6 | 32.2 | 34.2 | 33 | 55.22 | | 0.01 | 35.60 | 1 | 33 | 19.63 | | 3.90 |
| τ | Ceti . . . | 43 | 37.6 | 39.2 | 41.8 | 54.0 | 55.7 | 57.6 | 59.3 | 0.8 | 13.3 | 15.9 | 17.5 | 38 | 57.52 | | 0.10 | 35.60 | 1 | 38 | 22.02 | | 3.90 | |
| | Santini 102 . . . | 44 | .. | .. | .. | 46.0 | 47.4 | 49.4 | 51.0 | 52.6 | .. | .. | .. | 42 | 49.28 | | 0.10 | 35.61 | 1 | 42 | 13.77 | | 3.93 | |
| | O. Arg. S. 1127 . . | 45 | 5.9 | 7.5 | 10.1 | 22.3 | 24.0 | 25.8 | 27.4 | 29.1 | 41.5 | 44.1 | 45.8 | 46 | 25.77 | + | 0.10 | 35.61 | 1 | 45 | 50.26 | | 3.92 | |
| | B. A. C. 578 . . . | 46 | .. | .. | .. | .. | .. | .. | .. | .. | 24.5 | 26.5 | 28.7 | 31.1 | 49 | 26.40 | — | 44.01 | 35.61 | 1 | 48 | 6.78 | | 4.06 |
| α | Arietis . . . | 47 | 30.1 | 31.9 | 34.4 | 47.3 | 49.0 | 50.9 | 52.7 | 54.3 | 7.1 | 9.9 | 11.6 | 0 | 50.84 | + | 0.09 | 35.63 | 2 | 0 | 15.30 | | 4.17 | |
| ξ ¹ | Ceti . . . | 48 | 46.0 | 47.5 | 50.1 | .. | .. | .. | .. | .. | .. | .. | .. | 6 | 47.87 | + | 17.53 | —35.63 | 2 | 6 | 29.77 | — | 4.07 | |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------|-----------------|--------------|--------|--------|
| 1876. h. s. | — 35.57 | — 0.050 | — 0.02 | + 0.09 |
| Dec. 12, 1.0 | | | | |

4. Faint.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | | | |
|-------------------------|------------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|---------|---------------|----------|---------------------------------|-------------------------|-------------|------------|-------|------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | | | |
| | | | m. | s. | m. | s. | h. | m. | s. | s. | | | | | | | | | | | |
| 1876. Dec. 13 Y. | ω Piscium | 1 | 13.2 | 14.8 | 17.3 | 29.4 | 30.9 | 32.6 | 34.3 | 35.7 | 47.7 | 50.2 | 51.8 | 53 32.54 | + | 0.10 | —32.72 | 23 52 59.92 | — | 3.25 | |
| | 2 Ceti. | 2 | 39.1 | 40.6 | 43.3 | 55.9 | 57.6 | 59.3 | 1.1 | 2.6 | 15.1 | 17.8 | 19.5 | 57 59.26 | | 0.07 | 32.72 | 23 57 26.61 | | 3.51 | |
| | Lacaille 9737 . . . | 3 | 40.8 | 42.7 | 45.6 | 0.1 | 1.8 | 3.9 | 5.8 | 7.8 | 22.8 | 26.4 | 27.9 | 3 4.15 | | 0.05 | 32.72 | 0 2 31.48 | | 3.78 | |
| | γ Pegasi | 4 | 7.2 | 8.8 | 11.3 | 23.7 | 25.3 | 26.9 | 28.7 | 30.3 | 42.5 | 45.1 | 46.8 | 7 26.96 | | 0.11 | 32.72 | 0 6 54.35 | | 3.25 | |
| | Lalande 231 . . . | 5 | 37.3 | 39.3 | 42.4 | 58.9 | 59.8 | 2.0 | 4.2 | 6.1 | 21.4 | 24.7 | 26.7 | 11 2.07 | | 0.18 | 22.72 | 0 10 29.53 | | 3.07 | |
| | Lalande 409 . . . | 6 | 56.6 | 58.4 | 1.6 | 16.6 | 18.6 | 20.6 | 22.7 | 24.6 | 39.5 | 42.7 | 44.7 | 16 20.60 | | 0.17 | 32.72 | 0 15 48.05 | | 3.15 | |
| | α Phœnicis | 7 | 19.6 | 21.5 | 24.8 | 41.4 | 43.3 | 45.5 | 47.9 | 50.1 | 6.2 | 9.4 | 11.9 | 20 45.60 | | 0.05 | 32.72 | 0 26 12.93 | | 3.96 | |
| | 16 Cassiopeæ . . . | 8 | 1.1 | 4.5 | 10.6 | .. | .. | .. | .. | .. | 25.0 | 31.4 | 35.4 | 27 48.00 | | 0.38 | 32.71 | 0 27 15.67 | | 3.10 | |
| | *+65° 56' | 9 | .. | .. | .. | 46.7 | 50.5 | 54.6 | 58.7 | 2.5 | .. | .. | .. | 27 54.60 | | 0.42 | 32.71 | 0 27 22.31 | | 3.11 | |
| | Weisse 583 | 10 | 15.6 | 17.1 | 19.5 | 31.5 | 33.0 | 34.6 | 36.3 | 37.8 | .. | .. | .. | 35 28.17 | + | 6.58 | 32.71 | 0 35 2.04 | | 3.53 | |
| | Weisse 588 | 11 | .. | .. | .. | 56.3 | 57.9 | 59.7 | 1.2 | 2.7 | 14.5 | 17.1 | 19.9 | 36 6.16 | — | 6.39 | 32.71 | 0 35 27.06 | | 3.53 | |
| | Lalande 1443 . . . | 12 | 15.9 | 17.6 | 20.9 | 35.9 | 37.9 | 40.0 | 42.1 | 44.1 | 59.1 | 2.4 | 4.4 | 46 40.03 | + | 0.18 | 32.71 | 0 46 7.50 | | 3.51 | |
| | *+1° 50' | 13 | 53.3 | 54.9 | 57.3 | 9.3 | 10.9 | 12.4 | 14.2 | 15.7 | 27.6 | 30.0 | 31.6 | 52 12.47 | + | 0.09 | 32.71 | 0 51 39.85 | | 3.63 | |
| | *+1° 56' | 14 | .. | .. | .. | .. | .. | .. | .. | 14.1 | 17.4 | 18.8 | 21.1 | 22.9 | 53 18.86 | — | 34.13 | 32.71 | 0 52 12.02 | | 3.63 |
| | Weisse 972 | 15 | 51.9 | 53.4 | 56.2 | 8.3 | 10.0 | 11.5 | 13.0 | 14.6 | .. | .. | .. | 57 4.86 | + | 6.67 | 32.71 | 0 56 38.82 | | 3.64 | |
| | Weisse 980 | 16 | 21.7 | 23.4 | 25.7 | 38.0 | 39.5 | 41.0 | 42.8 | 44.4 | 56.3 | 58.0 | 0.7 | 57 41.05 | | 0.10 | 32.71 | 0 57 8.44 | | 3.64 | |
| | Lacaille 303 . . . | 17 | 22.6 | 24.4 | 27.0 | 40.1 | 41.7 | 43.6 | 45.3 | 47.1 | 0.1 | 2.9 | 4.7 | 0 43.59 | | 0.06 | 32.70 | 1 0 10.95 | | 3.81 | |
| | B. A. C. 366 . . . | 18 | 13.9 | 15.7 | 18.8 | 33.7 | 35.4 | 37.4 | 39.5 | 41.4 | 56.2 | 58.2 | 1.2 | 7 37.40 | | 0.05 | 32.70 | 1 7 4.75 | | 3.94 | |
| | Polaris | 19 | .. | .. | .. | 56.0 | 2.0 | 10.0 | 20.0 | 24.0 | .. | .. | .. | 14 10.40 | | 7.68 | 32.70 | .. | .. | 24.25 | |
| | *+15° 3' | 20 | 29.4 | 30.9 | 33.4 | 46.0 | 47.5 | 49.2 | 50.9 | 52.4 | 5.0 | 7.4 | 9.1 | 27 49.20 | | 0.11 | 32.70 | 1 27 16.61 | | 3.95 | |
| | *+13° 54' | 21 | 51.0 | 52.6 | 55.2 | 7.3 | 9.0 | 10.7 | 12.4 | 14.0 | 26.2 | 28.9 | 30.4 | 34 10.70 | + | 0.11 | 32.70 | 1 33 38.11 | | 3.89 | |
| | *+13° 55' | 22 | .. | .. | .. | .. | .. | .. | 50.8 | 53.1 | 54.5 | 56.1 | 58.0 | 34 54.50 | — | 35.12 | 32.70 | 1 33 46.68 | | 3.89 | |
| | α Piscium | 23 | 8.0 | 9.6 | 12.0 | 24.2 | 25.8 | 27.4 | 29.0 | 30.6 | 42.7 | 45.2 | 46.8 | 39 27.39 | + | 0.10 | 32.69 | 1 38 54.80 | | 3.92 | |
| | ϵ Arietis | 24 | 33.7 | 35.2 | 38.0 | 50.9 | 52.5 | 54.2 | 56.0 | 57.6 | 10.4 | 12.2 | 15.0 | 43 54.15 | | 0.13 | 32.69 | 1 43 21.59 | | 4.01 | |
| | β Arietis | 25 | 3.8 | 5.4 | 8.1 | 20.7 | 22.4 | 24.2 | 26.0 | 27.5 | 40.2 | 43.0 | 44.7 | 48 24.18 | | 0.12 | 32.69 | 1 47 51.61 | | 4.04 | |
| | γ Andromedæ, (1st *) | 26 | 4.2 | 6.6 | 9.0 | 11.0 | 14.6 | .. | 35.3 | 36.6 | 40.5 | 42.9 | 45.4 | 56 54.61 | | 0.09 | 32.69 | 1 56 22.01 | | 4.41 | |
| | γ Andromedæ, (2d *) | 27 | 29.7 | 32.0 | 35.4 | 51.3 | 53.5 | 55.6 | 57.8 | 59.9 | 15.8 | 19.1 | 21.2 | 56 55.57 | + | 0.19 | 32.69 | 1 56 23.07 | | 4.41 | |
| | Weisse 1069 | 28 | .. | 39.5 | 42.0 | 43.8 | .. | .. | 54.6 | 57.2 | 58.9 | 0.6 | 2.5 | 15 2.39 | — | 27.87 | 32.69 | 2 0 51.83 | | 3.98 | |
| | *—28° 50' | 29 | 12.0 | 13.8 | 17.1 | 30.5 | 32.1 | 34.0 | 35.8 | 37.6 | 51.0 | 53.7 | 55.5 | 5 33.92 | + | 0.06 | 32.69 | 2 5 1.29 | | 4.00 | |
| | Lacaille 649 . . . | 30 | .. | 1.2 | 4.3 | 6.0 | .. | .. | 18.6 | 21.4 | 23.2 | 25.1 | 27.3 | 6 15.89 | — | 31.72 | 32.69 | 2 5 11.48 | | 4.00 | |
| | *+55° 18' | 31 | .. | .. | .. | 41.0 | 43.4 | 46.5 | 49.5 | 52.0 | .. | .. | .. | 9 46.48 | + | 0.30 | 32.69 | 2 9 14.09 | | 5.07 | |
| | *+55° 18' | 32 | 21.8 | 24.6 | 28.9 | .. | .. | .. | .. | 21.9 | 26.4 | 29.4 | 9 55.50 | + | 0.27 | 32.69 | 2 9 23.08 | | 5.08 | | |
| | κ Fornacis | 33 | .. | 45.2 | 47.9 | 49.7 | .. | .. | 1.6 | 4.5 | 6.2 | 8.0 | 10.2 | 17 59.16 | — | 30.52 | 32.68 | 2 16 55.96 | | 4.01 | |
| | Lacaille 749 . . . | 34 | 0.3 | 1.9 | 4.9 | 19.2 | 21.1 | 23.1 | 25.1 | 27.1 | 41.4 | 44.6 | 46.6 | 23 23.21 | + | 0.05 | 32.68 | 2 22 50.58 | | 4.04 | |
| | *—33° 8' | 35 | 8.4 | 9.9 | 13.0 | 27.3 | 29.1 | 31.3 | 33.1 | 35.0 | 49.3 | 52.3 | 54.4 | 27 31.19 | | 0.06 | 32.68 | 2 26 58.57 | | 4.04 | |
| | Weisse (2) 702 . . | 36 | 50.9 | 53.6 | 56.1 | 11.1 | 13.0 | 14.9 | 17.0 | 18.9 | 33.9 | 37.4 | 39.3 | 31 15.05 | | 0.17 | 32.68 | 2 30 42.54 | | 4.68 | |
| | B. A. C. 840 . . . | 37 | 22.8 | 24.3 | 27.1 | 42.6 | 44.5 | 46.9 | 49.0 | 51.0 | 6.3 | 9.5 | 11.5 | 37 46.86 | | 0.05 | 32.68 | 2 37 14.23 | | 4.07 | |
| | Weisse (2) 1018 . . | 38 | 16.8 | 18.5 | 21.2 | 34.2 | 35.9 | 37.7 | 39.6 | 41.3 | 54.4 | 57.0 | 58.8 | 43 37.76 | | 0.14 | 32.68 | 2 43 5.22 | | 4.50 | |
| | B. A. C. 905 . . . | 39 | 53.4 | 55.0 | 57.4 | 9.4 | 11.1 | 12.8 | 14.4 | 16.0 | 27.9 | 30.5 | 32.2 | 50 12.74 | | 0.10 | 32.68 | 2 49 40.16 | | 4.31 | |
| | B. A. C. 944 . . . | 40 | 45.2 | 46.9 | 49.8 | 4.0 | 5.9 | 7.9 | 9.7 | 11.8 | 25.7 | 28.7 | 30.9 | 55 7.86 | | 0.06 | 32.67 | 2 54 35.25 | | 4.07 | |
| | *—26° 14' | 41 | 35.1 | 36.8 | 39.6 | 52.8 | 54.4 | 56.4 | 58.2 | 59.9 | 13.3 | 16.1 | 17.9 | 59 56.41 | | 0.06 | 32.67 | 2 59 23.80 | | 4.08 | |
| | Weisse 26 | 42 | 24.4 | 26.0 | 28.6 | 40.7 | 42.2 | 43.9 | 45.6 | 47.1 | 59.3 | 1.9 | 3.5 | 4 43.93 | | 0.10 | 32.67 | 3 4 11.36 | | 4.38 | |
| | Lalande 5997 . . . | 43 | 44.1 | 45.5 | 48.3 | 0.8 | 2.2 | 4.0 | 5.7 | 7.4 | 19.9 | 22.5 | 24.2 | 8 4.05 | | 0.07 | 32.67 | 3 7 31.45 | | 4.12 | |
| | ζ Persei | 44 | 20.4 | 22.5 | 25.9 | 42.1 | 44.1 | 46.5 | 48.7 | 50.7 | .. | .. | .. | 13 37.61 | | 9.04 | 32.67 | 3 13 13.98 | | 5.31 | |
| | B. A. C. 1105 . . . | 45 | 49.6 | 51.6 | 55.0 | 11.0 | 13.1 | 15.4 | 17.3 | 19.5 | 35.8 | 39.3 | 41.4 | 30 15.36 | | 0.20 | 32.67 | 3 29 42.89 | | 5.44 | |
| | B. A. C. 1123 . . . | 46 | 17.6 | 19.5 | 22.6 | 37.4 | 39.4 | 41.5 | 43.5 | 45.4 | 0.4 | 3.6 | 5.7 | 33 41.51 | | 0.17 | 32.66 | 3 33 9.02 | | 5.24 | |
| | 18 Tauri | 47 | 2.4 | 4.0 | 6.8 | 19.8 | 21.5 | 23.5 | 25.2 | 26.8 | 40.0 | 42.7 | 44.5 | 38 23.38 | | 0.14 | 32.66 | 3 37 50.86 | | 4.85 | |
| | η Tauri | 48 | 23.5 | 25.0 | 27.7 | 40.8 | 42.5 | 44.4 | 46.1 | 47.8 | 0.7 | 3.5 | 5.3 | 40 44.30 | | 0.13 | 32.66 | 3 40 11.77 | | 4.65 | |
| | B. A. C. 1205 . . . | 49 | 8.8 | 10.2 | 12.7 | 24.7 | 26.2 | 27.8 | 29.5 | 31.0 | 42.9 | 45.4 | 47.2 | 46 27.85 | | 0.09 | 32.66 | 3 45 55.28 | | 4.37 | |
| | ξ Persei | 50 | 9.7 | 11.6 | 14.6 | 29.1 | 31.0 | 33.2 | 35.1 | 36.9 | 51.6 | 54.8 | 56.8 | 51 33.13 | + | 0.17 | —32.66 | 3 51 0.64 | — | 5.30 | |

37. Blurred.

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------------------|--------------------|-----------------|--------------|--------------|
| 1876. h. Dec. 13, 1.9 | s. — 32.69 | s. + 0.016 | s. + 0.08 | s. + 0.09 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | | Observed Right Ascension. | Reduction to 1876.0. | |
|---------------------------|--------------------------------|----------|--------------------------------|----------|----------|----------|----------|------|-------|-------|-------|-------|------------|---------------|------------|-------------|---------------------------------|-------------------------|--------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | | Inst. | | | Clock. |
| | | | | | | | | | | | | | | m. | s. | | | | |
| 1876. Dec. 13 Y. | A ² Tauri | 1 | 38.840.5 | 43.155.9 | 57.659.4 | 1.2 | 2.8 | 15.7 | 18.5 | 20.2 | 57 | 59.43 | + | 0.13 | -32.66 | 3 57 26.90 | - | 4.87 | |
| | B. A. C. 1282 | 2 | 41.243.5 | 47.45.4 | 7.810.4 | 12.8 | 15.2 | 33.2 | 37.0 | 39.6 | 5 | 10.32 | | 0.23 | 32.65 | 4 4 37.90 | | 6.16 | |
| | B. A. C. 1307 | 3 | 4.57.0 | 10.829.3 | 31.534.2 | 36.9 | 39.1 | 57.0 | 0.3 | 2.9 | 10 | 33.95 | | 0.23 | 32.65 | 4 10 1.53 | | 6.29 | |
| | 70 Tauri | 4 | 50.151.0 | 54.36.6 | 8.29.8 | 11.7 | 13.4 | 25.5 | 28.3 | 30.0 | 18 | 9.95 | | 0.12 | 32.65 | 4 17 37.42 | | 4.79 | |
| | ε Tauri | 5 | 39.841.4 | 44.156.9 | 58.20.1 | 1.8 | 3.4 | 16.0 | 18.6 | 20.4 | 22 | 0.05 | | 0.12 | 32.65 | 4 21 27.52 | | 4.90 | |
| 15 | ω Piscium | 6 | 13.314.7 | 17.320.3 | 30.732.5 | 34.1 | 35.8 | 47.8 | 50.3 | 51.9 | 53 | 32.52 | | 0.07 | 32.69 | 23 52 59.90 | | 3.23 | |
| | 30 Piscium | 7 | 52.554.0 | 56.68.6 | 10.211.8 | 13.4 | 15.0 | 27.0 | 29.5 | 31.2 | 56 | 11.80 | | 0.13 | 32.69 | 23 55 39.24 | | 3.36 | |
| | γ Pegasi | 8 | 7.38.9 | 11.523.6 | 25.227.1 | 28.8 | 30.4 | 42.6 | 45.3 | 46.9 | 7 | 27.05 | + | 0.03 | 32.70 | 0 6 54.38 | | 3.23 | |
| | σ Andromedæ | 9 | 3.25.3 | 8.323.3 | 25.227.1 | 29.0 | 31.0 | 45.8 | 49.0 | 50.9 | 12 | 27.10 | - | 0.09 | 32.71 | 0 11 54.30 | | 3.08 | |
| | 9 Ceti | 10 | 46.848.3 | 50.83.0 | 4.66.4 | 8.0 | 9.7 | 21.8 | 24.4 | 26.1 | 17 | 6.35 | + | 0.17 | 32.71 | 0 16 33.81 | | 3.52 | |
| | 48 Piscium | 11 | 2.64.0 | 6.719.1 | 20.722.4 | 24.0 | 25.5 | 38.1 | 40.7 | 42.3 | 22 | 22.37 | + | 0.02 | 32.72 | 0 21 49.67 | | 3.34 | |
| | Groombridge 73 | 12 | ..19.3 | 23.025.0 | .. | .. | 39.9 | 43.4 | 45.4 | 47.8 | 25 | 36.76 | - | 38.01 | 32.72 | 0 24 26.03 | | 3.19 | |
| | *+2° 37' | 13 | 7.58.9 | 11.523.6 | 25.227.1 | 28.8 | 30.4 | 42.6 | 45.3 | 46.9 | 7 | 27.05 | - | 27.79 | 32.72 | 0 29 18.69 | | 3.47 | |
| | *+2° 39' | 14 | ..6.3 | 9.010.5 | .. | .. | 21.5 | 24.0 | 25.5 | 27.3 | 29.5 | 30 | 19.20 | - | 27.79 | 32.72 | 0 29 18.69 | | 3.47 |
| | O. Arg. S. 443 | 15 | 30.532.3 | 34.848.0 | 49.551.4 | 53.1 | 54.7 | 7.8 | 10.5 | 12.3 | 43 | 51.35 | + | 0.24 | 32.73 | 0 43 18.86 | | 3.73 | |
| | O. Arg. S. 447 | 16 | ..19.6 | 22.224.1 | .. | .. | 36.2 | 38.9 | 40.7 | 42.8 | 44.5 | 44 | 33.62 | - | 30.26 | 32.73 | 0 43 30.63 | | 3.73 |
| | φ ³ Ceti | 17 | 4.96.6 | 9.021.0 | 22.824.6 | 26.2 | 27.7 | 39.8 | 42.4 | 44.1 | 50 | 24.46 | + | 0.16 | 32.74 | 0 49 51.88 | | 3.67 | |
| | Weisse 972 | 18 | .. | ..7.5 | 9.411.4 | 13.4 | 14.7 | .. | .. | .. | 57 | 11.28 | + | 0.06 | 32.74 | 0 56 38.60 | | 3.62 | |
| | Weisse 980 | 19 | ..56.7 | 59.20.7 | .. | .. | 11.6 | 14.0 | 16.1 | 18.0 | 19.9 | 58 | 9.52 | - | 28.19 | 32.75 | 0 57 8.58 | | 3.62 |
| | Lacaille 303 | 20 | .. | .. | 39.841.5 | 43.3 | 45.2 | 46.8 | 50.8 | 2.6 | 4.5 | 0 | 50.44 | - | 6.92 | 32.75 | 1 0 10.77 | | 3.79 |
| | Lacaille 310 | 21 | 26.728.5 | 31.244.2 | 46.147.9 | 49.651.4 | 4.4 | 7.1 | 9.0 | 1 | 47.83 | + | 0.24 | 32.75 | 1 1 15.32 | | 3.79 | | |
| | B. A. C. 366 | 22 | 13.515.2 | 18.232.9 | 34.836.8 | 38.640.7 | 55.358.7 | 0.8 | 7 | 36.86 | + | 0.34 | 32.75 | 1 7 4.45 | | 3.91 | | | |
| | Polaris | 23 | .. | .. | 16.024.0 | 36.045.0 | 51.0 | .. | .. | .. | 14 | 34.40 | - | 7.59 | 32.76 | .. | 22.92 | | |
| | B. A. C. 424 | 24 | .. | .. | 58.059.8 | 1.83.7 | 5.5 | 10.8 | 22.6 | 24.6 | 19 | 9.47 | - | 7.37 | 32.76 | 1 18 29.34 | | 3.91 | |
| | *-37° 31' | 25 | 26.628.2 | 31.646.7 | 48.750.7 | 52.654.6 | 9.5 | 12.7 | 14.8 | 23 | 50.61 | + | 0.35 | 32.77 | 1 23 18.19 | | 3.96 | | |
| Lalande 2942 | 26 | .. | .. | 23.324.9 | 26.728.4 | 30.242.7 | 45.3 | 47.0 | 30 | 33.56 | - | 6.60 | 32.78 | 1 29 54.18 | | 3.85 | | | |
| *+13° 54' | 27 | 51.252.8 | 55.37.5 | 9.010.7 | 12.414.2 | 26.429.2 | 30.9 | 34 | 10.87 | + | 0.03 | 32.78 | 1 33 38.12 | | 3.88 | | | | |
| α Piscium | 28 | 8.09.6 | 12.124.0 | 25.727.4 | 29.130.6 | 42.545.1 | 46.8 | 39 | 27.35 | + | 0.06 | 32.78 | 1 38 54.63 | | 3.90 | | | | |
| 1 Arietis | 29 | 33.835.6 | 38.151.0 | 52.754.4 | 56.257.9 | 10.613.4 | 15.2 | 43 | 54.45 | - | 0.01 | 32.79 | 1 43 21.65 | | 3.99 | | | | |
| β Arietis | 30 | 4.05.7 | 8.221.0 | 22.624.5 | 26.327.7 | 40.443.0 | 44.8 | 48 | 24.38 | | 0.00 | 32.79 | 1 47 51.59 | | 4.02 | | | | |
| Lacaille 598 | 31 | 13.815.4 | 16.031.2 | 32.934.8 | 36.738.1 | 51.454.1 | 56.0 | 55 | 34.76 | + | 0.25 | 32.80 | 1 55 2.21 | | 3.95 | | | | |
| Weisse 1038 | 32 | .. | .. | 11.512.8 | 14.516.2 | 17.820.6 | 32.233.8 | 0 | 21.05 | - | 6.49 | 32.80 | 1 59 41.76 | | 4.02 | | | | |
| β Trianguli | 33 | .. | .. | 43.545.3 | 47.549.4 | 51.2 | .. | .. | .. | 3 | 47.38 | - | 0.02 | 32.80 | 2 3 14.56 | | 4.33 | | |
| γ Ceti | 34 | 43.345.5 | 47.259.2 | 0.92.6 | 4.25.6 | 17.720.2 | 21.8 | 7 | 2.56 | + | 0.06 | 32.81 | 2 6 29.81 | | 4.05 | | | | |
| Weisse 155 | 35 | 25.927.3 | 29.942.1 | 43.745.4 | 47.048.5 | 1.03.5 | 5.1 | 12 | 4.40 | | 0.04 | 32.81 | 2 12 12.63 | | 4.12 | | | | |
| B. A. C. 742 | 36 | 3.75.4 | 8.122.2 | 23.925.9 | 27.629.2 | 43.346.2 | 48.0 | 18 | 25.77 | | 0.28 | 32.82 | 2 17 53.23 | | 4.01 | | | | |
| Lacaille 745 | 37 | 40.742.5 | 45.659.8 | 1.73.7 | 5.57.5 | 22.225.0 | 27.2 | 23 | 3.76 | + | 0.32 | 32.82 | 2 22 31.26 | | 4.02 | | | | |
| Lacaille 749 | 38 | ..41.2 | 44.146.3 | .. | ..59.5 | 2.64.4 | 6.49.1 | 23 | 56.70 | - | 33.42 | 32.82 | 2 23 0.46 | | 4.03 | | | | |
| Lalande 4761 | 39 | 31.733.4 | 36.651.4 | 53.255.6 | 57.659.4 | 14.147.4 | 19.3 | 28 | 55.43 | - | 0.09 | 32.83 | 2 28 22.51 | | 4.62 | | | | |
| O. Arg. S. 1735 | 40 | 58.20.0 | 2.916.8 | 18.520.6 | 22.524.3 | 38.241.2 | 43.1 | 35 | 20.57 | + | 0.29 | 32.83 | 2 34 48.03 | | 4.03 | | | | |
| π Ceti | 41 | .. | .. | 46.548.0 | 49.851.5 | 53.05.2 | 7.89.6 | 38 | 56.42 | - | 6.50 | 32.83 | 2 38 17.09 | | 4.07 | | | | |
| 17 Persei | 42 | 7.29.0 | 11.926.4 | 28.330.3 | 32.334.0 | 48.751.7 | 53.7 | 44 | 30.32 | - | 0.08 | 32.84 | 2 43 57.40 | | 4.73 | | | | |
| Weisse 789 | 43 | 25.527.0 | 29.641.9 | 43.445.2 | 46.848.3 | 0.73.1 | 4.8 | 47 | 45.12 | + | 0.03 | 32.84 | 2 47 12.31 | | 4.34 | | | | |
| Lalande 5834 | 44 | 42.544.4 | 47.72.7 | 4.76.9 | 8.710.8 | 25.728.9 | 30.9 | 4 | 6.72 | - | 0.10 | 32.85 | 3 3 33.77 | | 5.00 | | | | |
| ζ Arietis | 45 | 3.65.2 | 7.920.6 | 22.224.0 | 25.827.4 | 40.142.9 | 45.5 | 7 | 24.02 | | 0.00 | 32.86 | 3 6 52.16 | | 4.59 | | | | |
| 16 | ι Piscium | 46 | 51.252.6 | 55.47.2 | 8.910.5 | 12.313.8 | 25.728.4 | 30.0 | 34 | 10.55 | + | 0.09 | 33.14 | 23 33 37.50 | | 3.12 | | | |
| | B. A. C. 8257 | 47 | 46.447.8 | 50.32.4 | 3.95.5 | 7.28.8 | 20.623.2 | 24.9 | 39 | 5.55 | | 0.09 | 33.14 | 23 38 32.50 | | 3.10 | | | |
| | B. A. C. 8285 | 48 | 7.59.1 | 11.723.7 | 25.226.7 | 28.430.2 | 42.444.9 | 46.6 | 44 | 26.95 | + | 0.15 | 33.14 | 23 43 53.96 | | 3.33 | | | |
| | Lalande 40836 | 49 | 59.91.5 | 4.920.2 | 22.224.3 | 26.528.4 | 43.546.9 | 48.8 | 48 | 24.28 | - | 0.04 | 33.15 | 23 47 51.09 | | 2.74 | | | |
| | ψ Pegasi | 50 | 41.943.4 | 46.259.4 | 1.02.8 | 4.76.3 | 11.422.3 | 23.8 | 52 | 2.84 | + | 0.02 | -33.15 | 23 51 29.71 | - | 2.99 | | | |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------|-----------------|--------------|--------|--------|
| 1876. h. | s. | s. | s. | s. |
| Dec. 15, 1.4 | - 32.77 | - 0.051 | - 0.29 | + 0.10 |
| 16, 1.1 | - 33.29 | - 0.41 | - 0.66 | - 0.11 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | |
|-------------------------|------------------------|---------|--------------------------------|------|------|------|------|------|------|-------|------|------|------|-------------------|-----------------|---------------------------------|-------------------------|--------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. |
| 1876. Dec. 16 Y. | 30 Piscium . . . | 1 | 53.0 | 54.4 | 57.0 | 9.1 | 10.6 | 12.2 | 13.8 | 15.6 | 27.4 | 30.0 | 31.7 | m. s. 56 12.25 | m. s. + 0.14 | s. -33.15 | h. m. s. 23 55 39.24 | s. - 3.35 |
| | 86 Pegasi . . . | 2 | 36.9 | 38.4 | 41.0 | 53.1 | 54.7 | 56.5 | 58.2 | 59.7 | 11.9 | 14.5 | 16.2 | 59 56.46 | 0.06 | 33.15 | 23 59 23.37 | 3.18 |
| | B. A. C. 17 . . . | 3 | 15.0 | 16.6 | 19.0 | 31.0 | 32.7 | 34.4 | 36.0 | 37.6 | 49.4 | 52.0 | 53.4 | 4 34.28 | 0.13 | 33.16 | 0 4 1.25 | 3.39 |
| | γ Pegasi . . . | 4 | 7.8 | 9.4 | 11.9 | 24.1 | 25.8 | 27.6 | 29.1 | 30.6 | 43.0 | 45.7 | 47.2 | 7 27.47 | + 0.05 | 33.16 | 0 6 54.36 | 3.22 |
| | Lalande 330 . . . | 5 | 29.8 | 31.7 | .. | 49.4 | 51.7 | 53.7 | 55.7 | 57.5 | .. | 15.5 | 17.5 | 13 53.55 | - 0.01 | 33.16 | 0 13 20.38 | 3.08 |
| | B. A. C. 91 . . . | 6 | 52.9 | 54.5 | 57.0 | 10.0 | 11.5 | 13.2 | 15.0 | 16.6 | 29.2 | 31.9 | 33.7 | 20 13.23 | + 0.04 | 33.17 | 0 19 40.10 | 3.28 |
| | Groombridge 73 . . . | 7 | 33.4 | 35.2 | 38.7 | 54.8 | 56.9 | 59.0 | 1.5 | 3.4 | 19.6 | 23.0 | 25.3 | 24 59.16 | - 0.06 | 33.17 | 0 24 25.93 | 3.17 |
| | *+42° 44' . . . | 8 | 56.4 | 58.4 | 1.7 | 18.2 | 20.1 | 22.5 | 24.7 | 26.9 | 43.0 | 46.3 | 48.4 | 26 22.42 | 0.06 | 33.17 | 0 25 49.19 | 3.19 |
| | B. A. C. 175 . . . | 9 | 32.4 | 35.9 | 41.9 | 11.0 | 14.9 | 18.5 | 22.5 | 26.2 | 55.0 | 1.0 | 5.2 | 35 18.59 | 1.18 | 33.18 | 0 34 44.23 | 3.20 |
| | ν Cassiopeæ . . . | 10 | 56.4 | 58.6 | 2.4 | 21.0 | 23.7 | 26.1 | 28.6 | 31.1 | 49.6 | 53.6 | 56.4 | 42 26.14 | 0.62 | 33.18 | 0 41 52.34 | 3.40 |
| | Lalande 1443 . . . | 11 | 16.9 | 18.9 | 21.9 | 37.0 | 38.8 | 41.2 | 43.1 | 45.2 | 0.1 | 3.3 | 5.2 | 46 41.05 | - 0.04 | 33.19 | 0 46 7.82 | 3.47 |
| | B. A. C. 263 . . . | 12 | 50.2 | 51.8 | 54.5 | 7.9 | 9.5 | 11.5 | 13.2 | 14.9 | 28.3 | 31.0 | 32.9 | 51 11.43 | + 0.01 | 33.19 | 0 50 38.25 | 3.53 |
| | 25 Ceti . . . | 13 | 3.6 | 5.1 | 7.8 | 19.6 | 21.2 | 23.0 | 24.6 | 26.0 | 38.0 | 40.6 | 42.0 | 57 23.86 | 0.13 | 33.19 | 0 56 50.80 | 3.66 |
| | Lacaille 303 . . . | 14 | 22.7 | 24.2 | 27.0 | 40.3 | 41.8 | 43.8 | 45.6 | 47.1 | 0.3 | 3.0 | 4.7 | 0 43.68 | 0.23 | 33.20 | 1 0 10.71 | 3.78 |
| | Lacaille 310 . . . | 15 | 27.1 | 28.8 | 31.5 | 44.6 | 46.3 | 48.2 | 50.1 | 51.7 | 4.6 | 7.5 | 9.5 | 1 48.17 | + 0.23 | 33.20 | 1 1 15.20 | 3.78 |
| | Polaris . . . | 16 | .. | .. | .. | 21.0 | 27.0 | 41.0 | 53.0 | 56.0 | .. | .. | .. | 14 39.60 | - 22.97 | 33.20 | .. | 22.18 |
| | *-13° 51' . . . | 17 | 25.2 | 26.7 | 29.1 | 41.4 | 43.0 | 44.7 | 46.5 | 47.9 | 0.0 | 2.8 | 4.4 | 22 44.70 | + 0.17 | 33.21 | 1 22 11.66 | 3.80 |
| | B. A. C. 466 . . . | 18 | 35.1 | 37.3 | 40.4 | 55.3 | 57.3 | 59.4 | 1.4 | 3.5 | 18.6 | 21.6 | 23.3 | 27 59.38 | 0.31 | 33.21 | 1 27 26.48 | 3.95 |
| | 105 Piscium . . . | 19 | 16.7 | 18.4 | 20.9 | 33.4 | 34.9 | 36.8 | 38.5 | 39.9 | 52.3 | 55.0 | 56.5 | 33 36.66 | 0.05 | 33.22 | 1 33 3.49 | 3.87 |
| | 109 Piscium . . . | 20 | 26.4 | 28.0 | 30.7 | 43.4 | 44.9 | 46.8 | 48.5 | 50.2 | 2.7 | 5.4 | 7.0 | 38 46.73 | 0.04 | 33.22 | 1 38 13.55 | 3.93 |
| | β Arietis . . . | 21 | 4.4 | 6.0 | 8.8 | 21.4 | 23.0 | 24.7 | 26.6 | 28.2 | 40.8 | 43.6 | 45.2 | 48 24.79 | 0.03 | 33.23 | 1 47 51.59 | 4.02 |
| | α Arietis . . . | 22 | 27.7 | 29.4 | 32.0 | 45.0 | 46.8 | 48.5 | 50.5 | 52.0 | 4.9 | 7.5 | 9.3 | 0 48.51 | 0.02 | 33.24 | 2 0 15.29 | 4.15 |
| | ζ Ceti . . . | 23 | 43.6 | 45.0 | 47.6 | 59.6 | 1.1 | 2.9 | 4.6 | 6.1 | 18.0 | 20.7 | 22.3 | 7 2.86 | + 0.08 | 33.24 | 2 6 29.70 | 4.05 |
| | 19 ζ Pegasi . . . | 24 | 32.5 | 34.0 | 36.7 | 48.9 | 50.3 | 51.8 | 53.6 | 55.0 | 7.4 | 10.0 | 11.3 | 35 51.95 | - 0.16 | 32.49 | 22 35 19.30 | 2.60 |
| | α Pegasi . . . | 25 | 50.5 | 52.2 | 55.0 | 7.0 | 8.7 | 10.3 | 12.0 | 13.5 | 26.0 | 28.5 | 30.0 | 59 10.34 | 0.17 | 32.48 | 22 58 37.69 | 2.67 |
| | Lalande 45326 . . . | 26 | 5.8 | 7.5 | 10.0 | 22.4 | 23.9 | 25.6 | 27.3 | 28.9 | 11.3 | 43.8 | 45.3 | 4 25.62 | 0.12 | 32.48 | 23 3 53.02 | 3.16 |
| | Weisse 185 . . . | 27 | .. | 3.1 | 5.6 | 7.2 | .. | .. | 18.4 | 21.2 | 22.7 | 44.4 | 26.3 | 12 16.11 | 28.55 | 32.48 | 23 11 15.08 | 3.17 |
| | 64 Pegasi . . . | 28 | 4.6 | 6.6 | 9.5 | 23.3 | 25.0 | 27.0 | 28.9 | 30.9 | 44.9 | 47.6 | 49.3 | 16 27.05 | 0.21 | 32.48 | 23 15 54.36 | 2.49 |
| | Lalande 45892 . . . | 29 | 14.4 | 16.1 | 18.8 | 1.0 | 2.5 | 4.3 | 6.2 | 7.8 | 20.2 | 22.9 | 24.3 | 21 4.41 | 0.12 | 32.48 | 23 20 31.81 | 3.25 |
| | 12 Piscium . . . | 30 | 25.2 | 26.9 | 29.4 | 41.4 | 42.8 | 44.5 | 46.2 | 47.8 | 59.7 | 2.2 | 3.8 | 23 44.54 | 0.14 | 32.48 | 23 23 11.92 | 3.08 |
| | Lalande 46188 . . . | 31 | 45.6 | 47.7 | 50.9 | .. | 7.7 | 9.7 | 11.6 | .. | 28.7 | 31.9 | 33.7 | 29 9.72 | 0.24 | 32.47 | 23 28 37.01 | 2.50 |
| | ω² Aquarii . . . | 32 | 33.5 | 35.0 | 37.7 | 50.1 | 51.6 | 53.4 | 55.1 | 56.6 | 9.0 | 11.5 | 13.0 | 36 53.32 | 0.12 | 32.47 | 23 36 20.73 | 3.32 |
| | O. Arg. S. 23052 . . . | 33 | 1.6 | 3.3 | 6.1 | 18.6 | 20.1 | 21.7 | 23.5 | 25.2 | 37.5 | 40.3 | 41.9 | 42 21.80 | 0.12 | 32.47 | 23 41 49.21 | 3.37 |
| | B. A. C. 8296 . . . | 34 | 20.8 | 22.5 | 25.1 | 37.9 | 39.5 | 41.2 | 43.0 | 44.7 | 57.6 | 0.1 | 1.8 | 46 41.29 | 0.18 | 32.47 | 23 46 8.64 | 2.95 |
| | 1 Ceti . . . | 35 | 14.4 | 16.2 | 18.7 | 31.1 | 32.6 | 34.4 | 36.2 | 37.7 | 50.1 | 52.7 | 54.4 | 52 34.41 | 0.12 | 32.47 | 23 52 1.82 | 3.41 |
| | γ Pegasi . . . | 36 | 7.2 | 8.7 | 11.4 | 23.6 | 25.1 | 26.8 | 28.6 | 30.2 | 42.6 | 45.2 | 46.7 | 7 26.92 | 0.17 | 32.46 | 0 7 54.29 | 3.19 |
| | θ Andromedæ . . . | 37 | 48.1 | 50.5 | 53.5 | 8.5 | 10.4 | 12.8 | 15.0 | 17.8 | 31.8 | 35.0 | 37.0 | 11 12.76 | 0.24 | 32.46 | 0 10 40.06 | 3.00 |
| | Lalande 409 . . . | 38 | 56.5 | 58.6 | 1.8 | 16.8 | 18.6 | 20.8 | 22.8 | 24.8 | 39.6 | 42.8 | 44.7 | 16 20.71 | 0.24 | 32.46 | 0 15 48.01 | 3.06 |
| | B. A. C. 92 . . . | 39 | 54.6 | 56.9 | 1.9 | 23.3 | 25.8 | 28.6 | 31.7 | 34.6 | 55.7 | 0.5 | 2.8 | 20 28.76 | 0.38 | 32.46 | 0 19 55.92 | 2.89 |
| | 49 Piscium . . . | 40 | 36.9 | 38.4 | 41.0 | 53.5 | 55.2 | 57.0 | 58.6 | 0.1 | 12.4 | 15.0 | 16.7 | 24 56.80 | 0.17 | 32.46 | 0 24 24.17 | 3.32 |
| | Lalande 884 . . . | 41 | 38.6 | .. | 43.9 | 58.7 | 0.4 | 2.5 | 4.8 | 7.0 | 21.6 | .. | 26.9 | 30 2.71 | 0.24 | 32.46 | 0 29 30.01 | 3.23 |
| | Weisse 588 . . . | 42 | .. | .. | .. | 56.4 | 58.0 | 59.5 | 1.0 | 2.9 | 14.7 | 17.2 | 18.7 | 36 6.05 | 7.89 | 32.46 | 0 33 26.96 | 3.47 |
| | O. Arg. S. 443 . . . | 43 | 30.8 | 32.2 | 35.1 | 48.2 | 49.9 | 51.6 | 53.4 | 55.1 | 8.2 | 10.7 | 12.7 | 43 51.63 | 0.12 | 32.45 | 0 45 19.06 | 3.68 |
| | Weisse 808 . . . | 44 | 40.7 | 42.3 | 45.7 | .. | .. | 0.2 | .. | .. | 15.2 | 17.6 | 19.3 | 48 0.14 | 0.14 | 32.45 | 0 47 27.55 | 3.53 |
| | 34 Ceti . . . | 45 | 42.2 | 43.8 | 46.3 | 58.2 | 59.7 | 1.5 | 2.2 | 4.7 | 16.7 | 19.1 | 20.5 | 6 1.35 | 0.14 | 32.45 | 1 5 28.76 | 3.67 |
| | Runkel 572 . . . | 46 | 36.1 | 37.6 | 40.2 | 52.2 | 53.7 | 55.4 | 57.0 | 58.6 | 10.6 | 13.1 | 14.6 | 10 55.37 | 0.15 | 32.45 | 1 10 22.77 | 3.68 |
| | Polaris . . . | 47 | .. | .. | .. | 12.0 | 23.0 | 33.0 | .. | .. | .. | .. | .. | 14 22.67 | 9.54 | 32.44 | .. | 19.62 |
| | B. A. C. 424 . . . | 48 | 39.2 | 41.1 | 44.2 | 58.4 | 0.1 | 2.1 | 4.0 | 5.8 | 20.1 | 23.0 | 24.8 | 19 2.07 | 0.12 | 32.44 | 1 18 29.51 | 3.85 |
| | *+13° 54' . . . | 49 | 50.9 | 52.7 | 55.4 | .. | .. | .. | .. | .. | .. | .. | .. | 33 53.00 | + 17.64 | 32.44 | 1 33 38.20 | 3.85 |
| | o Piscium . . . | 50 | 7.8 | 9.4 | 12.0 | 23.9 | 25.6 | 27.4 | 29.0 | 30.5 | 42.7 | 45.2 | 46.6 | 39 27.28 | - 0.15 | -32.44 | 1 38 54.69 | - 3.87 |

CORRECTIONS, &c.

December 18. Image east of 85. Clamp east.
Image east of 50. Clamp west.

| Date. | Error of clock. | Hourly rate. | n | e |
|--------------------------|--------------------|-----------------|--------------|--------------|
| 1876. h. Dec. 19, 0.3 | s. - 32.46 | s. + 0.017 | s. - 0.08 | s. - 0.14 |

OBSERVATIONS WITH THE MERIDIAN TRANSIT INSTRUMENT.

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | |
|-------------------------|-------------------------------|---------|--------------------------------|------|------|------|------|------|----------|----------|----------|----------|----------|---------------|--------------|--------|---------------------------------|-------------------------|----|-------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | Clock. | | | | |
| | | | m. | s. | m. | s. | m. | s. | m. | s. | m. | s. | m. | s. | m. | s. | h. | m. | s. | s. |
| 1876. Dec. 19 Y. | B. A. C. 563 | 1 | 39.3 | 41.5 | 44.8 | 0.0 | 1.9 | 4.1 | 6.2 | 8.0 | 23.3 | 26.7 | 28.8 | 45 4.05 | — | 0.12 | —32.44 | 1 44 31.49 | — | 3.95 |
| | 7 Arietis | 2 | 27.8 | 29.9 | 33.2 | 49.5 | 51.4 | 53.4 | 55.6 | 57.7 | 14.2 | 17.3 | 19.2 | 53 39.96 | — | 7.23 | 32.43 | 1 49 0.30 | — | 4.02 |
| | B. A. C. 613 | 3 | 16.1 | 17.6 | 20.3 | 32.8 | 36.1 | 39.6 | 52.0 | 54.6 | 56.3 | 58 36.15 | 58 36.15 | 58 36.15 | — | 0.12 | 32.43 | 1 53 21.01 | — | 3.98 |
| | *—18° 6' | 4 | 55.2 | 57.8 | 59.4 | 0.0 | 10.3 | 12.9 | 14.6 | 16.6 | 18.6 | 2 8.17 | 2 8.17 | 2 8.17 | — | 28.20 | 32.43 | 2 1 7.54 | — | 4.00 |
| | Weisse 1071 | 5 | 59.0 | 0.7 | 2.5 | 4.1 | 5.6 | 17.6 | 20.2 | 21.7 | 7 8.92 | 7 8.92 | 7 8.92 | 7 8.92 | — | 6.70 | 32.43 | 2 7 29.79 | — | 4.03 |
| | ξ ¹ Ceti | 6 | 32.1 | 34.0 | 36.5 | 48.5 | 50.2 | 51.7 | 53.5 | 54.9 | 7.2 | 9.7 | 11.2 | 35 51.77 | — | 0.13 | 32.40 | 22 35 19.24 | — | 2.57 |
| | ζ Pegasi | 7 | 24.7 | 26.4 | 29.0 | 40.7 | 42.5 | 44.0 | 45.7 | 47.1 | 59.4 | 1.9 | 3.4 | 46 44.07 | — | 0.10 | 32.40 | 22 46 11.57 | — | 2.91 |
| | λ Aquarii | 8 | 52.9 | 55.2 | 58.6 | 14.4 | 16.4 | 18.7 | 20.7 | 22.8 | 38.6 | 41.7 | 43.8 | 51 18.53 | — | 0.22 | 32.39 | 22 50 45.92 | — | 1.90 |
| | 16 Lacerte | 9 | 2.4 | 4.6 | 7.9 | 24.3 | 26.0 | 28.2 | 30.5 | 32.6 | 48.6 | 52.0 | 53.9 | 57 28.27 | — | 0.23 | 32.39 | 22 56 55.65 | — | 1.93 |
| | 2 Andromedæ | 10 | 16.5 | 22.3 | 32.0 | 17.6 | 23.2 | 28.9 | 35.3 | 41.2 | 26.5 | 36.2 | 41.5 | 4 29.20 | — | 0.75 | 32.39 | 23 3 56.06 | + | 1.24 |
| | π Cephei | 11 | 56.2 | 58.1 | 1.0 | 14.5 | 16.0 | 18.0 | 19.8 | 21.6 | 35.1 | 38.0 | 39.5 | 10 17.98 | — | 0.18 | 32.38 | 23 9 45.42 | — | 2.43 |
| | 61 Pegasi | 12 | 4.7 | 6.7 | 10.0 | 24.9 | 27.0 | 29.0 | 31.2 | 33.1 | 48.3 | 51.3 | 53.2 | 15 29.04 | — | 0.21 | 32.38 | 23 14 56.45 | — | 2.29 |
| | 12 Andromedæ | 13 | 39.4 | 42.5 | 43.9 | 0.0 | 56.8 | 59.9 | 1.6 | 3.6 | 5.9 | 19 54.20 | 19 54.20 | 19 54.20 | — | 32.81 | 32.38 | 23 18 49.01 | — | 2.48 |
| | 67 Pegasi | 14 | 21.3 | 23.0 | 25.6 | 37.5 | 38.9 | 40.5 | 42.2 | 43.8 | 55.9 | 58.4 | 59.8 | 23 40.63 | — | 0.11 | 32.37 | 23 23 8.15 | — | 3.07 |
| | 11 Piscium | 15 | 2.2 | 4.0 | 6.6 | 19.5 | 21.0 | 22.9 | 24.6 | 26.2 | 39.3 | 41.8 | 43.5 | 27 22.87 | — | 0.09 | 32.37 | 23 26 50.11 | — | 3.34 |
| | 61 Aquarii | 16 | 20.5 | 22.4 | 25.6 | 39.6 | 41.3 | 43.3 | 45.2 | 47.2 | 1.4 | 4.4 | 6.1 | 31 43.36 | — | 0.07 | 32.37 | 23 34 10.92 | — | 3.53 |
| | μ Sculptoris | 17 | 45.4 | 47.0 | 49.6 | 1.5 | 3.0 | 4.6 | 6.3 | 7.9 | 19.9 | 22.5 | 24.1 | 39 4.71 | — | 0.12 | 32.36 | 23 38 32.23 | — | 3.05 |
| | B. A. C. 8257 | 18 | 26.3 | 30.6 | 42.7 | 14.2 | 45.8 | 47.5 | 49.0 | 1.0 | 5.0 | 42 45.79 | 42 45.79 | 42 45.79 | — | 0.10 | 32.36 | 23 42 13.33 | — | 3.23 |
| | B. A. C. 8274 | 19 | 13.6 | 16.4 | 0.0 | 32.6 | 34.2 | 36.0 | 37.8 | 47 28.43 | 47 28.43 | 47 28.43 | 47 28.43 | 47 28.43 | — | 31.04 | 32.36 | 23 46 25.03 | — | 2.93 |
| | *+21° 2' | 20 | 13.0 | 14.7 | 17.2 | 29.1 | 30.5 | 32.1 | 33.8 | 35.4 | 47.5 | 50.0 | 51.5 | 53 32.25 | — | 0.12 | 32.35 | 23 52 59.78 | — | 3.17 |
| | ω Piscium | 21 | 10.4 | 43.1 | 55.4 | 57.2 | 59.0 | 0.8 | 2.4 | 15.0 | 17.7 | 57 59.00 | 57 59.00 | 57 59.00 | — | 0.11 | 32.35 | 23 57 26.54 | — | 3.43 |
| | 2 Ceti | 22 | 6.9 | 8.6 | 11.1 | 0.0 | 42.4 | 44.8 | 46.5 | 7 26.72 | 7 26.72 | 7 26.72 | 7 26.72 | 7 26.72 | — | 0.13 | 32.35 | 0 6 54.24 | — | 3.16 |
| | γ Pegasi | 23 | 1.9 | 3.7 | 6.3 | 0.0 | 37.7 | 40.4 | 41.9 | 22 21.98 | 22 21.98 | 22 21.98 | 22 21.98 | 22 21.98 | — | 0.13 | 32.34 | 0 21 49.51 | — | 3.28 |
| | 48 Piscium | 24 | 1.5 | 5.0 | 11.4 | 40.5 | 44.5 | 48.6 | 52.5 | 56.6 | 27 32.57 | 27 32.57 | 27 32.57 | 27 32.57 | — | 15.49 | 32.34 | 0 27 15.72 | — | 2.78 |
| | 16 Cassiopeiæ | 25 | 31.0 | 34.7 | 41.1 | 9.5 | 13.1 | 17.4 | 21.5 | 25.2 | 53.7 | 59.6 | 3.5 | 35 17.30 | — | 0.46 | 32.33 | 0 34 44.51 | — | 3.02 |
| | B. A. C. 176 | 26 | 30.4 | 32.0 | 35.0 | 48.0 | 49.8 | 51.4 | 53.0 | 54.7 | 8.0 | 10.5 | 12.0 | 43 51.35 | — | 0.08 | 32.33 | 0 43 18.94 | — | 3.66 |
| | O. Arg. S. 443 | 27 | 3.0 | 4.6 | 7.2 | 19.0 | 20.6 | 22.3 | 24.0 | 25.5 | 37.7 | 40.0 | 41.6 | 57 22.32 | — | 0.10 | 32.32 | 0 56 49.90 | — | 3.61 |
| | 25 Ceti | 28 | 22.4 | 24.0 | 26.8 | 39.9 | 41.6 | 43.6 | 45.4 | 46.9 | 0.2 | 2.8 | 4.5 | 0 43.46 | — | 0.08 | 32.32 | 1 0 11.06 | — | 3.70 |
| | Lacaille 303 | 29 | 26.9 | 28.5 | 31.5 | 44.5 | 46.1 | 48.0 | 49.7 | 51.5 | 4.6 | 7.3 | 9.0 | 1 47.96 | — | 0.08 | 32.31 | 1 1 15.57 | — | 3.71 |
| | Lacaille 310 | 30 | 42.0 | 43.7 | 46.0 | 58.0 | 0.5 | 1.3 | 2.9 | 4.5 | 16.4 | 18.7 | 20.3 | 6 1.30 | — | 0.11 | 32.31 | 1 5 28.88 | — | 3.65 |
| | 34 Ceti | 31 | 3.0 | 7.0 | 20.0 | 32.0 | 40.0 | 0.0 | 14 20.40 | 14 20.40 | 14 20.40 | 14 20.40 | 14 20.40 | 14 20.40 | — | 9.19 | 32.31 | 1 27 26.98 | — | 17.80 |
| | Polaris | 32 | 35.2 | 37.1 | 40.4 | 55.3 | 57.3 | 59.3 | 1.5 | 3.4 | 18.4 | 21.6 | 23.4 | 27 59.35 | — | 0.07 | 32.30 | 1 34 42.79 | — | 3.88 |
| | B. A. C. 466 | 33 | 53.2 | 55.2 | 58.0 | 11.5 | 13.3 | 15.0 | 17.1 | 19.0 | 32.6 | 35.7 | 37.3 | 35 15.26 | — | 0.18 | 32.29 | 1 37 26.98 | — | 3.92 |
| | B. A. C. 514 | 34 | 7.7 | 9.3 | 11.9 | 24.0 | 25.5 | 27.1 | 28.7 | 30.3 | 42.4 | 45.0 | 46.5 | 39 27.15 | — | 0.13 | 32.29 | 1 38 54.73 | — | 3.86 |
| | ω Piscium | 35 | 2.8 | 4.4 | 7.1 | 19.6 | 21.2 | 22.7 | 24.5 | 26.1 | 38.6 | 41.2 | 42.7 | 46 22.81 | — | 0.09 | 32.29 | 1 45 50.43 | — | 3.85 |
| | O. Arg. S. 1127 | 36 | 11.8 | 13.6 | 16.5 | 29.5 | 30.9 | 32.8 | 34.6 | 36.3 | 49.4 | 51.9 | 53.7 | 49 32.82 | — | 0.16 | 32.28 | 1 49 0.38 | — | 4.00 |
| | 7 Arietis | 37 | 4.2 | 6.3 | 8.7 | 20.9 | 22.4 | 24.0 | 25.7 | 27.3 | 39.5 | 42.1 | 43.6 | 53 24.06 | — | 0.13 | 32.28 | 1 52 51.65 | — | 3.95 |
| | B. A. C. 609 | 38 | 28.0 | 29.6 | 32.5 | 44.4 | 45.8 | 47.7 | 49.5 | 50.9 | 3.0 | 5.5 | 7.1 | 4 47.64 | — | 0.13 | 32.27 | 2 4 15.24 | — | 4.52 |
| | Neptune | 39 | 44.9 | 47.1 | 50.2 | 5.0 | 6.9 | 8.9 | 11.0 | 13.0 | 27.9 | 30.8 | 32.8 | 22 8.96 | — | 0.20 | 32.26 | 2 21 36.50 | — | 4.52 |
| | *+36° 47' | 40 | 8.0 | 9.6 | 12.2 | 23.8 | 25.5 | 27.1 | 28.9 | 30.5 | 42.4 | 44.9 | 46.4 | 26 27.21 | — | 0.11 | 32.26 | 2 25 54.84 | — | 4.06 |
| | 75 Ceti | 41 | 28.4 | 29.9 | 32.6 | 44.9 | 46.4 | 48.2 | 49.9 | 51.7 | 3.8 | 6.3 | 7.8 | 32 48.17 | — | 0.14 | 32.26 | 2 32 15.77 | — | 4.24 |
| | Lalande 4907 | 42 | 9.9 | 11.6 | 14.2 | 26.0 | 27.5 | 29.2 | 30.8 | 32.3 | 44.3 | 46.8 | 48.2 | 37 29.16 | — | 0.12 | 32.25 | 2 36 56.79 | — | 4.14 |
| | γ Ceti | 43 | 46.6 | 48.3 | 50.9 | 3.1 | 4.7 | 6.4 | 8.0 | 9.6 | 22.0 | 24.5 | 26.1 | 59 6.38 | — | 0.14 | 28.53 | 2 39 37.73 | — | 2.60 |
| | α Pegasi | 44 | 53.7 | 56.3 | 0.1 | 18.0 | 20.3 | 22.7 | 25.5 | 27.8 | 45.9 | 49.4 | 51.8 | 7 22.86 | — | 0.34 | 28.53 | 23 6 53.99 | — | 1.82 |
| | 7 Andromedæ | 45 | 21.2 | 22.8 | 25.2 | 37.2 | 38.7 | 40.4 | 42.1 | 43.6 | 55.5 | 58.0 | 59.5 | 23 40.38 | — | 0.09 | 28.52 | 23 23 11.77 | — | 3.01 |
| | 12 Piscium | 46 | 21.5 | 23.2 | 24.8 | 36.7 | 38.2 | 39.8 | 41.5 | 43.0 | 55.0 | 57.5 | 58.9 | 29 40.01 | — | 0.09 | 28.52 | 23 29 11.40 | — | 3.02 |
| | 15 Piscium | 47 | 16.7 | 18.6 | 21.7 | 35.8 | 37.5 | 39.6 | 41.5 | 43.3 | 57.5 | 0.5 | 2.3 | 34 39.55 | — | 0.00 | 28.52 | 23 34 11.03 | — | 3.46 |
| | μ Sculptoris | 48 | 26.0 | 28.0 | 29.9 | 31.7 | 34.4 | 38.0 | 40.9 | 42.5 | 44.2 | 46.3 | 40 6.19 | — | + | 0.05 | —28.51 | 23 39 37.73 | — | 3.31 |
| | 12 Aquarii (1st *) | 49 | | | | | | | | | | | | | | | | | | |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | n | c |
|--------------|-----------------|--------------|--------|--------|
| 1876. h. | s. | s. | s. | s. |
| Dec. 21, 0.3 | — 32.34 | + 0.037 | — 0.09 | — 0.11 |
| 26, 23.4 | — 28.52 | + 0.026 | — 0.17 | — 0.09 |

| Date and ob- server. | OBJECT. | Number. | SECONDS OF TRANSIT OVER WIRES. | | | | | | | | | | | CORRECTIONS. | | Observed Right Ascension. | Reduction to 1876.0. | | | |
|----------------------------|---|-------------------------|--------------------------------|-----------|------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|------------------|-----------|---------------------------------|-------------------------|-------------------------|------------|------------|
| | | | I. | II. | III. | IV. | V. | VI. | VII. | VIII. | IX. | X. | XI. | Mean wire. | Inst. | | | Clock. | | |
| 1876. Dec. 26 Y. | <i>z</i> ² Aquarii, (2d *) . . . | 1 | 46.0 | 47.8 | 50.6 | 3.2 | 4.9 | 6.7 | 8.3 | 10.1 | 22.7 | 25.3 | 26.9 | m. s. 40 6.59 | — | 0.03 | —28.51 | h. m. s. 23 39 38.05 | — | s. 3.31 |
| | 79 Pegasi | 2 | | | 50.8 | 52.5 | 54.4 | 56.4 | 58.2 | 11.5 | 14.4 | 16.1 | 43 17.95 | 7.54 | 28.51 | 23 42 25.71 | 2.72 | | | |
| | Lalande 46873 | 3 | 54.5 | 56.5 | 59.6 | 14.4 | 16.3 | 18.4 | 20.5 | 22.5 | 37.7 | 40.7 | 42.5 | 49 18.51 | 0.25 | 28.51 | 23 48 49.75 | 2.62 | | |
| | <i>ω</i> Piscium | 4 | 9.0 | 10.6 | 13.1 | 25.2 | 26.7 | 28.5 | 30.1 | 31.7 | 43.6 | 46.2 | 47.6 | 53 28.39 | 0.11 | 28.51 | | 3.12 | | |
| | B. A. C. 8360 | 5 | 10.4 | 12.1 | 14.5 | 27.0 | 28.6 | 30.5 | 32.1 | 33.7 | 46.4 | 48.9 | 50.4 | 58 30.42 | 0.04 | 28.50 | 23 58 1.88 | 3.36 | | |
| | <i>θ</i> Sculptoris | 6 | | 39.0 | 53.6 | 55.5 | | | 16.4 | 19.4 | 21.3 | 6 4.20 | 6.55 | 28.50 | 0 5 29.15 | 3.59 | | | | |
| | 9 Ceti | 7 | 42.7 | 44.5 | 47.0 | 59.3 | 0.8 | 2.4 | 4.2 | 5.8 | 17.9 | 20.4 | 22.2 | 17 2.47 | 0.05 | 28.50 | 0 16 33.92 | 3.41 | | |
| | B. A. C. 92 | 8 | 53.0 | 57.2 | 18.7 | 21.6 | 24.3 | 27.5 | 30.6 | 51.8 | 56.0 | | 20 24.52 | — | 0.44 | 28.50 | 0 19 55.58 | 2.70 | | |
| | Polaris | 9 | 10.0 | 38.0 | 46.0 | | | | | | | | 49 31.33 | +24 32.03 | 28.48 | | 13.75 | | | |
| | 27 | <i>β</i> Ceti | 10 | 33.2 | 34.8 | 37.4 | 50.0 | 51.6 | 53.3 | 55.0 | 56.7 | 9.4 | 11.9 | 13.6 | 37 53.35 | — | 0.04 | 27.87 | 0 37 25.44 | 3.55 |
| *+40° 24' | | 11 | 32.6 | 34.9 | 38.3 | | | | | 17.5 | 21.0 | 23.9 | 42 58.03 | 0.25 | 27.87 | 0 42 29.91 | 3.25 | | | |
| <i>ν</i> Andromedæ | | 12 | 4.7 | 6.9 | 10.2 | 25.9 | 27.8 | 29.9 | 32.2 | 34.2 | 49.8 | 53.1 | 55.1 | 43 29.98 | 0.26 | 27.87 | 0 43 1.85 | 3.26 | | |
| Lalande 1504 | | 13 | 53.7 | 56.0 | 59.2 | 14.3 | 16.3 | 18.4 | 20.6 | 22.7 | 37.7 | 40.9 | 42.8 | 48 18.42 | 0.25 | 27.86 | 0 47 50.31 | 3.33 | | |
| <i>ε</i> | Lalande 1627 | 14 | | 2.2 | 5.2 | 7.1 | | | 20.7 | 24.0 | 25.9 | 28.2 | 30.5 | 52 17.97 | 34.77 | 27.86 | 0 51 15.34 | 3.38 | | |
| | Piscium | 15 | 42.7 | 44.2 | 46.8 | | | | | 17.3 | 19.7 | 21.1 | 57 1.97 | 0.03 | 27.86 | 0 56 34.08 | 3.51 | | | |
| | Polaris | 16 | 28.0 | 41.0 | 28.0 | | | | | 2.0 | 47.0 | 51.0 | 14 12.83 | — | 10.97 | 27.85 | | 13.02 | | |
| | *+5° 58' | 17 | 27.1 | 28.5 | 31.0 | 43.0 | 44.6 | 46.4 | 47.9 | 49.7 | | | 14 39.77 | + | 6.40 | 27.85 | 1 14 18.32 | 3.63 | | |
| | B. A. C. 424 | 18 | 34.7 | 36.4 | 39.4 | 53.6 | 55.5 | 57.2 | 59.3 | 1.1 | 15.0 | 18.1 | 19.8 | 18 57.28 | 0.00 | 27.84 | 1 18 29.44 | 3.74 | | |
| | Weisse 753 | 19 | 30.2 | 31.6 | 34.4 | | | | | | | | 43 32.07 | + | 17.56 | 27.83 | 1 43 21.80 | 3.78 | | |
| | <i>ψ</i> Ceti | 20 | 41.9 | 43.5 | 46.1 | 58.3 | 59.8 | 1.4 | 3.1 | 4.6 | 16.8 | 19.4 | 20.8 | 44 1.43 | — | 0.06 | 27.83 | 1 43 33.54 | 3.78 | |
| | <i>α</i> Arietis | 21 | 22.4 | 24.0 | 26.7 | 39.7 | 41.4 | 43.1 | 44.9 | 46.8 | 59.5 | 2.3 | 4.1 | 0 43.17 | 0.17 | 27.82 | 2 0 15.18 | 4.06 | | |
| | Neptune | 22 | 8.9 | 10.7 | 13.0 | 25.3 | 26.9 | 28.6 | 30.3 | 32.0 | 43.8 | 46.4 | 47.9 | 4 28.53 | 0.12 | 27.81 | 2 4 0.60 | . . . | | |
| | Weisse 155 | 23 | 21.0 | 22.6 | 25.3 | 37.4 | 38.9 | 40.5 | 42.2 | 43.8 | 56.0 | 58.5 | 0.0 | 12 40.56 | 0.13 | 27.81 | 2 12 12.62 | 4.05 | | |
| 14 | Weisse 231 | 24 | 9.7 | 11.5 | 14.0 | 26.1 | 27.6 | 29.3 | 31.0 | 32.7 | 44.8 | 47.3 | 48.9 | 16 29.35 | 0.06 | 27.80 | 2 16 1.49 | 3.92 | | |
| | Weisse 298 | 25 | 44.1 | 45.8 | 48.3 | 0.5 | 2.2 | 3.6 | 5.3 | 6.8 | 19.0 | 21.5 | 23.2 | 20 3.66 | 0.12 | 27.80 | 2 19 35.74 | 4.07 | | |
| | Trianguli | 26 | 41.0 | 43.0 | 46.1 | 0.8 | 2.6 | 4.6 | 6.9 | 8.6 | 23.5 | 26.4 | 28.2 | 25 4.70 | 0.24 | 27.80 | 2 24 36.66 | 4.48 | | |
| | Lalande 4761 | 27 | 26.5 | 28.4 | 31.4 | 46.4 | 48.3 | 50.3 | 52.3 | 54.4 | 9.3 | 12.2 | 14.0 | 28 50.32 | 0.24 | 27.80 | 2 28 22.28 | 4.54 | | |
| <i>γ</i> | Lalande 4983 | 28 | 23.6 | 25.3 | 27.7 | 40.2 | 41.9 | 43.4 | 45.3 | 46.8 | 59.2 | 1.7 | 3.3 | 32 43.49 | 0.14 | 27.80 | 2 32 15.55 | 4.20 | | |
| | Ceti | 29 | 5.4 | 7.0 | 9.4 | 21.4 | 23.0 | 24.5 | 26.2 | 27.7 | 39.6 | 42.1 | 43.5 | 37 24.53 | 0.10 | 27.79 | 2 36 56.64 | 4.10 | | |
| <i>η</i> | Persei | 30 | 39.7 | 42.3 | 46.7 | 7.7 | 10.5 | 13.6 | 16.3 | 19.0 | 40.5 | 44.7 | 47.0 | 42 13.45 | 0.41 | 27.79 | 2 41 45.25 | 5.45 | | |
| | B. A. C. 905 | 31 | 48.5 | 50.3 | 52.9 | 4.8 | 6.4 | 8.0 | 9.8 | 11.4 | 23.4 | 26.0 | 27.4 | 50 8.08 | 0.11 | 27.78 | 2 49 40.19 | 4.21 | | |
| | *+38° 26' | 32 | 7.5 | 9.6 | 12.8 | 27.9 | 30.2 | 32.1 | 34.2 | 36.3 | 51.3 | 54.6 | 56.7 | 54 32.11 | 0.25 | 27.78 | 2 54 4.08 | 4.87 | | |
| | <i>ρ</i> Persei | 33 | 22.4 | 24.5 | 27.8 | 42.8 | 44.7 | 46.7 | 49.0 | 51.0 | 6 3 | 9.2 | 11.2 | 57 46.87 | 0.25 | 27.78 | 2 57 18.84 | 4.91 | | |
| <i>ζ</i> | Arietis | 34 | 58.5 | 0.0 | 3.0 | 15.7 | 17.3 | 18.9 | 20.8 | 22.6 | 35.2 | 37.9 | 39.5 | 8 19.04 | 0.16 | 27.77 | 3 7 51.11 | 4.56 | | |
| 7 | Tauri | 35 | 17.7 | 19.5 | 22.3 | 35.4 | 37.0 | 38.9 | 40.7 | 42.4 | 55.2 | 58.0 | 59.6 | 27 38.79 | 0.18 | 27.76 | 3 27 10.85 | 4.77 | | |
| | Weisse (2) 657 | 36 | 26.6 | 28.6 | 31.4 | 45.7 | 47.6 | 49.8 | 51.7 | 53.5 | 8.2 | 11.0 | 12.6 | 32 49.70 | 0.22 | 27.76 | 3 32 21.72 | 5.09 | | |
| | 18 Tauri | 37 | 57.6 | 59.2 | 2.2 | 15.1 | 16.7 | 18.6 | 20.4 | 22.2 | 35.3 | 38.0 | 39.6 | 38 18.63 | 0.18 | 27.75 | 3 37 50.70 | 4.85 | | |
| | <i>η</i> Tauri | 38 | | | 36.3 | 38.1 | 39.8 | 41.5 | 43.3 | 56.2 | 58.9 | 0.6 | 38 46.84 | 7.25 | 27.75 | 3 38 11.84 | 4.85 | | | |
| <i>γ</i> | B. A. C. 1205 | 39 | 4.0 | 6.0 | 8.3 | 19.8 | 21.4 | 23.2 | 24.8 | 26.5 | 38.3 | 40.9 | 42.4 | 46 23.24 | 0.09 | 27.75 | 3 45 55.40 | 4.37 | | |
| | Eridani | 40 | 26.8 | 28.5 | 31.1 | 43.3 | 45.1 | 46.7 | 48.2 | 49.9 | 2.3 | 5.0 | 6.5 | 52 46.67 | — | 0.05 | —27.74 | 3 52 18.88 | — 4.22 | |

CORRECTIONS, &c.

| Date. | Error of clock. | Hourly rate. | <i>n</i> | <i>c</i> |
|--------------------------|-----------------|---------------|--------------|--------------|
| 1876. h. Dec. 27, 2.4 | s. — 27.80 | s. + 0.039 | s. — 0.17 | s. — 0.09 |

OBSERVATIONS

MADE WITH THE

XXVI-INCH EQUATORIAL.

1876.

OBSERVATIONS

MADE WITH

THE XXVI-INCH EQUATORIAL.

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|-----------------|------------------------------|---------------------------|-----------------------|--------------------------------|--------------------------------|-----------------------|---|----------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Jan. 3 | 36 <i>Andromeda</i> . . . | ° 0 | h. m. . . | r. 64.091 .090 .075 | r. 64.321 .340 .342 | h. m. . . | ° 67.8 65.2 65.7 65.2 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 64.085 | 64.334 | | 66.0 | | | | | |
| | 138 Σ | 35 | . . | 64.060 .075 .077 .056 | 64.337 .348 .344 .348 | . . | 31.0 29.6 30.8 30.0 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 64.067 | 64.344 | | 30.3 | | | | | |
| | 138 Σ (C) | 60 | . . | 61.928 .891 | 66.306 .356 | . . | 359.3 358.6 | . . | 3 A | 2 | H. | Companion of 15th magnitude to night; (moonlight). |
| | Mean | . . | . . | 61.910 | 66.331 | | 359.0 | | | | | $\frac{A+B}{2}$ C. Chron. corr., + 0 ^m .1. |
| | Satellite of NEPTUNE. | 60 | 7 49 58 | 63.210 .140 .168 | 65.140 .123 .120 | 7 38 46 | 358.4 358.6 358.9 358.4 357.4 | . . | 5 A | 2 | H. | |
| | Mean | . . | 7 54 | 63.173 | 65.128 | 7 42 | 358.3 | | | | | |
| | 107 <i>Arietis</i> | 15 | . . | 63.892 .853 .896 .853 | 64.512 .511 .521 .536 | . . | 47.1 46.2 47.2 48.7 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.874 | 64.520 | | 47.3 | | | | | |
| | W. III, 564 | 330 | . . | 64.021 .040 | 64.392 .364 | . . | 90.6 90.6 89.8 89.2 | . . | 3 A | 2 | H. | |
| | Mean | . . | . . | 64.030 | 64.378 | | 90.0 | | | | | |
| | Companion of <i>Sirius</i> . | 60 | 12 0 | . . | . . | . . | 6.4 8.1 8.8 9.2 8.1 | . . | 3 A | 2 | Hn. | Chron. corr., + 0 ^m .1. Images too unsteady for good measures of distance. Measures of position angle without illumination of wires. |
| 4 | 36 <i>Andromeda</i> . . . | 0 | . . | 64.046 .037 .063 | 64.340 .345 .340 | . . | 67.2 66.0 65.4 68.4 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 64.049 | 64.342 | | 66.7 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|-----------------|----------------------------|---------------------------|-----------------------|--|--|-----------------------|--|----------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Jan. 4 | Satellite of NEPTUNE. | 30 | h. m. 7 31 | r. 62.540 .530 .507 .478 | r. 65.853 .024 .855 .860 | h. m. 7 8 | 25.9 25.8 25.0 25.5 25.6 | | 5 A | 3 | H. | |
| | Mean | | 7 42 | 62.514 | 65.873 | 11 | 25.6 | | | | | |
| | 315 <i>Eridani</i> | | | | | | | | | | H. | Images too bad for measurement. Chron. corr., + 0 ^m 2. |
| 6 | Σ 589 | 310 | | 63.732 .734 | 64.656 .676 | | 303.1 302.4 304.0 304.1 | | 3 A | 3 | H. | |
| | Mean | | | 63.733 | 64.666 | | 303.4 | | | | | |
| | Companion of <i>Sirius</i> | 60 | 11 0 | 62.941 .971 .966 | 65.347 .317 .527 | | 8.8 6.0 9.2 7.7 7.2 8.4 | | 3 A | 3 | Hn. | Images unsteady and measures of distance difficult. Measures without illumination of wires. |
| | Mean | | | 62.959 | 65.397 | | 7.9 | | | | | |
| | OSBERON | 340 | 12 32 12 42 | 60.897 .890 | 67.522 .554 | 12 8 | 83.6 83.1 81.8 | | 5 A | 1 | Hn. | |
| | Mean | | 12 37 | 60.894 | 67.538 | 12 17 | 82.8 | | | | | |
| | TITANIA | 24 | 12 50 53 | 61.031 | 67.409 | 12 13 12 23 | 39.1 38.1 39.4 | | 5 A | | Hn. | Clock broke down. Weight of measures of ρ , 4; of distances, 2. Chron. corr., 0 ^m 0. |
| | Mean | | 12 52 | | | 12 18 | 38.9 | | | | | |
| 7 | 36 <i>Andromeda</i> | 0 | | 64.074 .083 .075 .080 | 64.254 .327 .326 .310 | | 66.7 64.8 64.5 66.1 | | 3 A | 2 | H. | |
| | Mean | | | 64.078 | 64.304 | 1 ^h s. t. | 65.5 | | | | | |
| | Satellite of NEPTUNE. | 220 | 7 40 | 62.563 .534 .517 .508 .511 | 65.766 .852 .830 .841 .820 | 7 33 | 28.6 28.5 28.1 28.3 28.2 | | 5 A | 4 | H. | Satellite rather faint but steady |
| | Mean | | 7 45 | 62.527 | 68.822 | 7 35 | 28.3 | | | | | |
| | 107 <i>Arietis</i> | 15 | | 63.896 .878 .871 .888 | 64.496 .498 .509 .490 | | 46.8 47.4 45.3 45.3 | | 3 A | 3 | H. | |
| | Mean | | | 63.883 | 64.498 | | 46.2 | | | | | |
| | Σ 589 | 300 | | 63.719 .735 .721 .712 | 64.653 .659 .668 .645 | | 120.3 121.1 121.1 120.8 | | 3 A | 3 | H. | |
| | Mean | | | 63.729 | 64.656 | | 120.8 | | | | | |
| | L. 9065 (Br.) | 340 | | 63.846 .875 .846 .872 | 64.530 .549 .525 .538 | | 77.2 76.7 77.0 78.2 | | 3 A | 3 | H. | |
| | Mean | | | 63.860 | 64.536 | | 77.3 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|-----------------|--------------------------------|---------------------------|-----------------------|-------------------------------|-------------------------------|-------------------------|------------------|----------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Jan. 7 | Companion of <i>Sirius</i> . | ° | h. m. | r. | r. | h. m. | ° | ° | | | | |
| | | . . | . . | 63.032 | 65.357 | . . | 5.4 | . . | 3 A | 3 | Hn. | Measures through haze; companion faint, but steady. Chron. corr., +0 ^m .3. |
| | | | | 62.986 | .293 | | 6.1 | | | | | |
| | | | | 63.078 | .312 | 11 | 7.5 | | | | | |
| | | | | .062 | .278 | | 6.7 | | | | | |
| | Mean | . . | . . | 63.040 | 65.310 | . . | 6.4 | | | | | |
| 10 | Satellite of NEPTUNE. | 30 | 6 45 | 62.475 | 66.000 | 6 35 | 27.7 | . . | 5 A | 1½ | H. | Windy, and the poorest image of NEPTUNE I have seen; very unsteady. Chron. corr., +0 ^m .4. |
| | | | | .511 | 65.890 | | 26.4 | | | | | |
| | | | | .390 | .854 | | 29.6 | | | | | |
| | | | 58 | .464 | .901 | 41 | 30.1 | | | | | |
| | Mean | . . | 6 52 | 62.468 | 65.908 | 6 38 | 28.6 | | | | | |
| 11 | W. III, 564 | 330 | . . | 64.065 | 64.340 | . . | 88.3 | . . | 3 A | 2 | H. | |
| | | | | .074 | .350 | | 88.0 | | | | | |
| | | | | | | | 89.0 | | | | | |
| | | | | | | | 87.8 | | | | | |
| | Mean | . . | . . | 64.069 | 64.345 | . . | 88.3 | | | | | |
| | γ <i>Ceti</i> | 290 | . . | 63.905 | 64.489 | . . | 315.4 | . . | 3 A | 3 | H. | |
| | | | | .868 | .504 | | 314.5 | | | | | |
| | | | | .856 | .503 | | 314.7 | | | | | |
| | | | | .871 | .490 | | 313.8 | | | | | |
| | Mean | . . | . . | 63.875 | 64.497 | . . | 314.6 | | | | | |
| | ARIEL | . . | . . | . . | . . | . . | . . | . . | . . | . . | Hn. | ARIEL seen at 11 ^h 30 ^m , but clouds prevent work till 1 ^h 20 ^m , when sky became even worse. |
| 12 | γ <i>Ceti</i> | 290 | . . | 63.877 | 64.499 | . . | 135.2 | . . | 3 A | 3 | H. | |
| | | | | .881 | .498 | | 135.7 | | | | | |
| | | | | .876 | .510 | 2 ^h .5 s. t. | 136.9 | | | | | |
| | | | | .885 | .472 | | 136.3 | | | | | |
| | Mean | . . | . . | 63.880 | 64.495 | . . | 136.0 | | | | | |
| | W. III, 564 | 330 | . . | 64.015 | 64.364 | . . | 271.0 | . . | 3 A | 3 | H. | |
| | | | | .017 | .395 | | 270.4 | | | | | |
| | | | | 63.990 | .389 | 3 ^h s. t. | 270.6 | | | | | |
| | | | | 64.001 | .384 | | 269.1 | | | | | |
| | Mean | . . | . . | 64.006 | 64.383 | . . | 270.3 | | | | | |
| | L. 7655 | 280 | . . | 63.614 | 64.761 | . . | 144.0 | . . | 3 A | 3 | H. | |
| | | | | .594 | .780 | | 142.6 | | | | | |
| | | | | .584 | .777 | 3 ^h .5 s. t. | 144.5 | | | | | |
| | | | | .608 | .798 | | 145.5 | | | | | |
| | Mean | . . | . . | 63.600 | 64.779 | . . | 144.2 | | | | | |
| | 315 <i>Eridani</i> | . . | . . | . . | . . | . . | . . | . . | . . | . . | H. | This star wedged; angle about 160°. Images too bad for measurements. |
| | L. 9065 | 340 | . . | 63.868 | 64.536 | . . | 256.0 | . . | 3 A | 3 | H. | |
| | | | | .881 | .532 | | 255.5 | | | | | |
| | | | | .871 | .542 | | 256.3 | | | | | |
| | | | | .858 | .545 | | 256.5 | | | | | |
| | Mean | . . | . . | 63.869 | 64.539 | . . | 256.1 | | | | | |
| | Companion of <i>Sirius</i> . | . . | . . | 63.038 | 65.218 | . . | 183.5 | . . | 3 A | . . | W. | Images very fine. W = J. C. WATSON. |
| | | | | 62.985 | .220 | | 183.8 | | | | | |
| | | | | 63.066 | .298 | 10 30 | 184.5 | | | | | |
| | | | | 62.982 | .280 | | 186.5 | | | | | |
| | Mean | . . | . . | 63.018 | 65.254 | . . | 184.6 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|--------------------------------|---------------------------|--------------------------------|--|--|------------------------|---|----------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Jan. 12 | PROCYON and neighboring stars. | ° | h. m. | r. | r. | h. m. | ° | ° | | | | |
| | | | | 63.488 .592 | | | 231.6 | | 3 A | . | W. | Coincidence of wires 64.14 approx. Telescope west of pier. |
| | Mean | | | 63.54 | | | | | | | | |
| | | | | 63.31 63.40 | | | 200.0 208.0 | | 3 A | . | Hn. | HOLDEN suspects a companion about $p = 320-330$. |
| | Mean | | | 63.35 | | | 204.0 | | | | | |
| | | | | 65.12 | | | 209.6 | | | | W. | |
| | PROCYON | | | 65.02 | | | 208 | | | | Hn. | No signs of Σ 's companion. Images fine. At about 11 ^h PROCYON examined by Professors J. C. WATSON and HOLDEN; where ALVAN G. CLARK found a companion (see observing-book, Nov. 12, 1874), which was verified by HOLDEN (1874, Nov. 25 and 26), Professors WATSON and HOLDEN found three. One of these is somewhat brighter than the other two (see sketches I and II), and this was first seen by WATSON, while HOLDEN saw the preceding one, and finally all three were well seen, and the first seen was measured in both positions of the instrument, E. and W. of pier, by both observers. The seeing was extremely fine, and these images were well and steadily seen for about two hours. In the sketches (see observing-book) a is the old companion $p = 312^\circ$. |
| | | | | | | | | | | | | Tel. W. $\left\{ \begin{array}{l} p = 10^\circ \quad s = 6'' \quad \text{J. C. W.} \\ p = 38^\circ \quad s = 7''.9 \quad \text{E. S. H.} \\ p = 34^\circ \quad \quad \quad \text{J. C. W.} \end{array} \right\}$ Tel. E. $\left\{ \begin{array}{l} p = 32^\circ \quad s = 9''.7 \quad \text{J. C. W.} \\ p = 34^\circ \quad s = 8''.8 \quad \text{E. S. H.} \end{array} \right\}$ |
| 13 | Satellite of NEPTUNE. | | 6 50 7 11 15 19 27 | 62.484 .528 .585 .482 .529 | 65.862 .749 .810 .825 .804 | 6 37 47 | 208.1 207.6 207.5 208.0 209.3 | | 5 A | 2 | H. | |
| | Mean | | 7 12 | 62.522 | 65.810 | 6 42 | 208.1 | | | | | |
| | L. 7055 | 280 | | 63.547 .570 .560 .572 | 64.775 .800 .769 .768 | | 144.3 143.1 142.6 142.6 | | 3 A | 2 | H. | First two measures of distance half-weight. Haze and clouds. Chron. corr., 0 ^m .0. |
| | Mean | | | 63.563 | 64.775 | | 143.1 | | | | | |
| 14 | W. IV, 258. | 180 | | 62.254 .219 .238 .263 | 66.186 .164 .138 .135 | | 251.2 250.2 250.3 250.0 | | 3 A | 2 | H. | |
| | Mean | | | 62.243 | 66.156 | | 250.4 | | | | | |
| | G. A. No. 1 | 350 | | 63.648 .627 .638 .620 | 64.724 .748 .761 .768 | | 264.4 264.2 265.8 264.2 | | 3 A | 2 | H. | Magnitudes 10 and 10.5. A pretty pair found by G. ANDERSON. Images too bad for any close star. |
| | Mean | | | 63.633 | 64.750 | | 264.6 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|--|---------------------------|-----------------------|--------------------------------------|--------------------------------|--------------------------------|--|---|---|---|---|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Jan. 14 | TITANIA | 49 | h. m. 12 5 | r. 66.925 .920 .958 .880 | r. . . | h. m. 11 29 | ° 14.1 16.1 14.7 11.7 14.6 | . . | 5 A | 2 | Hn. | Coincidence of wires 64 ^r .189. |
| | Mean | . . | 12 7 | 66.921 | . . | 11 32 | 14.2 | . . | | | | |
| | OSERON | . . | . . | . . | . . | 11 44 | 130.6 133.6 130.3 132.8 | . . | 5 A | 1 | Hn. | TITANIA much brighter than OSERON; the latter barely visible on account of moonlight and diffused images. |
| | Mean | . . | . . | . . | . . | 11 48 | 131.8 | . . | | | | |
| 20 | | . . | . . | . . | . . | . . | . . | . . | . . | | H. | Seeing very bad in the early part of the evening. G. ANDERSON found a pair of 10th magnitude stars each of which has a faint companion. Position $\alpha = 3^h 12^m \delta = +23^\circ$. Looked at the nebula around <i>Merope</i> . It is faint and diffuse. There is a part near a small star preceding <i>Merope</i> 10 ^s or 12 ^s , and a little north, that is best seen. |
| | Companion of <i>Sirius</i> | . . | . . | . . | . . | 10 | 188.9 187.0 187.5 186.8 | . . | 3 A | 3 | Hn. | Measures made without clock-work. |
| | Mean | . . | . . | . . | . . | . . | 187.6 | . . | | | | |
| | Companion of <i>Sirius</i> | . . | . . | 63.002 62.975 63.002 63.050 | 65.318 .276 .296 .342 | . . | . . | . . | 3 A | . . | P. | Seeing not so good. P = C. H. F. PETERS. |
| | Mean | . . | . . | 63.007 | 65.308 | . . | . . | . . | | | | |
| | Companions of <i>Procyon</i> | . . | . . | . . | . . | . . | 214 224 212 189 188 242 | | | | Hn. P. W. P. W. P. | I saw the brightest of the three companions without difficulty and quite steadily; and caught occasional glimpses of one of the others,—D. P. TODD. Neither PETERS, WATSON, nor HOLDEN see O. Σ 's companion. |
| | UMBRIEL | 180 | . . | . . | . . | 12 8 12 18 | 242.8 243.3 | . . | 5 A | 3 | Hn. | UMBRIEL hard to see, and as seeing became worse measures of distance not possible. |
| | Mean | . . | . . | . . | . . | 12 13 | 243.1 | . . | | | | |
| | TITANIA | 180 | 1 2 14 | 60.760 .810 .777 .765 | 67.649 .662 .620 .695 | 12 20 27 | 235.8 235.3 237.0 236.6 | . . | 5 A | 2 | Hn. | |
| | Mean | . . | 1 8 | 60.778 | 67.657 | 12 24 | 236.2 | . . | | | | |
| | OSERON | 320 | 12 38 55 | 61.459 .479 .508 .500 | 66.918 .853 .978 .841 | 12 30 35 | 280.9 283.3 281.4 280.2 | . . | 5 A | 2 | Hn. | Measures of OSERON quite difficult. |
| | Mean | . . | 12 47 | 61.487 | 66.898 | 12 33 | 281.5 | . . | | | | |
| 21 | Σ 86 | 160 | . . | . . | . . | . . 2 ^h .5 s. t. | 82.0 80.7 80.6 81.8 | . . | 3 A | 2 | H. | Stopped by clouds. |
| | Mean | . . | . . | . . | . . | . . | 81.3 | . . | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|--------------------------------|---------------------------|-----------------------|--|--|---|---|------------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Jan. 21 | Σ 932 | 340 | h. m. | r. 63.965 .944 .957 .970 | r. 64.426 .420 .400 .426 | h. m. . . . 4 ^h .7 s. t. | ° 270.9 270.5 271.4 270.8 | ° . . . | 3 A | 2 | H. | |
| | Mean | | | 63.959 | 64.418 | . . . | 270.9 | | | | | |
| | Σ 950 | 190 | . . . | 63.920 .906 .880 .842 | 64.465 .507 .494 .508 | . . . 5 ^h .0 s. t. | 210.5 212.3 210.0 213.4 | . . . | 3 A | 2 | H. | This is a fine double star; images bad for measures of distance. There is another companion in $p = 0^\circ$ and $s = 12''$ (estimated) and yet another more distant. A little north of the star, say r' , is a faint double $s = 3''$. |
| | Mean | | | 63.887 | 64.494 | . . . | 211.5 | | | | | |
| | PROCYON | | | . . . | . . . | . . . | . . . | . . . | . . . | . . . | . . . | Examined PROCYON with power of 400. Images generally blurred and flaring; irregular whiffs of wind. During occasional moments of good seeing caught quite distinct glimpses of one or two companions about $p = 45^\circ$ greater than old companion but too unsteady to measure.—NEWCOMB. About 11 ^h saw by glimpses two of the close companions of PROCYON, viz: that nearest in angle of position to the old companion and the middle one. PROCYON too much blurred for attempting any measures.—PETERS. At 11 ^h cannot be certain of seeing anything in the place of the new companions, although there is at times an appearance that looks like a companion. Images not good.—HALL. |
| 24 | Σ 86 | 160 | . . . | 62.864 .869 .910 .867 | 65.504 .526 .510 .525 | . . . 3 ^h s. t. | 83.5 82.8 82.2 83.1 | . . . | 3 A | 3 | H. | |
| | Mean | | | 62.878 | 65.516 | . . . | 82.9 | | | | | |
| | Satellite of NEPTUNE | 220 | 7 15 | 62.740 .790 .779 .733 .760 | 65.630 .618 .617 .629 .663 | 7 7 13 | 198.7 199.2 198.9 197.7 198.8 | . . . | 5 A | 3 | H. | |
| | Mean | | 7 24 | 62.760 | 65.631 | 7 10 | 198.7 | | | | | |
| | ϵ ARIETIS | 200 | . . . | 63.844 .855 .891 .900 | 64.508 .503 .466 .466 | . . . 4 ^h s. t. | 224.2 221.2 222.0 219.1 | . . . | 3 A | 2 | H. | Images blazing. |
| | Mean | | | 63.872 | 64.486 | . . . | 221.6 | | | | | |
| | G. A. 2 | 20 | . . . | . . . | . . . | . . . | . . . | . . . | 3 A | . . . | H. | By estimate distance = $8''$. Star is 7 ^m .8 and companion 11 th . A pretty double. Images too bad for measurement. |
| | ARIEL (?) | 40 | . . . | . . . | . . . | 10 59 | 202.4 201.5 202.0 | . . . | 6 A | . . . | Ilh. | Haze renders the last measure of position angle doubtful. This is found to be neither ARIEL nor UMBRIEL. UMBRIEL was also seen about 10 ^h 50 ^m brighter than ARIEL. TITANIA and OBERON hazy and dull, and images unsteady. Chron. corr., +0 ^m .2. |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|-----------------------------|---------------------------|-----------------------|--|--|---|---|----------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Jan. 25 | Σ 86 | 160 | h. m. . . | r. 62.903 .882 .890 .877 | r. 65.489 .490 .480 .486 | h. m. . . 2 ^h .7 s. t. | 83.3 84.1 82.7 81.8 | . . | 3 A | 4 | H. | |
| | Mean | . . | . . | 62.888 | 65.486 | | 83.0 | | | | | |
| | Satellite of NEPTUNE. | 220 | 6 57 | 62.704 .679 .725 .685 .670 | 65.610 .670 .692 .670 .700 | 6 49 | 213.3 215.7 214.8 215.6 215.7 | . . | 5 A | 3 | H. | |
| | Mean | . . | 7 4 | 62.693 | 65.668 | 6 52 | 215.0 | | | | | |
| | Σ 305 | 330 | . . | 63.920 .894 .902 .900 | 64.455 .498 .492 .481 | . . 3 ^h .8 s. t. | 281.8 282.4 281.4 279.5 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.904 | 64.482 | | 281.3 | | | | | |
| | ε Arietis | 200 | . . | 64.084 .078 .068 .077 | 64.303 .310 .331 .314 | . . 4 ^h .1 s. t. | 222.2 220.1 220.0 224.8 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 64.077 | 64.315 | | 221.8 | | | | | |
| | 920 B. A. C. (Br.). | . . | . . | . . | . . | . . | . . | . . | 3 A | . . | H. | This star is not separated to-night. |
| | G. A. 2 | 15 | . . | 63.293 .256 .297 .262 | 65.080 .103 .134 .040 | . . 4 ^h .8 s. t. | 223.2 224.1 223.9 223.5 | . . | 3 A | 2 | H. | There are three companions preceding about 5" of 13th magnitude. |
| | Mean | . . | . . | 63.277 | 65.089 | | 223.7 | | | | | |
| | Σ 742 | 250 | . . | 63.835 .824 | 64.542 .559 | . . 5 ^h .3 s. t. | 165.7 166.6 166.6 165.8 | . . | 3 A | 2 | H. | Images diffuse. |
| | Mean | . . | . . | 63.830 | 64.550 | | 166.2 | | | | | |
| | Σ 932 | . . | . . | . . | . . | . . | . . | . . | 3 A | . . | H. | Images too bad for measurement. |
| | G. A. 3 | 165 | . . | . . | . . | . . | . . | . . | . . | . . | . . | A star of the 8th magnitude with a companion of the 12th; distance 6" by estimate. |
| | PROCYON | . . | . . | . . | . . | . . | . . | . . | . . | . . | H. | PROCYON examined with powers of 400 A, 400, 600 A, and single lens of 500. I cannot see the new companions or STRUVE'S. The distant companion seen steadily with all the powers, but best with 400 A and 500. |
| | PROCYON | . . | . . | . . | . . | 10 30 | 205.5 | . . | 5 A | . . | Hn. | The new companion, <i>i. e.</i> the brighter of the three, suspected strongly, and a reading of position taken. Image of PROCYON very poor. |
| | OBERON | 180 | 11 18 30 | 59.763 .690 .796 .703 | 68.570 .505 .680 .678 | 10 58 11 9 | 240.4 241.4 241.6 240.4 | . . | 5 A | 2 | Hn. | |
| | Mean | . . | 11 24 | 59.738 | 68.608 | 11 4 | 241.0 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|-------------------------|---------------------------|-----------------------|--|--------------------------------------|-------------------------|----------------------------------|----------|-------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Jan. 25 | TITANIA | 0 | h. m. 11 33 | r. 61.166 60.965 61.143 .150 | r. 67.401 .310 .389 .321 | h. m. 11 2 11 13 | 250.5 250.6 251.0 250.6 | ° . . | 5 A | 2 | Hn. | Both satellites very faint OBERON easier to see than TITANIA. Chron. corr., +0 ^m .2. |
| | Mean | . . | 11 40 | 61.106 | 67.355 | 11 8 | 250.7 | | | | | |
| 26 | Σ 113 | 335 | . . | 63.924 64.071 63.916 64.085 | 64.490 .306 .457 .294 | 2 ^h .8 s. t. | 251.7 248.4 251.4 250.4 | . . | 3 A | 3 | H. | Quadruple distance. Double distance. |
| | Mean | . . | . . | . . | . . | . . | 250.5 | | | | | |
| | Satellite of NEPTUNE. | . . | . . | . . | . . | . . | . . | . . | 5 A and 6 A | . | H. | I cannot see the satellite steadily enough for measurement. |
| | Σ 305 | 320 | . . | 63.962 .900 .914 .911 | 64.447 .449 .462 .470 | 3 ^h .5 s. t. | 282.4 281.9 282.9 281.2 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.922 | 64.457 | . . | 282.1 | | | | | |
| | ε Arietis | 200 | . . | 64.081 .070 .067 .070 | 64.304 .301 .306 .294 | 4 ^h s. t. | 217.2 221.9 220.3 223.2 | . . | 3 A | 2 | H. | |
| | Mean | . . | . . | 64.072 | 64.301 | . . | 220.6 | | | | | |
| | O. A. S. 3957 | 240 | . . | 63.819 .778 .766 | 64.535 .568 .542 | 4 ^h .5 s. t. | 187.7 190.8 191.6 192.2 | . . | 3 A | 2 | H. | Images blurred at this altitude. The companion of β LEPORIS was seen, but images became very bad. |
| | Mean | . . | . . | 63.788 | 64.548 | . . | 190.6 | | | | | |
| | Σ 742 | 260 | . . | 63.814 .817 .830 .826 | 64.568 .581 .572 .575 | 5 ^h .0 s. t. | 169.5 168.8 170.3 170.8 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.822 | 64.574 | . . | 169.8 | | | | | |
| | Σ 932 | 330 | . . | 63.976 .952 .963 .970 | 64.430 .422 .430 .431 | 5 ^h .3 s. t. | 268.6 268.3 267.9 267.6 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.965 | 64.428 | . . | 268.1 | | | | | |
| | Σ 950 | 210 | . . | 63.843 .852 .876 .870 | 64.460 .483 .504 .478 | . . | 212.9 211.6 210.1 209.0 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.860 | 64.481 | . . | 210.9 | | | | | |
| | UMBRIEL (?) | 20 | . . | . . | . . | 10 50 58 | 219.4 218.0 219.8 | . . | 6 A | . | Hn. | If this is UMBRIEL it is extremely faint—hardly visible. Measure of distance not practicable. |
| | Mean | . . | . . | . . | . . | 10 54 11 45 | 219.1 217.3 | . . | . . | . . | . | The last measure not completed; stopped by a sudden fog or haze. |
| | OBERON | 180 | 11 10 27 | 60.596 .639 .616 .618 | 67.747 .782 .732 .769 | 11 2 7 | 257.0 258.3 258.0 258.4 | . . | 5 A | 4 | Hn. | |
| | Mean | . . | 11 19 | 60.617 | 67.758 | 11 5 | 257.9 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|---------------------------|---------------------------|---------------------------|--|--|--------------------------------|---|----------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Jan. 26 | TITANIA | 300 | h. m. 11 40 | r. 62.460 64.187* | r. . . . | h. m. 11 32 37 | 111.6 113.0 113.2 113.2 | . . | 5 A | 5 | Hn. | The images while measuring ρ for TITANIA were the finest I have ever seen. *Coincidence. Chron. corr., + 0 ^m .2. |
| | Mean | . . | . . | . . | . . | 11 35 | 112.8 | | | | | |
| 28 | Satellite of NEPTUNE. | 30 | 6 39 46 | 62.714 .657 | 65.623 .648 | 6 24 32 | 213.3 214.5 214.2 213.4 213.7 | . . | 5 A | 2 | H. | Telescope much shaken by the wind. Straps on sector tightened by $\frac{1}{2}$ turn of screws. The clock behaves so badly that measures of distance were given up. The two above are of little value. I have never seen the telescope so unsteady under the driving clock as on January 28. It was very warm, and the straps may have been loosened; and also puffs of wind came through the opening of the shutters. Chron. corr., + 0 ^m .3. |
| | Mean | . . | 6 43 | 62.685 | 65.635 | 6 28 | 213.8 | | | | | |
| 30 | PROCYON | . . | . . | . . | . . | . . | 200 202 | . . | 3 A | 1 | Hn. | New companion. Seeing very poor and images unsteady. |
| | Mean | . . | . . | . . | . . | . . | 201 | | | | | |
| 31 | Σ 113 | 330 | . . | 64.080 .058 .063 .040 | 64.321 .305 .314 .331 | . . 2 ^h .5 s. t. | 72.2 72.1 70.8 70.6 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 64.064 | 64.318 | . . | 71.4 | | | | | |
| | Satellite of NEPTUNE . | 210 | 6 44 55 | 62.774 .809 .771 .796 .809 | 65.571 .536 .568 .548 .536 | 6 38 42 | 217.6 217.6 217.2 217.0 217.6 | . . | 5 A | 4 | H. | |
| | Mean | . . | 6 50 | 62.792 | 65.552 | 6 41 | 217.4 | | | | | |
| | Σ 305 | 320 | . . | 63.718 .900 .898 .887 | 64.449 .461 .486 .484 | . . | 281.6 282.0 280.5 279.0 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.901 | 64.470 | . . | 280.8 | | | | | |
| | O. Arg. S. 3957 . . . | 240 | . . | 63.803 .789 .758 .798 | 64.581 .578 .578 .616 | . . 4 ^h .6 s. t. | 193.0 190.7 191.6 190.8 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.787 | 64.588 | . . | 191.5 | | | | | |
| | β Leporis | 270 | . . | 63.855 .867 .864 .882 | 64.529 .503 .494 .489 | . . 5 ^h .0 s. t. | 142.3 141.2 142.3 142.3 | . . | 3 A | 3 | H. | Companion of 10.5th magnitude. |
| | Mean | . . | . . | 63.867 | 64.504 | . . | 142.0 | | | | | |
| | 45 Leporis | . . | . . | . . | . . | . . | . . | . . | 3 A | . . | H. | Saw all of BURNHAM'S stars, but 45 was not seen well enough to measure. There is another star of 14th magnitude in angle 300° about and $s = 25''$, but haze came on. |
| | TITANIA | 90 | . . 11 27 11 45 | . . 62.580 .537 .558 | . . 65.860 .814 | 10 40 11 17 21 | 163.7 166.0 164.9 166.3 167.2 | . . | 6 A | 5 | Hn. | |
| | Mean | . . | 11 37 | 62.558 | 65.837 | 11 19 | 166.1 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (small-est reading). | Microm. II (large-est reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|---------------------|---------------------------|-----------------------|--|--|--------------------------------|----------------------------------|----------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Jan. 31 | ARIEL | 30 | h. m. 10 59 | r. 63.041 .007 62.936 .931 | r. . . . | h. m. 10 42 | 211.2 213.8 215.0 213.4 | . . | 6 A | 4 | Hn. | Images very steady and air quite transparent till about 11 ^h 10 ^m , when light haze comes up, which at 11 ^h 50 ^m obscures OBERON and makes last two or three measures of TITANIA's distance difficult. TITANIA is decidedly brighter than the Satellite of NEPTUNE; it is easier to see within 16" of URANUS than NEPTUNE's satellite within 16" of NEPTUNE. Chron. corr., + 0 ^m .7. |
| | Mean | . . | . . | 62.979 | . . | 10 47 | 213.4 | | | | | |
| | | | 11 4 | . . | 65.438 .458 .425 .512 .435 | | | | | | | |
| | Mean | . . | . . | . . | 65.454 | | | | | | | |
| Feb. 2 | OBERON | 330 | 11 3 | 60.940 .893 .917 .933 | 67.404 .442 .422 .449 | 10 35 10 46 49 | 264.2 263.8 265.4 264.9 | . . | 5 A | 4 | Hn. | Telescope W. Setting for distance, 165.4. Distances measured with 6 A. |
| | Mean | . . | 11 12 | 60.921 | 67.429 | 10 43 | 264.6 | | | | | |
| | TITANIA | 6 | . . | . . | . . | 10 38 | 235.2 235.9 235.8 235.5 | . . | 5 A | 4 | Hn. | The above measures are of the distance of URANUS from the line joining OBERON and TITANIA. Parallel 152.4 by a star. After careful examination with 800 A and 400 A I cannot decide which is brighter, OBERON or TITANIA, but if either is brighter than the other, TITANIA is so. Chron. corr., + 1 ^m .0. |
| | Mean | . . | . . | . . | . . | 10 42 | 235.6 | | | | | |
| 4 | Σ 494 | 180 | . . | 63.623 .641 .641 .654 | 64.690 .703 .696 .713 | . . 3 ^h .8 s. t. | 236.9 235.6 234.7 236.9 | . . | 3 A | 2 | H. | Tried several other stars, but the images were too bad for measurement—not much better at 8½ hours. |
| | Mean | . . | . . | 63.640 | 64.700 | . . | 236.0 | | | | | |
| | Σ 932 | 330 | . . | 63.991 .970 .954 .968 | 64.377 .403 .409 .396 | . . 6 ^h .4 s. t. | 271.0 269.0 270.1 269.0 | . . | 3 A | 2 | II. | |
| | Mean | . . | . . | 63.971 | 64.396 | . . | 269.8 | | | | | |
| 5 | Σ 138 (A and B) . . | 25 | . . | 64.089 .074 .068 .069 | 64.334 .331 .325 .328 | . . 3 ^h .5 s. t. | 207.6 209.4 208.0 207.7 | . . | 3 A | 2 | H. | C is very faint to-night, but steadily seen. |
| | Mean | . . | . . | 64.075 | 64.330 | . . | 208.2 | | | | | |
| | Σ 155 | 325 | . . | 63.711 .717 .721 .719 | 64.661 .685 .668 .650 | . . 4 ^h .2 s. t. | 96.9 95.2 95.5 94.5 | . . | 3 A | 3 | H. | Clock stopped after first two measures of position angle. |
| | Mean | . . | . . | 63.717 | 64.666 | . . | 95.5 | | | | | |
| | Σ 589 | 300 | . . | 63.746 .734 .728 .720 | 64.650 .644 .643 .651 | . . 4 ^h .8 s. t. | 122.4 123.0 122.7 123.0 | . . | 3 A | 2 | H. | |
| | Mean | . . | . . | 63.732 | 64.647 | . . | 122.8 | | | | | |
| | Σ 735 | 350 | . . | 60.371 .412 .365 .376 | 67.970 .979 68.020 67.990 | . . 5 ^h .8 s. t. | 249.9 249.7 249.9 249.6 | . . | 3 A | 2 | H. | Clock made another and longer stop. |
| | Mean | . . | . . | 60.381 | 67.990 | . . | 249.8 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|-----------------|----------------------------|---------------------------|-----------------------|--------------------------------|--------------------------------|-----------------------|----------------------------------|----------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Feb. 5 | URANUS | ° | h. m. | r. | r. | h. m. | ° | ° | . | . | Hn. | At 11 ^h 5 ^m both ARIEL and UMBRIEL (?) well seen, in spite of moonlight and haze. At 11 ^h 10 ^m the whole sky overclouded, and remains so. At 12 ^h 30 ^m sky clear for a few moments, but not long. |
| 8 | Σ 155 | 325 | . | 63.730 .718 .737 .707 | 64.685 .688 .680 .687 | . | 93.3 94.8 94.0 94.6 | . | 3 A | 3 | H. | |
| | Mean | . | . | 63.723 | 64.685 | . | 94.2 | . | | | | |
| | Σ 494 | 180 | . | 63.662 .664 .640 .642 | 64.709 .730 .695 .731 | . | 237.2 236.0 237.6 236.2 | . | 3 A | 2 | H. | |
| | Mean | . | . | 63.652 | 64.716 | . | 236.8 | . | | | | |
| | Σ 742 | 250 | . | 63.824 .820 .842 .834 | 64.534 .536 .549 .540 | . | 169.0 168.0 169.5 167.2 | . | 3 A | 3 | H. | |
| | Mean | . | . | 63.830 | 64.540 | . | 168.4 | . | | | | |
| | Σ 735 | 350 | . | 60.388 .405 .386 | 68.028 .045 67.988 | . | 249.6 249.3 249.5 249.7 | . | 3 A | 2 | H. | This star seems to have moved 7" in s since STRUVE observed it. Clouds. |
| | Mean | . | . | 60.393 | 68.030 | . | 249.5 | . | | | | |
| 10 | | . | . | . | . | . | . | . | . | . | Hn. | Adjusted both finders by Venus at about 0 ^h . |
| | <i>a Piscium</i> | 330 | . | 63.887 .882 .886 .870 | 64.534 .519 .506 .521 | . | 97.7 98.2 99.9 100.9 | . | 3 A | 3 | H. | |
| | Mean | . | . | 63.881 | 64.520 | . | 99.2 | . | | | | |
| | Σ 494 | 180 | . | 63.646 .668 .660 .671 | 64.692 .739 .721 .731 | . | 236.6 234.5 234.5 234.1 | . | 3 A | 3 | H. | |
| | Mean | . | . | 63.661 | 64.721 | . | 234.9 | . | | | | |
| | Σ 535 | 340 | . | 64.021 .013 .013 .019 | 64.346 .376 .361 .365 | . | 263.5 262.6 262.8 262.9 | . | 3 A | 3 | H. | |
| | . | . | . | 64.017 | 64.362 | . | 262.9 | . | | | | |
| | 0 Σ 91 | . | . | . | . | . | . | . | . | . | H. | This star elongated in direction 240°. Cannot measure it to-night. Parallel 151°.3. |
| | O. A. S. 3957 | 240 | . | 63.800 .776 .774 .806 | 64.583 .618 .605 .623 | . | 189.3 189.3 190.4 190.0 | . | 3 A | 3 | H. | |
| | Mean | . | . | 63.789 | 64.607 | . | 189.8 | . | | | | |
| | G. A. 2 | 20 | . | 63.253 .266 .223 .281 | 65.117 .102 .104 .102 | . | 220.8 220.9 221.6 221.6 | . | 3 A | 2 | H. | |
| | Mean | . | . | 63.256 | 65.106 | . | 221.2 | . | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|----------------------------|---------------------------|-----------------------|--------------------------------------|--------------------------------------|---|---------------------------------------|------------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Feb. 10 | Σ 853 | 340 | h. m. | r. 61.510 .498 .501 .478 | r. 66.919 .940 .931 .944 | h. m. . . . 5 ^h .5 s. t. | ° 252.0 252.7 252.5 252.3 | ° . . . | 3 A | 3 | H. | Clouds. |
| | Mean | . . . | . . . | 61.497 | 66.934 | . . . | 252.4 | . . . | | | | |
| | Σ 950 | 210 | . . . | 63.861 .881 .873 .894 | 64.525 .490 .478 .480 | . . . 6 ^h .0 s. t. | 204.6 205.1 206.2 207.9 | . . . | 3 A | 3 | H. | |
| | Mean | . . . | . . . | 63.877 | 64.493 | . . . | 206.0 | . . . | | | | |
| | 38 <i>Geminorum</i> . . . | 165 | . . . | 63.578 .550 .568 .569 | 64.850 .878 834 .861 | . . . 6 ^h .4 s. t. | 257.7 259.4 259.3 257.7 | . . . | 3 A | 2 | H. | Images blurred. |
| | Mean | . . . | . . . | 63.566 | 64.856 | . . . | 258.5 | . . . | | | | |
| | Object near URANUS. | 230 | . . . | . . . | . . . | 10 8 15 | 189.9 191.6 191.5 190.9 | . . . | 6 A | 1 | Hn. | This object is much brighter than TITANIA and not so distant. |
| | Mean | . . . | . . . | . . . | . . . | 10 12 | 191.0 | . . . | | | | |
| | TITANIA | . . . | . . . | . . . | . . . | 10 18 | 217.1 | . . . | 6 A | 1 | Hn. | Images so unsteady and sky so thick that further work would be useless. The measures made are not satisfactory. Zero of position, 150°.5 approx. |
| | | 225 | . . . | . . . | . . . | . . . | . . . | . . . | 1 | . . . | Hn. | This must be ε <i>Hydrae</i> , = Σ 1273; the small companion $\rho = 190^\circ$; $s = 12''$ must be new. |
| | <i>a Piscium</i> | 330 | . . . | 63.865 .884 .893 .882 | 64.512 .490 .518 .501 | . . . 3 ^h .2 s. t. | 98.2 98.6 97.9 100.9 | . . . | 3 A | 3 | H. | |
| | Mean | . . . | . . . | 63.881 | 64.505 | . . . | 98.9 | . . . | | | | |
| 12 | Σ 535 | 345 | . . . | 64.027 .028 .026 .022 | 64.371 .352 .374 .355 | . . . 3 ^h .4 s. t. | 263.8 263.2 262.1 262.6 | . . . | 3 A | 3 | H. | |
| | Mean | . . . | . . . | 64.026 | 64.363 | . . . | 262.9 | . . . | | | | |
| | L. 9181 (Br.) | 180 | . . . | 64.088 .099 .093 .092 | 64.302 .294 .294 .294 | . . . 3 ^h .7 s. t. | 241.8 243.3 244.1 243.1 | . . . | 3 A | 3 | H. | Magnitudes 9 and 9.3. |
| | Mean | . . . | . . . | 64.093 | 64.296 | . . . | 243.1 | . . . | | | | |
| | Σ 694 | 180 | . . . | 64.075 .055 .056 .040 | 64.310 .310 .322 .317 | . . . 4 ^h .2 s. t. | 239.4 239.4 239.2 239.0 | . . . | 3 A | 3 | H. | |
| | Mean | . . . | . . . | 64.056 | 64.315 | . . . | 239.2 | . . . | | | | |
| | Anonymous | 130 | . . . | 63.528 .498 .542 .530 | 64.860 .894 .870 .856 | . . . 1 ^h .6 s. t. | 106.8 109.9 112.3 109.8 | . . . | 3 A | 3 | H. | Magnitudes 6 and 13. $\alpha = 5^h 7^m$. } $\delta = 1^\circ 50'$. } + 1° 50'. |
| | Mean | . . . | . . . | 63.524 | 64.870 | . . . | 109.7 | . . . | | | | |
| | Σ 853 | 350 | . . . | 61.465 .476 .472 .490 | 66.902 .909 .888 .897 | . . . 6 ^h .1 s. t. | 252.3 253.0 252.5 252.1 | . . . | 3 A | 3 | H. | Parallel, 151°.3 |
| | Mean | . . . | . . . | 61.476 | 66.899 | . . . | 252.5 | . . . | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|----------------------|---------------------------|-----------------------|--------------------------------------|--------------------------------------|---|---------------------------------------|------------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Feb. 12 | 38 Geminorum . . . | 160 | h. m. . . . | r. 63.564 .572 .550 .556 | r. 64.820 .862 .814 .848 | h. m. . . . 6 ^h .4 s. t. | ° 257.8 256.9 256.6 256.7 | ° . . . | 3 A | 3 | H. | |
| | Mean | | | 63.560 | 64.836 | | 257.0 | | | | | |
| | Σ 1037 | 290 | | 64.051 .069 .070 .066 | 64.331 .325 .330 .346 | 7 ^h .0 s. t. | 291.7 292.8 292.9 292.5 | | 3 A | 2 | H. | Σ 1037 has another companion of 12th magnitude in $p = 110^\circ$ and $s = 10''$ (by estimate). |
| | Mean | | | 64.064 | 64.333 | | 292.5 | | | | | |
| | TITANIA | | 11 25 28 | 61.959 | 66.666 .609 | 11 16 20 | 270.2 268.1 267.8 268.7 | | 6 A | . . . | Hn. | Stopped by clouds. Chron. corr. + 1 ^m . |
| | Mean | | 11 27 | . . . | 66.638 | 11 19 | 268.7 | | | | | |
| 16 | HASTINGS (1) | 300 | | 64.025 .001 .008 .014 | 64.348 .389 .368 .364 | | 283.2 285.0 284.0 285.1 | | 3 A | 3 | H. | Magnitudes 8 and 9. |
| | Mean | | | 64.012 | 64.367 | | 284.3 | | | | | |
| | L. 9181 | 180 | | 64.082 .092 .098 .086 | 64.283 .288 .282 .291 | | 243.7 241.4 243.2 243.1 | | 3 A | 3 | H. | |
| | Mean | | | 64.089 | 64.286 | | 242.8 | | | | | |
| | Σ 694 | 180 | | 64.096 .056 .071 .053 | 64.323 .326 .331 .322 | | 238.6 239.5 239.4 240.0 | | 3 A | 2 | H. | |
| | Mean | | | 64.069 | 64.325 | | 239.4 | | | | | |
| | 118 Tauri | 190 | | 63.660 .651 .640 .650 | 64.689 .668 .695 .670 | | 219.6 221.4 222.6 220.8 | | 3 A | 2 | H. | |
| | Mean | | | 63.650 | 64.680 | | 221.1 | | | | | |
| | 38 Geminorum . . . | 170 | | 63.548 .585 .539 .509 | 64.834 .836 .832 .838 | | 255.6 255.8 255.8 256.8 | | 3 A | 2 | H. | Images blurred. |
| | Mean | | | 63.545 | 64.835 | | 256.0 | | | | | |
| | Σ 1037 | | | | | | | | | | | |
| | UMBRIEL | 0 | 10 23 44 | 62.138 .208 .221 .156 | 66.214 .258 .332 .120 | 10 10 18 | 243.8 243.5 243.6 244.4 | | 6 A | 2 | Hn. | Images so bad that this star cannot be observed. Telescope west. |
| | Mean | | 10 34 | 62.181 | 66.231 | 10 14 | 243.8 | | | | | |
| | TITANIA | 65 | | | | 10 52 | 75.3 75.1 | | 5 A | 1 | Hn. | Wind blowing hard during observation of UMBRIEL and it increases in violence by 11 ^h so that no further measures are possible. |
| | Mean | | | | | | 75.2 | | | | | |
| | OBERON | 320 | | | | 10 48 | 99.7 101.0 | | 5 A | 1 | Hn. | A small double star follows URANUS about 2' and is south of it $\frac{1}{2}'$, <i>i. e.</i> , $a = 9^h 21^m.3$ and $\delta = + 16^\circ 17'.4$, approximately; distance of components, about 5''; magnitudes, 10; about equal. |
| | Mean | | | | | | 100.4 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|--|---------------------------|-----------------------|-------------------------------|-------------------------------|-------------------------|------------------|----------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Feb. 17 | <i>ε Arietis</i> | 190° | h. m. | r. | r. | h. m. | ° | ° | 3 A | 2 | H. | Images blurred. |
| | | | . . | 64.068 | 64.304 | . . | 216.1 | . . | | | | |
| | | | | .070 | .302 | | 216.7 | | | | | |
| | | | | .059 | .304 | 4 ^h .2 s. t. | 217.2 | | | | | |
| | | | | .077 | .329 | | 216.5 | | | | | |
| | Mean | | . . | 64.068 | 64.310 | . . | 216.6 | | | | | |
| | Σ 535 | 340° | . . | 64.021 | 64.374 | . . | 262.8 | . . | 3 A | 2 | H. | |
| | | | | .021 | .349 | | 259.8 | | | | | |
| | | | | .012 | .360 | 4 ^h 6 s. t. | 260.1 | | | | | |
| | | | | 63.989 | .387 | | 258.8 | | | | | |
| | Mean | | . . | 64.011 | 64.368 | . . | 260.4 | | | | | |
| | HASTINGS (I) | 300° | . . | 64.009 | 64.380 | . . | 285.0 | . . | 3 A | 2 | H. | |
| | | | | 63.989 | .388 | | 287.5 | | | | | |
| | | | | .988 | .388 | 4 ^h .9 s. t. | 284.6 | | | | | |
| | | | | .985 | .390 | | 286.0 | | | | | |
| | Mean | | . . | 63.993 | 64.386 | | 285.8 | | | | | |
| | Σ 694 | 180° | . . | 64.071 | 64.305 | . . | 238.2 | . . | 3 A | 3 | H. | |
| | | | | .070 | .308 | | 238.0 | | | | | |
| | | | | .054 | .304 | 5 ^h .3 s. t. | 237.5 | | | | | |
| | | | | .059 | .325 | | 236.5 | | | | | |
| | Mean | | . . | 64.064 | 64.310 | . . | 237.5 | | | | | |
| | Σ 694 | 310° | . . | 63.308 | 65.009 | . . | 262.5 | . . | 3 A | 2 | H. | <i>C</i> is 15th or 16th magnitude. Clock stopped. |
| | $\frac{A+B}{2}$ and <i>C</i> | | | .271 | .050 | | 262.6 | | | | | |
| | Mean | | . . | 63.289 | 65.030 | . . | 262.6 | | | | | |
| | β <i>Leporis</i> | 275° | . . | . . | . . | . . | 138.6 | . . | 3 A | 2 | H. | Clock stopped again. Images too bad for distance, and much blurred for ρ . Parallel 151°.2. |
| | | | | | | 5 ^h .7 s. t. | 137.4 | | | | | |
| | | | | | | | 136.8 | | | | | |
| | | | | | | | 137.5 | | | | | |
| | Mean | | . . | . . | . . | . . | 137.6 | | | | | |
| | ARIEL | 170° | 10 25 | 63.160 | 65.334 | 10 4 | 258.6 | . . | 6 A | 3 | Hn. | After 10 ^h 30 ^m ARIEL was much harder to see; the air less transparent. |
| | | | 45. | .268 | .361 | | 258.0 | | | | | |
| | | | 51 | .192 | | 13 | 258.5 | | | | | |
| | | | | | | | 259.2 | | | | | |
| | Mean | | 10 40 | 63.207 | 65.348 | 10 9 | 258.6 | | | | | |
| | UMBRIEL | . . | . . | . . | . . | 10 20 | 178.4 | . . | . . | . . | Hn. | UMBRIEL was really in $p = 241.5$. |
| | OSBERON | 260° | 11 33 | 61.960 | 66.442 | 10 54 | 150.3 | . . | 6 A | 3 | Hn. | |
| | | | | .980 | .418 | | 149.4 | | | | | |
| | | | 48 | .934 | .470 | 2 | 149.8 | | | | | |
| | | | | .975 | | | | | | | | |
| | Mean | | 11 41 | 61.962 | 66.443 | 10 58 | 149.8 | | | | | |
| | TITANIA | 110° | 11 10 | 62.625 | 65.880 | 10 56 | 128.1 | . . | 6 A | 3 | Hn. | |
| | | | | .617 | .895 | | 128.6 | | | | | |
| | | | 28 | .630 | .833 | 4 | 128.5 | | | | | |
| | Mean | | 11 19 | 62.624 | 65.869 | 11 0 | 128.4 | | | | | |
| 18 | HASTINGS (I) | 340° | . . | 64.000 | 64.370 | . . | 282.3 | . . | 3 A | 3 | H. | |
| | | | | 63.992 | .362 | | 283.2 | | | | | |
| | | | | 64.006 | .365 | 4 ^h .0 s. t. | 284.4 | | | | | |
| | | | | 63.989 | .350 | | 284.6 | | | | | |
| | Mean | | . . | 63.997 | 64.362 | . . | 283.6 | | | | | |
| | η <i>Orionis</i> | . . | . . | 64.072 | 64.280 | . . | 158.5 | . . | 3 A | 2 | H. | Images blurred. |
| | | | | .062 | .292 | | 158.1 | | | | | |
| | | | | .074 | .287 | 4 ^h .4 s. t. | 157.0 | | | | | |
| | | | | .054 | .294 | | 156.0 | | | | | |
| | Mean | | . . | 64.065 | 64.288 | . . | 157.4 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|---------------------------|---------------------------|-----------------------|-------------------------------|-------------------------------|-------------------------|------------------|----------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Feb. 18 | β Leporis | 280 | h. m. | r. | r. | h. m. | ° | ° | 3 A | 3 | H. | |
| | | | . . | 63.909 | 64.482 | . . | 140.8 | . . | | | | |
| | | | | .893 | .521 | | 141.8 | | | | | |
| | | | | .872 | .505 | 4 ^h .7 s. t. | 143.8 | | | | | |
| | | | | .854 | .496 | | 142.5 | | | | | |
| | Mean | . . | . . | 63.882 | 64.501 | | 142.2 | | | | | |
| | 118 Tauri | 195 | . . | 63.685 | 64.685 | . . | 221.7 | . . | 3 A | 3 | H. | |
| | | | | .700 | .719 | | 222.6 | | | | | |
| | | | | .678 | .720 | 5 ^h .2 s. t. | 223.6 | | | | | |
| | | | | .660 | .683 | | 223.8 | | | | | |
| | Mean | . . | . . | 63.681 | 64.702 | . . | 222.9 | | | | | |
| | λ Orionis | 35 | . . | 63.690 | 64.629 | . . | 195.4 | . . | 3 A | 3 | H. | |
| | | | | .728 | .662 | | 196.6 | | | | | |
| | | | | .712 | .627 | 5 ^h .5 s. t. | 195.2 | | | | | |
| | | | | .742 | .626 | | 197.6 | | | | | |
| | Mean | . . | . . | 63.718 | 64.636 | . . | 196.2 | | | | | |
| | 38 Geminorum. . . | 170 | . . | 63.541 | 64.830 | . . | 258.0 | . . | 3 A | 3 | H. | Clock caused much delay. |
| | | | | .551 | .822 | 6 ^h .3 s. t. | 259.6 | | | | | |
| | | | | | | | 257.8 | | | | | |
| | | | | | | | 258.3 | | | | | |
| | Mean | . . | . . | 63.546 | 64.826 | . . | 258.4 | | | | | |
| | Σ 1037 | 310 | . . | 64.083 | 64.308 | . . | 285.1 | . . | 3 A | 3 | H. | C is 13th magnitude, $p = 90^\circ$ and $s = 15''$. |
| | | | | .068 | .313 | | 287.3 | | | | | |
| | | | | .070 | .312 | 6 ^h .7 s. t. | 286.3 | | | | | |
| | | | | .069 | .303 | | 286.6 | | | | | |
| | Mean | . . | . . | 64.072 | 64.309 | . . | 286.3 | | | | | |
| | | . . | . . | . . | . . | . . | . . | . . | . . | . . | Hn. | All four satellites of URANUS visible. ARIEL seen somewhat more steadily than UMBRIEL at first. ARIEL very much brighter than it was February 17 under similar atmospheric conditions. TITANIA brighter than OBERON, but not very much so. |
| | ARIEL | 10 | 10 16 | 62.623 | 65.673 | 10 3 | 239.6 | . . | 6 A | 4 | Hn. | |
| | | | | .590 | .653 | | 238.7 | | | | | |
| | | | | .663 | .657 | | 239.4 | | | | | |
| | | | 27 | .659 | .734 | 12 | 237.5 | | | | | |
| | Mean | . . | 10 22 | 62.634 | 65.679 | 10 8 | 238.8 | | | | | |
| | UMBRIEL (?) | 180 | 10 31 | 62.113 | 66.203 | 10 46 | . . | 61.5 | 6 A | 4 | Hn. | Setting for measures of s 148°. |
| | | | | .095 | .186 | | 242.9 | | | | | |
| | | | | | | 52 | 242.5 | | | | | |
| | | | | | | | 241.3 | | | | | |
| | Mean | . . | . . | 62.104 | 66.195 | 10 49 | 242.1 | | | | | |
| | TITANIA | 40 | 11 20 | 61.800 | . . | 10 57 | 196.4 | . . | 6 A | 4 | Hn. | Setting for $s = 103^\circ.0$. Coincidence at 64 ^h .184. |
| | | | 30 | .858 | . . | | 196.6 | | | | | |
| | | | | .806 | . . | 11 7 | 197.6 | | | | | |
| | | | | | | | 198.2 | | | | | |
| | Mean | . . | 11 25 | 61.821 | . . | 11 2 | 197.2 | | | | | |
| | OBERON | 230 | 11 17 | . . | 67.231 | 11 1 | 193.3 | . . | 6 A | 4 | Hn. | |
| | | | | | .230 | | 193.7 | | | | | |
| | | | | | .210 | | 193.4 | | | | | |
| | | | 33 | | .200 | 10 | 193.7 | | | | | |
| | Mean | . . | 11 25 | . . | 67.218 | 11 6 | 193.5 | | | | | |
| | 20 Object near URANUS . | 90 | 11 41 | 61.473 | . . | 11 35 | 152.8 | . . | 6 A | . . | Hn. | Parallel, 151°.3. This object is of about the brightness of OBERON and TITANIA which are easily seen. The image of URANUS is extremely bad and unsteady. |
| | | | | | | 37 | 152.6 | | | | | |
| | | | | | | 38 | 152.1 | | | | | |
| | Mean | . . | . . | . . | . . | 11 37 | 152.5 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|---------------------------|---------------------------|-----------------------|--|--|---------------------------------------|---|----------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Feb. 22 | UMBRIEL (?) | 180 | h. m . . | r. . . | r. . . | h. m. 9 27 36 50 | 236.5 232.0 237.9 240.0 | . . | 5 A | . | Hn. | The distance of this object is about $\frac{2}{3}$ that of OBERON. It is <i>extremely</i> hard to see, as the night is so bad that even OBERON is not obvious. TITANIA is also <i>extremely</i> faint; fainter than I have ever seen it and comparable in brightness with UMBRIEL. |
| | Mean . . | . . | . . | . . | . . | 9 37 | 236.6 | | | | | |
| Mar. 2 | 45 <i>Leporis</i> | . . | . . | . . | . . | . . | . . | . . | . | . | H. | Images too bad for measurements. The new faint star, not given by Burnham, is visible to-night, say, 14th magnitude; $p = 300^\circ$; $s = 35''$ (by estimate). It is between <i>A</i> and <i>D</i> . |
| | L. 11915 (Br.) | 93 | . . | 63.943 .062 .988 .984 | 64.407 .416 .421 .387 | . . 6 ^h .1 s. t. . . | 148.5 148.5 148.2 149.4 | . . | 3 A | 2 | H. | |
| | Mean . . | . . | . . | 63.969 | 64.408 | . . | 148.6 | | | | | |
| | L. 13404 (Br.) | 60 | . . | 64.036 .079 | 64.319 .318 | . . | 179.7 178.2 179.8 177.8 | . . | 3 A | 2 | H. | Images bad. Parallel, $151^\circ.3$. |
| | Mean . . | . . | . . | 64.071 | 64.318 | . . | 178.9 | | | | | |
| 3 | L. 11915 | 93 | . . | 63.957 .995 .974 .959 | 64.400 .414 .406 .403 | . . 5 ^h .6 s. t. . . | 147.9 147.9 148.2 147.0 | . . | 3 A | 2 | H. | |
| | Mean . . | . . | . . | 63.971 | 64.406 | . . | 147.8 | | | | | |
| | L. 13404 | 60 | . . | 64.079 .083 | 64.326 .330 | . . 5 ^h .9 s. t. . . | 181.0 177.8 176.5 175.5 | . . | 3 A | 2 | H. | Images much blurred. |
| | Mean . . | . . | . . | 64.081 | 64.328 | . . | 177.7 | | | | | |
| | SIRIUS | . . | . . | 63.078 .050 .048 .057 .068 | 65.318 .369 .309 .324 .305 | . . 6 ^h .3 s. t. . . | 186.0 186.8 185.8 185.8 185.7 | . . | 3 A | 2 | H. | Clock stopped. Images unsteady. |
| | Mean . . | . . | . . | 63.060 | 65.325 | . . | 186.0 | | | | | |
| | G. A. 3 (A and C) . . | 330 | . . | 63.531 .430 | 64.930 .925 | . . 6 ^h .8 s. t. . . | 103.0 100.7 100.8 | . . | 3 A | 2 | H. | C 14th or 15th magnitude. |
| | Mean . . | . . | . . | 63.480 | 64.928 | . . | 101.5 | | | | | |
| | G. A. 3 (A and B) . . | 270 | . . | 63.820 .802 | 64.556 .540 | . . | 139.5 139.6 137.6 | . . | 3 A | 3 | H. | |
| | Mean . . | . . | . . | 63.811 | 64.548 | . . | 138.9 | | | | | |
| | G. A. 3 (A and D) . . | 275 | . . | 62.932 .882 | 65.449 .452 | . . | 132.9 133.5 132.4 | . . | 3 A | 3 | H. | |
| | Mean . . | . . | . . | 62.907 | 65.450 | . . | 132.9 | | | | | |
| | G. A. 3 (A and E) . . | 180 | . . | 62.858 .896 | 65.555 .541 | . . | 225.0 223.4 222.9 | . . | 3 A | 3 | H. | A is 8.9th magnitude; moonlight, and sky not very clear. |
| | Mean . . | . . | . . | 62.877 | 65.548 | . . | 223.8 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (small-est reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|-----------------|-----------------------------|---------------------------|------------------------|--------------------------------|--------------------------------|------------------------------|----------------------------------|----------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Mar. 3 | URANUS | ° | h. m. | r. | r. | h. m. | ° | ° | . | . | Hn. | All four satellites visible; two stars slightly brighter than OBERON are in $p = 230^{\circ}$; $s = 1'$ } estimated. $p = 0^{\circ}$, $s = 50''$ } Not much difference in the magnitude of TITANIA and OBERON. UMBRIEL is more steadily seen than ARIEL, but not much more so. |
| | ARIEL | 180 | 11 8 17 | 62.870 .872 | 65.512 .404 | 10 19 28 | 68.8 68.7 68.0 68.7 | . | 6 A | 3 | Hn. | |
| | Mean | . | 11 13 | 62.871 | 65.458 | 10 24 | 68.6 | | | | | |
| | UMBRIEL | 20 | 10 51 11 0 | 62.195 .167 | 66.195 .091 | 10 34 42 | 36.8 41.1 37.4 38.0 | . | 6 A | . | Hn. | |
| | Mean | . | 10 56 | 62.181 | 66.143 | 10 38 | 38.3 | | | | | |
| | URANUS | . | . | . | . | . | . | . | . | . | Hn. | At 11 ^h 30 ^m put on a cap reducing aperture to 15 inches, and pointed on URANUS again; the images were pretty steady, and OBERON and TITANIA quite easy objects. UMBRIEL was <i>certainly</i> seen, and I am almost satisfied that ARIEL was to be seen by glimpses. An attempt to measure the distance of ARIEL failed, but measures of UMBRIEL could have been taken. Sky hazy and bright; moon in first quarter is (12 ^h)—degrees from URANUS. |
| 4 | 118 Tauri | 200 | . | 63.693 .703 .682 .671 | 64.684 .672 .698 .692 | . 5 ^h .8 s. t. | 224.2 224.8 225.4 225.4 | . | 3 A | 2 | H. | |
| | Mean | . | . | 63.687 | 64.686 | . | 225.0 | | | | | |
| | λ Orionis | 35 | . | 63.753 .738 .776 .741 | 64.640 .675 .692 .624 | . 6 ^h .2 s. t. | 196.1 195.8 197.0 195.8 | . | 3 A | 2 | H. | |
| | Mean | . | . | 63.752 | 64.658 | . | 196.2 | | | | | |
| | ζ Orionis | 160 | . | 63.908 .920 .912 .908 | 64.458 .476 .483 .471 | . 6 ^h .6 s. t. | 264.8 262.0 264.9 265.4 | . | 3 A | 2 | H. | Images much blurred; stars on this date observed through thin clouds. |
| | Mean | . | . | 63.912 | 64.472 | . | 264.3 | | | | | |
| | ARIEL | 10 | . | . | . | 10 30 36 | 50.0 51.2 50.2 | . | 6 A | . | Hn. | ARIEL, though hard to see in the moonlight and haze, is yet quite as bright as last night under better circumstances in $p = 180$. Coincidence of wire A and micrometer wire 64.194. |
| | Mean | . | . | . | . | 10 34 | 50.5 | | | | | s estimated 13". |
| | Coincidence of wires. | . | . | . | 64.198 .190 .196 .190 | . | . | . | . | . | . | |
| | TITANIA | 170 | 11 7 13 19 28 | . .130 .144 .127 | 67.174 .130 .144 .127 | 10 40 56 | 244.2 244.0 245.1 244.9 | . | 6 A | . | Hn. | Weight 4 for p ; weight 3 for s . |
| | Mean | . | 11 17 | | 67.144 | 10 49 | 244.6 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (small-est reading). | Microm. II (large-est reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|-----------------|-----------------------------|---------------------------|---------------------------------|--|--|------------------------------------|---|-------------------------------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Mar. 4 | ÖBERON | 200 | h. m. 11 5 13 21 30 | r. | r. 68.649 .618 .660 .639 | h. m. 10 43 11 0 | ° 223.7 223.2 222.3 222.8 | ° | 6 A | . | Hn. | Weight 4 for <i>p</i> ; weight 3 for <i>s</i> . Sky quite hazy after 11 ^h . TITANIA is brighter than ÖBERON; not much brighter but certainly easier seen. |
| | Mean | . . | 11 18 | . . | 68.642 | 10 52 | 223.0 | | | | | |
| 5 | VENUS | . . | . . | . . | . . | . . | . . | . . | . | . | Hn. | Parallel carefully determined by Venus, 150.95. It is not 151.3, as I set on this and was not satisfied with the setting. Made sketch of Venus. |
| 6 | | . . | . . | . . | . . | . . | . . | . . | . | . | . | Parallel, 151.°00 by τ ORIONIS. Cloudy at 7 ^h . At 9 ^h SIRIUS too poor to measure. |
| 8 | ι 18 Tauri | 200 | . . | 63.720 .661 .705 .697 | 64.688 .691 .694 .730 | . . 5 ^h .9 s. t. | 223.4 222.8 222.6 223.1 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.696 | 64.701 | . . | 223.0 | | | | | |
| | λ Orionis | 40 | . . | 63.643 .692 .705 .682 | 64.680 .693 .663 .643 | . . 6 ^h .4 s. t. | 198.9 200.0 199.7 199.3 | . . | 3 A | 2 | H. | Images much blurred. |
| | Mean | . . | . . | 63.681 | 64.670 | . . | 199.5 | | | | | |
| | SIRIUS | . . | . . | 63.009 .061 .070 .061 .079 | 65.319 .283 .305 .313 .302 | . . 6 ^h .8 s. t. | 184.7 184.1 185.5 184.7 186.5 | . . | 3 A | 2 | H. | Companion very faint and images unsteady. Clock stopped several times. Parallel, 151.1. |
| | Mean | . . | . . | 63.056 | 65.304 | . . | 185.1 | | | | | |
| 9 | η Orionis | 85 | . . | 64.076 .084 .096 | 64.296 .293 .282 | . . 5 ^h .9 s. t. | 156.2 155.5 155.4 155.1 | . . | 5 A | 2 | H. | Images blurred. |
| | Mean | . . | . . | 64.085 | 64.290 | . . | 155.5 | | | | | |
| | λ Orionis | 40 | . . | 63.740 .723 .741 .755 | 64.643 .625 .656 .621 | . . 6 ^h .3 s. t. | 196.8 199.6 200.1 197.9 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.740 | 64.636 | . . | 198.6 | | | | | |
| | ζ Orionis | 160 | . . | 63.928 .912 .909 | 64.459 .453 .463 | . . 6 ^h .8 s. t. | 84.5 83.9 84.6 84.3 | . . | 3 A | 2 | H. | |
| | Mean | . . | . . | 63.916 | 64.458 | . . | 84.3 | | | | | |
| | SIRIUS | . . | . . | 63.029 .068 .026 62.990 63.053 | 65.354 .334 .352 .290 .319 | . . 7 ^h .2 s. t. | 185.8 185.8 186.1 186.5 185.5 | . . | 3 A | 2 | H. | |
| | Mean | . . | . . | 63.033 | 65.330 | . . | 185.9 | | | | | |
| | TITANIA | 340 | 8 37 49 | 61.525 .535 .558 .536 | 66.860 .843 .848 .872 | 8 31 35 | 261.8 261.5 261.3 260.8 | . . | 6 A | 3 | H. | Satellite faint. Chron. Corr., + 0 ^m .1. |
| | Mean | . . | 8 43 | 61.538 | 66.856 | 8 33 | 261.4 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|-----------------|-------------------|---------------------------|-----------------------|--------------------------------------|--------------------------------------|----------------------------|---------------------------------------|----------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Mar. 9 | OBERON | 60 | h. m. 8 59 | r. 61.439 .443 .442 .453 | r. 66.969 .910 .923 .911 | h. m. 8 52 | ° 184.4 183.2 183.8 183.4 | ° . . | 6 A | 3 | H. | Satellite faint. TITANIA decidedly brighter than OBERON. |
| | Mean | . . | 9 6 | 61.444 | 66.928 | 8 54 | 183.7 | | | | | |
| | ARIEL | 15 | 9 28 35 | 62.738 .725 | 65.659 .632 | 9 20 | 222.7 224.7 222.6 223.7 | . . | 6 A | 2 | H. | Satellite very faint. Full moon. Chron. corr., + 0 ^m .1. |
| | Mean | . . | 9 32 | 62.732 | 65.645 | 9 22 | 223.4 | | | | | |
| | Lunar Eclipse . . | . . | . . | . . | . . | . . | . . | . . | 2 A | . | Hn. | P. V. clock 11 ^h 42 ^m 49 ^s ; shadow touches TYCHO south side. P. V. clock 11 ^h 44 ^m 38 ^s ; shadow touches TYCHO north side. Clock corr., + 11 ^s . Middle of eclipse occurred shortly before 12 ^h 29 ^m . |
| | Σ 1037 | 340 | . . | 64.053 .052 | 64.320 .310 | . . | 288.8 290.2 290.8 289.8 | . . | 3 A | 2 | H. | |
| | Mean | . . | . . | 64.05 | 64.315 | | 289.9 | | | | | |
| | ARIEL | 180 | 8 26 33 | 62.685 .671 | 65.625 .689 | 8 8 10 12 22 | 239.5 239.0 238.1 237.6 | . . | 6 A | 2 | H. | Very faint. |
| | Mean | . . | 8 30 | 62.678 | 65.657 | 8 13 | 238.6 | | | | | |
| | OBERON | 350 | 8 49 | 60.353 .360 .381 .362 | 68.108 .046 .033 .019 | 8 42 | 254.1 254.9 254.0 254.2 | . . | 6 A | 2 | H. | |
| 14 | Mean | . . | 8 55 | 60.364 | 68.052 | 8 44 | 254.3 | | | | | |
| | TITANIA | 170 | 9 12 | 61.200 .228 .227 .146 | 67.143 .205 .200 .182 | 9 4 8 | 251.6 251.9 252.1 250.8 | . . | 6 A | 2 | H. | ARIEL very well seen at first, but sky became thick, and it was difficult to observe. To-night OBERON is brighter than TITANIA. Images not good. G. ANDERSON discovers <i>ε Canis Majoris</i> to be double. Chron. corr., + 0 ^m .4. |
| | Mean | . . | 9 16 | 61.200 | 67.182 | 9 6 | 251.6 | | | | | |
| | ARIEL | 25 | 9 12 18 | 62.811 .824 | 65.569 .584 | 8 42 47 48 50 | 217.0 218.6 216.6 218.5 | . . | 6 A | 2 | H. | Very faint. |
| | Mean | . . | 9 15 | 62.817 | 65.576 | 8 47 | 217.7 | | | | | |
| | UMBRIEL | 170 | 9 2 8 | 62.233 .301 | 66.171 .177 | 8 54 56 57.5 58.5 | 244.8 243.9 245.8 244.6 | . . | 6 A | 2 | H. | Very faint. |
| | Mean | . . | 9 5 | 62.267 | 66.174 | 8 57 | 244.8 | | | | | |
| | TITANIA | 110 | 9 35 40 | 62.360 .392 | 66.035 65.961 | 9 28 31 | 115.8 117.0 113.8 114.0 | . . | 6 A | 2 | H. | Satellite faint. |
| | Mean | . . | 9 38 | 62.376 | 65.998 | 9 30 | 115.2 | | | | | |
| | OBERON | 320 | 9 48 54.5 | 61.411 .480 .427 | 66.948 .906 .926 | 9 42 46 | 102.5 103.7 102.8 102.5 | . . | 6 A | 2 | H. | Images diffuse and sky seems misty. ARIEL a little brighter than UMBRIEL. TITANIA so faint that it was observed with difficulty. OBERON brighter, but when observing it the sky was worse and ARIEL and UMBRIEL scarcely visible. Chron. corr., + 0 ^m .5. |
| | Mean | . . | 9 52 | 61.439 | 66.927 | 9 44 | 102.9 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|------------------|---------------------------|-----------------------|--------------------------------------|--------------------------------------|------------------------|---------------------------------------|----------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Mar. 21 | TITANIA | ° 180 | h. m. 8 14 | r. 60.733 .789 .777 .799 | r. 67.590 .583 .603 .628 | h. m. 8 7 11 | ° 233.8 233.6 233.8 234.2 | ° . . | 5 A | 2 | H. | Very windy and images bad. Chron. corr., -0 ^m .1. Clouds. |
| | Mean | . . | 8 22 | 60.775 | 67.602 | 8 9 | 233.8 | | | | | |
| | Omega Nebula . . | . . | . . | . . | . . | . . | . . | . . | 1 | . | Hn. | The numbers of the stars referred to below are LASSELL'S. Mem. R. A. S., vol. 36. Star No. 1 brighter, but not much, than 2. It precedes $\frac{3}{10}$ of the nebulosity of preceding hook of the horseshoe. Line joining 1 and 10 is barely inside of the nebulosity. Line joining 10 and 3 is inside the nebulosity, but not much; 11 is just on the following edge of nebulosity; 34 follows western branch of horseshoe about half distance of 2-7 (this is a rough estimate only) and is clear of any nebulosity; middle half of line 6-1 is in the dark. Line 6-35 is all in the nebula; 8, 73, 11 about the same magnitude; 73 is in $\frac{1}{2}$ nebulosity: on preceding edge of it. Between 11 and 73 very faint nebulosity, which joins these two stars. Line 3-13 is just inside the nebula; 1 certainly precedes $\frac{3}{10}$ of west branch of horseshoe. Line 1-34 has its west $\frac{7}{10}$ in nebula; 34 seems to be in the dark. Certainly a connection across 11-73 more distinct than in the Naval Observatory drawing—more definite. (Meteor across north half of field, 16 ^h 14 ^m .5.) Line 10-11 is all inside nebulosity. Line 1-36 (?) all inside nebulosity; 10-13 was through fainter nebulosity; 13-14-10 are on following side of a bay which is filled with very faint nebulosity; 43 brighter than 15; 44 brighter than 42; 42 brighter than 15, but the inequality is not great. 15 is fainter than 43, 44, 42. Dark space within the horseshoe, and bounded by 2, 7, 73, 11, is elliptic—largest diameter perpendicular to line 8-14. Diameters as 6 to 4. It seems more regular in shape than in the sketch. Line 1-36 crosses fainter part of nebula about $\frac{1}{3}$ of way from 1 to 36, and nearer 1. Preceding the line 1-10, a darker space about equal in width to distance from 6 to 1. Preceding that the sky is nebulous for 10' at least. This should be confirmed with another eye-piece. Faint prolongation from 6, south, preceding. Shape of HERSCHEL'S resolvable knot is correctly laid down by TROUVELOT. Two stars at its southern point. A star at or near the junction of the two prongs of this knot. Sky more transparent than I have ever seen it; much annoyed by forming of clouds. |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|---------------------------------------|---------------------------|-----------------------|--------------------------------|--------------------------------|-----------------------|---------------------------------------|----------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Mar. 22 | τ Orionis (A and D) | 60 | h. m. | r. 60.610 .548 | r. 67.804 .823 | h. m. | ° 181.4 181.4 181.2 181.8 | ° . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 60.579 | 67.813 | . . | 181.5 | | | | | |
| | τ Orionis (A and B) | 250 | . . | 60.569 .577 | 67.790 .810 | . . | 170.8 170.4 170.0 170.7 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 60.573 | 67.800 | . . | 170.5 | | | | | |
| | τ Orionis (B and C) | 45 | . . | 63.790 .824 | 64.529 .544 | . . | 188.0 191.5 191.8 193.0 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.807 | 64.536 | . . | 191.1 | | | | | |
| | SIRIUS | . . | . . | 62.914 .935 | 65.386 .376 | . . | 186.4 185.6 185.8 186.8 | . . | 3 A | 3 | Hn. | |
| | Mean | . . | . . | 62.925 | 65.381 | . . | 186.1 | | | | | |
| | UMBRIEL | 180 | 8 59 9 5 | 62.036 .049 | 66.293 .273 | 8 45 50 | 232.9 232.6 231.5 231.8 | . . | 6 A | 3 | H. | |
| | Mean | . . | 9 2 | 62.042 | 66.283 | 8 48 | 232.2 | | | | | |
| | ARIEL | 350 | 9 8 12 | 62.912 .943 | 65.469 .413 | 8 51 56 | 254.0 254.3 252.9 252.8 | . . | 6 A | 2 | H. | Satellite extremely faint. |
| | Mean | . . | 9 10 | 62.928 | 65.441 | 8 54 | 253.5 | | | | | |
| | OSERON | 80 | 9 23 29 | 61.820 .848 | 66.524 .536 | 9 16 19 | 162.5 162.7 163.7 163.8 | . . | 6 A | 3 | H. | |
| | Mean | . . | 9 26 | 61.834 | 66.530 | 9 18 | 163.2 | | | | | |
| | TITANIA | 160 | 9 39 52 | 61.524 .569 .487 .539 | 66.825 .878 .844 .863 | 9 32 36 | 81.2 79.5 80.2 80.6 | . . | 6 A | 3 | H. | Parallel 151°.1. TITANIA much brighter than OSERON to-night. UMBRIEL easily and steadily seen. ARIEL extremely faint. Chron. corr., 0 ^m .0. |
| | Mean | . . | 9 46 | 61.530 | 66.852 | 9 34 | 80.4 | | | | | |
| 23 | τ Orionis (A and D) | 60 | . . | 60.530 .564 | 67.785 .769 | . . | 181.3 181.6 180.7 180.4 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 60.547 | 67.777 | . . | 181.0 | | | | | |
| | τ Orionis (A and B) | 250 | . . | 60.534 .593 | 67.829 .788 | . . | 171.2 172.6 171.7 170.4 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 60.564 | 67.808 | . . | 171.5 | | | | | |
| | τ Orionis (B and C) | 50 | . . | 63.806 .736 | 64.588 .588 | . . | 192.9 193.4 194.4 194.4 | . . | 3 A | 2 | H. | Companion faint. |
| | Mean | . . | . . | 63.771 | 64.588 | . . | 193.8 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|------------------------------|---------------------------|-----------------------|--|--|---|--|----------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Mar. 23 | <i>Sirius</i> | 55 | h. m. . . | r. 63.077 .074 .072 .077 .053 | r. 65.268 .357 .330 .286 .245 | h. m. . . 7 ^h .8 s. t. | ° 184.8 185.1 186.4 186.6 185.5 | ° . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.071 | 65.297 | . . | 185.7 | | | | | |
| | ARIEL | 190 | 8 23 33 | 62.680 .621 | 65.688 .613 | 8 16 19 | 231.4 229.6 232.0 232.3 | . . | 6 A | 3 | H. | |
| | Mean | . . | 8 28 | 62.650 | 65.650 | 8 17 | 231.3 | | | | | |
| | TITANIA | 90 | 8 44 53 | 62.512 .448 .517 .489 | 65.841 .888 .895 .893 | 8 38 41 | 134.8 133.9 135.9 136.2 | . . | 6 A | 3 | H. | |
| | Mean | . . | 8 48 | 62.492 | 65.879 | 8 39 | 135.2 | | | | | |
| | OBERON | 40 | 9 3 14 | 60.903 .878 .905 .919 | 67.509 .434 .509 .432 | 8 57 9 0 | 199.5 199.7 199.4 199.8 | . . | 6 A | 3 | H. | OBERON is brighter to-night than TITANIA. ARIEL pretty well seen but still difficult to observe. Chron. corr., 0 ^m .0. |
| | Mean | . . | 9 8 | 60.901 | 67.471 | 8 58 | 199 6 | | | | | |
| | | . . | . . | . . | . . | . . | . . | . . | . . | . . | Hn. | Parallel 151°.32; pretty good determination. |
| | Star | . . | . . | . . | . . | . . | . . | . . | . . | . . | Hn. | This star has a companion, $s = 6'' \pm$ and $p = 300^\circ \pm$; very faint in this hazy sky. Two others less than 15" suspected; magnitude 9. Query: Is the principal star double? This star is followed by another star $\frac{1}{2}$ magnitude smaller; 20 seconds. |
| 29 | <i>Sirius</i> | 55 | . . | 62.976 .985 .987 .941 | 65.414 .419 .323 .360 | . . | 186.2 186.7 187.4 185.8 | . . | 3 A | 2 | Hn. | Setting 95°.0. Ver. I. |
| | Mean | . . | . . | 62.972 | 65.379 | . . | 186.5 | | | | | |
| | <i>a Leonis</i> | 90 | . . | . . | . . | . . | 155.1 | . . | 3 A | 3 | H. | Companion to companion s (est.) 2".5. Clouds. This companion of <i>a Leonis</i> is north preceding. |
| 31 | TITANIA | 160 | 7 55 8 8 | 61.828 .897 .888 .927 | 66.545 .678 .623 .610 | 7 45 50 | 268.8 268.8 269.2 268.6 | . . | 6 A | 2 | H. | |
| | Mean | . . | 8 2 | 61.885 | 66.614 | 7 48 | 268.8 | | | | | |
| | OBERON | 200 | 8 17 31 | 59.868 .800 .800 .886 | 68.546 .643 .571 .565 | 8 11 15 | 224.0 223.2 222.2 222.8 | . . | 6 A | 2 | H. | OBERON brighter than TITANIA. Images unsteady; also illumination of the wires not good. |
| | Mean | . . | 8 24 | 59.839 | 68.581 | 8 13 | 223.1 | | | | | |
| | <i>a Leonis C.</i> | 90 | . . | 63.855 .880 | 64.180 .210 | . . | 153.0 154.0 154.1 152.0 | . . | 3 A | 2 | H. | Magnitude 15-16. This companion extremely faint to-night, fainter than on the 29th. Distance is uncertain. |
| | Mean | . . | . . | 63.868 | 64.195 | | 153.3 | | | | | Parallel, 151°.1. The above companion of <i>a Leonis</i> is n. pr. and of 9th magnitude and distance equal to 3" by estimate. Chron. corr., + 0 ^m .5. |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|--------|-------------------------|---------------------------|-----------------------|--|--|-----------------------|--|----------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| Apr. 1 | <i>Sirius</i> | ° | h. m. | r. | r. | h. m. | ° | ° | . | . | Hn. | Companion of <i>Sirius</i> too faint to be observed. |
| 6 | <i>Sirius</i> | . | . | 63.063 .040 .061 .065 .039 | 65.270 .288 .303 .270 .265 | . | 186.6 185.6 186.2 185.7 187.2 | . | 3 A | 3 | H. | First saw the companion in the twilight at 6 ^h 35 ^m m. t. Examined PROCYON with powers 400 and 400 A. The only appearance of a close companion is in $p = 40^\circ$ (est.), and am not sure of this. Mr. HERRIGAN declares he sees <i>three</i> companions in a line above the star, $p = 180^\circ$, and very close. The seeing fair, the best I have had, but full moon. |
| | Mean | . | . | 63.054 | 65.279 | . | 186.3 | . | | | | |
| | OVERON | 25 | 7 55 | 60.401 .445 .407 .429 | 67.929 .916 .947 .896 | 7 49 | 210.5 210.1 211.3 211.4 | . | 6 A | 3 | H. | |
| | Mean | . | 7 59 | 60.420 | 67.922 | 7 51 | 210.8 | . | | | | |
| | TITANIA | 220 | 8 14 | 61.825 .886 .829 | 66.529 .533 .561 | 8 6 | 196.4 196.9 195.1 196.6 | . | 6 A | 2 | H. | Faint. OVERON brighter than TITANIA. The light from full moon makes both fainter than usual. ARIEL was seen at first, but the rising of the moon seemed to put it out. Parallel, 151.2. Chron. corr., +0 ^m .2. |
| | Mean | . | 8 18 | 61.847 | 66.541 | 8 8 | 196.2 | . | | | | |
| 7 | <i>Sirius</i> | . | . | 63.052 .021 | 65.334 .381 .327 | . | . | . | 3 A | 2 | Hn. | Setting for distance, 96°.0. Images bad, and telescope vibrating from the wind. April 7. Windy, and images so bad that observing was given up.—HALL. |
| | Mean | . | . | 63.037 | 65.347 | . | . | . | | | | |
| 8 | <i>Sirius</i> | . | . | 63.005 62.960 63.055 .051 .095 | 65.250 .300 .288 .278 .270 | . | 186.9 185.9 187.8 186.8 186.1 | . | 400 | 1 | H. | Images very unsteady. |
| | Mean | . | . | 63.033 | 65.277 | . | 186.7 | . | | | | |
| | OVERON | 5 | 7 44 | 59.716 .743 .761 .764 | 68.660 .652 .648 .624 | 7 37 | 239.6 239.4 240.2 239.7 | . | 6 A | 2 | H. | |
| | Mean | . | 7 49 | 59.746 | 68.646 | 7 39 | 239.7 | . | | | | |
| | TITANIA | 180 | 8 4 | 61.092 .078 .080 .075 | 67.326 .310 .283 .309 | 7 56 | 247.5 247.6 247.8 247.1 | . | 6 A | 2 | H. | OVERON a little brighter than TITANIA, but both faint on account of hazy sky and moonlight. Chron. corr., +0 ^m .2. |
| | Mean | . | 8 9 | 61.081 | 67.307 | 7 59 | 247.5 | . | | | | |
| Apr. 9 | PROCYON | . | . | . | . | 7 30 | 188.7 187.9 212.6 214.9 192.0 158.5 188.6 187.8 | . | 400 | . | Hn. | Supposed to be 2. Tel. west of pier. Supposed to be 2. Uncertain; supposed to be 1. A little better; supposed to be 1. Good; supposed to be 2. Very uncertain; supposed to be 3. Supposed to be 2. 600 A; supposed to be 2. Two companions, the one to which the measure refers and one of 20°, less position-angle, seen with extraordinary distinctness for a few moments. |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|-----------------|-------------------|---------------------------|-----------------------|-------------------------------|-------------------------------|-----------------------|---|-------------------------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Apr. 9 | PROCYON | ° | h. m. | r. | r. | h. m. | ° | ° | 400 | . | Hn. | Very uncertain; supposed to be 3. Seeing growing worse again and sky bright from rising moon. |
| | | . . | . . | . . | . . | 8 30 | 156.0 | . . | | | | |
| | No. 2 | . . | . . | . . | . . | . . | 9 30 | 186.8 217.4 | . . | . . | . | Not good; supposed to be 2. Not good; supposed to be 1; 3 not to be seen at all. |
| | | | | | | | 188.7 187.9 192.0 188.6 187.8 | | | | | |
| | | | | | | | 188.6 | | | | | |
| | | | | | | | 212.6 214.9 217.4 | | | | | |
| | | | | | | | 215.0 | | | | | |
| | No. 1 | . . | . . | . . | . . | . . | . . | 212.6 214.9 217.4 | . . | . . | . | Results of separate measures. |
| | | | | | | | | 215.0 | | | | |
| | No. 3 | . . | . . | . . | . . | . . | . . | 158.5 156.0 | . . | . . | . | |
| | | | | | | | | 157.3 | | | | |
| | PROCYON | . . | . . | . . | . . | . . | . . | . . | . . | 400 | . | Hn. |
| . . | | | | | | | | . . | | | | |
| 10 | PROCYON | . . | . . | . . | . . | . . | 203.1 207.5 214.9 | . . | 400 | 2 | Hn. | The third measure is the best. Telescope west of pier. |
| | | | | | | | 210.1 | | | | | |
| | PROCYON | . . | . . | . . | . . | . . | 189.5 | . . | 400 | 2 | Hn. | There is the appearance of a companion at $p = 90^\circ$ from distant companion, or $p = 42^\circ$ about.—HALL. |
| 12 | PROCYON | . . | . . | . . | . . | . . | . . | . . | 400 | . | H. | Examined PROCYON with power of 400. Image not very good, but the best I have had. There are several bright points visible around the star, but nothing that I can call a close companion, since these points change position-angle as the micrometer is turned. Some twilight still in the sky. Mr. PAUL looked at PROCYON; could not see any close companion. Clock running badly and tightened the straps on sector by $\frac{3}{4}$ turn of screw. |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|-----------------------------|---------------------------|-----------------------|--------------------------------|--------------------------------|-----------------------|----------------------------------|----------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Apr. 15 | PROCYON | ° | h. m. | r. | r. | h. m. | ° | ° | 400 | . | H. | Images not good. Cannot make out any close companions. Mr. HERRIGAN thinks he sees one in $p = 225^\circ$ about. |
| | VENUS | ° | . | . | . | . | . | . | . | I | H. | The planet very bright. There are no markings or belts on the disk, and no satellite visible to-night. Powers 400 and 175. |
| | α Leonis C. | ° | . | . | . | . | . | . | . | . | . | The sky not very clear, and this faint object barely visible; too faint to measure. |
| | OBERON | 180 | 8 7 | 59.852 .834 .884 .907 | 68.459 .519 .460 .458 | 8 0 | 244.2 244.2 244.2 243.9 | . | 5 A | 3 | H. | |
| | Mean | . | 8 13 | 59.869 | 68.474 | 8 3 | 244.1 | | | | | |
| | TITANIA | 200 | 8 28 | 61.420 .351 .377 .391 | 66.891 .971 .887 .938 | 8 22 | 208.4 209.2 209.0 209.6 | . | 5 A | 3 | H. | OBERON brighter than TITANIA. Parallel, $151^\circ.2$. Chron. corr., $+ 0^m.5$. |
| | Mean | . | 8 35 | 61.385 | 66.922 | 8 24 | 209.0 | | | | | |
| 20 | PROCYON | ° | 7 30 | . | . | . | 161.4 | . | 400 | . | Hn. | For a few moments had good seeing and saw plainly what I suppose to be No. 2 and No. 3 of PROCYON's companions. No. 3. Parallel approximate $122^\circ.8$. |
| 21 | α Leonis C. | 90 | . | 63.886 .854 | 64.479 .526 | . | 130.0 128.6 129.2 130.1 | . | 3 A | 3 | H. | Parallel, $122^\circ.7$. The faint companion easily seen to-night. |
| | Mean | . | . | 63.870 | 64.502 | | 129.5 | | | | | |
| | PROCYON | ° | . | . | . | . | . | . | . | . | Hn. | Set the wire for distance of No. 3 of the companions which I fancied I saw. Reading, 63.31. Coincidence, $64^s.18$. $s = 0^s.87 = 8''.7$. |
| May 10 | A Leonis | 30 | . | 63.388 .472 | 64.834 .841 | . | 82.6 83.4 83.8 84.2 | . | 3 A | 2 | H. | There is a pair of fine knots on wires that make them drag when they pass each other. Parallel = $33^\circ.0$. Discovered by G. ANDERSON April 22. |
| | Mean | . | . | 63.430 | 64.837 | | 83.5 | | | | | |
| 11 | A Leonis | 40 | . | 63.396 .395 | 64.910 .888 | . | 76.0 76.6 75.0 74.6 | . | 3 A | 3 | H. | Took off micrometer and cleaned the wires. Parallel = $29^\circ.3$. Give this observation double weight. There is a 14th-13th magnitude companion in $p = 220^\circ$ and $s = 30''$. |
| | Mean | . | . | 63.395 | 64.899 | | 75.5 | | | | | |
| | Σ 1426 (A and B) . . | 260 | . | 64.077 | 64.268 | . | 24.5 22.1 24.1 21.2 | . | 3 A | 3 | H. | $s = 0''.5$, estimated by setting this wire. |
| | Mean | . | . | . | . | | 23.0 | | | | | |
| | Σ 1426 | 10 | . | 63.336 .414 .396 | 64.953 .942 .963 | . | 110.3 109.5 110.0 110.4 | . | 3 A | 3 | H. | |
| | $\frac{A+B}{2}$ and C | | | | | | | | | | | |
| | Mean | . | . | 63.382 | 64.953 | | 110.0 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|-----------------|--|---------------------------|-----------------------|-------------------------------|-------------------------------|-----------------------|----------------------------------|----------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. May 11 | Σ 1426 $\frac{A+B}{2}$ and D | 40 | h. m. | r. | r. | h. m. | ° | ° | 3 A | 3 | H. | Magnitude of D = 15th. |
| | | | | 60.590 .552 | 67.424 .548 | | 74.2 74.0 | | | | | |
| | Mean | | | 60.571 | 67.486 | | 74.1 | | | | | |
| | Σ 1647 | 215 | | 64.052 .033 | 64.313 .308 | | 86.8 84.2 82.4 87.2 | | 3 A | 2 | H. | Magnitudes 9th and 9.5. |
| | Mean | | | 64.042 | 64.310 | | 85.2 | | | | | |
| 13 | Σ 1426 (A and B) . . | 260 | | | | | 22.3 19.5 22.1 23.0 | | 5 A | 2 | H. | s estimated by setting wires = 0".6. Images bad and stars not separated. |
| | Mean | | | | | | 21.7 | | | | | |
| | Σ 1426 $\frac{A+B}{2}$ and C | 10 | | 63.342 .380 .334 | 64.959 .961 .977 | | 109.4 107.6 109.2 108.8 | | 3 A | 2 | H. | |
| | Mean | | | 63.352 | 64.966 | | 108.8 | | | | | |
| | Double Stars . . . | | | | | | | | | | | Star of 6th magnitude companion = 10th, distance = 3", $p = 240^\circ$, by estimate. $a = 13^h 35^m$, n. p. d. = 86° . Star of 9th magnitude companion of 10th, distance = 1', $p = 200^\circ$. $a = 14^h 6^m$, n. p. d. = 86° , by estimate. Micrometer I removed. |
| 18 | 42 Coma Ber. | 180 | | 64.150 .149 | 64.228 .223 | | 122.0 122.0 120.4 121.2 | | 6 A | 3 | H. | Parallel, $41^\circ.6$. |
| | Mean | | | 64.150 | 64.226 | | 121.4 | | | | | |
| 20 | ι Leonis | 60 | | 63.891 .911 .903 | 64.439 .485 .430 | | 58.2 60.8 64.2 62.0 | | 3 A | 3 | H. | |
| | Mean | | | 63.902 | 64.451 | | 61.3 | | | | | |
| 23 | Anonymous | 90 | | 64.121 .102 | 64.213 .223 | | 212.3 211.9 209.0 209.2 | | 6 A | 3 | H. | This star discovered by A. G. CLARK April 21, 1876. Parallel, $41^\circ.4$.—HOLDEN. May 23. Micrometer I removed and micrometer II put in for transit observations for value of its screw.—HN. |
| | Mean | | | 64.112 | 64.218 | | 210.6 | | | | | |
| 24 | Anonymous | 100 | | 64.121 .122 | 64.217 .217 | | 202.3 204.6 204.0 203.4 | | 6 A | 3 | H. | This star clearly divided to-night; delayed by clock. |
| | Mean | | | 64.121 | 64.217 | | 203.3 | | | | | |
| | ι Leonis | 75 | | 63.885 .874 .890 | 64.417 .451 .472 | | 49.7 51.5 50.6 52.1 | | 5 A | 3 | H. | Clock performing badly. |
| | Mean | | | 63.883 | 64.447 | | 51.0 | | | | | |
| | Σ 1647 | 215 | | 64.055 .038 | 64.280 .290 | | 84.0 84.1 85.1 85.1 | | 5 A | 3 | H. | Looked for CLARK's star near 44 <i>Virginis</i> and could find nothing like the one he describes; 44 <i>Virginis</i> is a wide STRUVE star = Σ 1704. |
| | Mean | | | 64.046 | 64.285 | | 84.6 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|-----------------|---------------------------------------|---------------------------|-----------------------|-------------------------------|-------------------------------|---------------------------------|---------------------------------------|----------|-------------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. May 24 | Σ 1813 | ° 190 | h. m. . . | r. 63.680 .662 .663 | r. 64.675 .679 .661 | h. m. . . | ° 107.8 106.2 106.4 107.3 | ° . . | 3 A | 3 | H. | Micrometer I taken out. Parallel = 30°.4. |
| | Mean | . . | . . | 63.668 | 64.672 | . . | 106.9 | | | | | |
| 26 | 46 <i>Virginis</i> | 150 | . . | 64.062 .036 | 64.285 .284 | . . 13 ^h .8 s. t. | 146.2 147.6 150.4 146.7 | . . | 5 A | 3 | H. | Magnitudes 6 and 11. Measures of distance difficult. |
| | Mean | . . | . . | 64.049 | 64.284 | . . | 147.7 | | | | | |
| | 42 Coma Ber. . . . | 190 | . . | 64.127 .137 | 64.221 .212 | . . 14 ^h .2 | 292.6 294.3 293.5 290.7 | . . | 6 A | 3 | H. | |
| | Mean | . . | . . | 64.132 | 64.216 | . . | 292.8 | | | | | |
| | Σ 1813 | 190 | . . | 63.690 .688 .678 | 64.676 .648 .669 | . . | 113.2 114.4 114.8 115.0 | . . | 5 A | 3 | H. | |
| | Mean | . . | . . | 63.685 | 64.664 | . . | 114.3 | | | | | |
| | Σ 1819 | 220 | . . | 64.031 .045 | 64.288 .291 | . . 15 ^h .0 s. t. | 105.4 104.6 105.8 105.9 | . . | 5 A | 3 | H. | |
| | Mean | . . | . . | 64.038 | 64.290 | . . | 105.4 | | | | | |
| | ϵ <i>Coronæ Borealis</i> . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | Examined this star with powers 5 A and 3 A, but cannot see CLARK's companion with certainty. Images blurred with 5 A. Parallel 37°.1. |
| 27 | Σ 1647 | 215 | . . | 64.054 .058 | 64.309 .318 | . . | 88.1 86.9 85.7 86.4 | . . | 3 A and 5 A | 3 | H. | |
| | Mean | . . | . . | 64.056 | 64.313 | . . | 86.8 | | | | | |
| | 46 <i>Virginis</i> | 160 | . . | 64.032 .020 | 64.328 .353 | . . | 150.2 148.9 148.9 149.4 | . . | 3 A | 3 | H. | Measures of distance difficult. |
| | Mean | . . | . . | 64.026 | 64.340 | . . | 149.4 | | | | | |
| | Σ 1819 | 210 | . . | 64.054 .032 .029 | 64.310 .315 .315 | . . 14 ^h .4 s. t. | 108.1 106.3 108.0 109.0 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 64.038 | 64.313 | . . | 107.8 | | | | | |
| | 42 Coma Ber. . . . | 190 | . . | 64.138 .135 | 64.218 .215 | . . 14 ^h .7 s. t. | 114.6 113.6 112.5 112.3 | . . | 6 A | 3 | H. | |
| | Mean | . . | . . | 64.136 | 64.216 | . . | 113.2 | | | | | |
| | ϵ <i>Coronæ Borealis</i> . . | 0 | . . | 63.974 .970 .954 | 64.378 .382 .378 | . . 14 ^h .9 s. t. | 137.8 140.6 139.2 140.2 | . . | 3 A | 3 | H. | Magnitudes 12 and 4. This is a difficult object to observe, since the companion is partly concealed by the rays of the bright one. Parallel 37°.1. |
| | Mean | . . | . . | 63.966 | 64.379 | . . | 139.5 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|-----------------|--------------------------------|---------------------------|-----------------------|-------------------------------|-------------------------------|--|---|----------|-------------------|-----------------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. May 29 | γ Virginis | 170 | h. m. . . | r. 63.670 .666 | r. 64.700 .717 | h. m. . . 12 ^h .2 s. t. | ° 140.0 139.4 139.9 139.3 | ° . . | 3 A | 3 | H. | Parallel, 29°.4. The above star observed in twilight; afterwards the seeing became very bad, and finally it became cloudy. |
| | Mean | . . | . . | 63.668 | 64.708 | . . | 139.6 | | | | | |
| 31 | γ Virginis | 160 | . . | 63.658 .639 .642 | 64.681 .718 .700 | . . 12 ^h .7 s. t. | 140.3 140.6 141.4 144.0 142.4 | . . | 3 A | 2 | H. | Images blurred. |
| | Mean | . . | . . | 63.646 | 64.700 | . . | 141.7 | | | | | |
| | 46 Virginis | 160 | . . | 64.049 .030 | 64.278 .308 | . . 13 ^h .0 s. t. | 142.2 140.7 143.0 141.3 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 64.039 | 64.293 | . . | 141.8 | | | | | |
| | 42 Coma Ber. . . . | 190 | . . | 64.137 .131 | 64.220 .215 | . . 13 ^h .3 s. t. | 105.5 104.6 103.2 107.1 | . . | 6 A | 3 | H. | |
| | Mean | . . | . . | 64.134 | 64.218 | . . | 106.4 | | | | | |
| | Σ 1819 | 200 | . . | 64.048 .053 | 64.281 .281 | . . 13 ^h .6 s. t. | 101.4 101.8 102.4 103.2 | . . | 3 A | 3 | H. | Parallel, = 31°.6. |
| | Mean | . . | . . | 64.050 | 64.281 | . . | 102.2 | | | | | |
| | δ Serpentis | 190 | . . | 63.823 .816 .820 | 64.504 .509 .533 | . . 15 ^h .0 s. t. | 109.9 111.9 112.4 113.0 112.4 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.820 | 64.515 | . . | 111.9 | | | | | |
| | ϵ Corona Borealis . . | 350 | . . | 63.970 .962 | 64.412 .380 | . . 15 ^h .3 s. t. | 132.8 128.8 128.5 126.0 125.0 | . . | 5 A | 1 $\frac{1}{2}$ | H. | Observation very difficult. |
| | Mean | . . | . . | 63.966 | 64.396 | . . | 128.2 | | | | | |
| June 1 | γ Virginis | 160 | . . | 63.674 .655 .675 | 64.680 .690 .700 | . . 12 ^h .3 s. t. | 140.4 141.8 140.3 140.6 | . . | 3 A | 2 | H. | |
| | Mean | . . | . . | 63.668 | 64.690 | . . | 140.8 | | | | | |
| | Lalande 23271 | 240 | . . | 64.076 .071 | 64.281 .266 | . . 12 ^h .6 s. t. | 68.0 63.2 65.0 63.0 | . . | 5 A | 2 | H. | Discovered by A. G. CLARK. |
| | Mean | . . | . . | 64.073 | 64.273 | . . | 64.8 | | | | | |
| | Σ 1768 | . . | . . | . . | . . | . . | . . | . . | 5 A and 6 A | . . | H. | Image much blurred and cannot be certain that the star is divided. Examined 42 Com. Ber. but images too bad for measures. |
| | ζ Bootis | 300 | . . | 64.110 .111 | 64.256 .259 | . . 13 ^h .4 s. t. | 359.0 359.8 357.0 358.4 | . . | 6 A | 3 | H. | |
| | Mean | . . | . . | 64.111 | 64.258 | . . | 358.5 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|-----------------|------------------------------|---------------------------|-----------------------|-------------------------------|-------------------------------|-----------------------------------|----------------------------------|----------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. June 1 | ϵ Bootis | 330 | h. m. | r. | r. | h. m. | ° | ° | 5 A | 3 | H. | |
| | | | | 63.897 .878 .894 | 64.472 .480 .491 | . . . 13 ^h .7 s. t. | 154.3 153.5 152.7 151.6 | . . . | | | | |
| | Mean | | | 63.890 | 64.481 | . . . | 153.0 | | | | | |
| | ξ Bootis | 280 | . . . | 63.748 .705 .700 | 64.651 .638 .635 | . . . 14 ^h .0 s. t. | 16.9 15.8 17.1 17.0 | . . . | 5 A | 3 | II. | |
| | Mean | | | 63.718 | 64.641 | . . . | 16.7 | | | | | |
| | η Coronæ Borealis . . | 260 | . . . | 64.104 .100 | 64.251 .257 | . . . 14 ^h .3 s. t. | 229.8 233.2 230.3 231.5 | . . . | 6 A | 3 | H. | |
| | Mean | | | 64.102 | 64.254 | . . . | 231.2 | | | | | |
| | μ_2 Bootis | 160 | . . . | 64.092 .096 | 64.248 .252 | . . . 14 ^h .6 s. t. | 155.2 153.1 154.8 157.3 | . . . | 6 A | 3 | H. | |
| | Mean | | | 64.094 | 64.250 | . . . | 155.1 | | | | | |
| | δ Serpentis | 190 | . . . | 63.841 .843 .807 | 64.520 .502 .521 | . . . 15 ^h .0 s. t. | 111.5 111.2 112.8 111.1 | . . . | 5 A | 2 | H. | |
| | Mean | | | 63.830 | 64.514 | . . . | 111.6 | | | | | |
| | ϵ Cor. Bor. | 350 | . . . | 63.950 .977 | 64.401 .400 | . . . 15 ^h .3 s. t. | 132.5 128.8 130.8 132.7 | . . . | 5 A | 3 | H. | Companion of 12th magnitude. Parallel = 31°.6. |
| | Mean | | | 63.963 | 64.400 | . . . | 131.2 | | | | | |
| 2 | γ Virginis | 160 | . . . | 63.646 .652 .649 | 64.673 .689 .674 | . . . 12 ^h .3 s. t. | 140.9 141.9 141.5 140.9 | . . . | 3 A | 2 | H. | Clouds. |
| | Mean | | | 63.649 | 64.679 | . . . | 141.3 | | | | | |
| 6 | LAL. 23271. | 240 | . . . | 64.088 .089 | 64.247 .241 | . . . | 248.8 251.9 249.4 248.3 | . . . | 5 A | 2 | H. | This is a difficult star to observe; clouds. Parallel = 211°.6. |
| | Mean | | | 64.088 | 64.244 | . . . | 249.6 | | | | | |
| 8 | LAL. 23271. | 230 | . . . | 64.091 .092 | 64.254 .240 | . . . 13 ^h .2 s. t. | 248.9 250.0 248.6 249.9 | . . . | 5 A | 3 | H. | Magnitudes 8 and 11. |
| | Mean | | | 64.092 | 64.247 | . . . | 249.4 | | | | | |
| | ζ Bootis. | 300 | . . . | 64.101 .095 | 64.246 .249 | . . . 13 ^h .7 s. t. | 356.0 356.3 356.9 356.2 | . . . | 5 A | 3 | H. | |
| | Mean | | | 64.098 | 64.248 | . . . | 356.4 | | | | | |
| | ϵ Bootis. | 330 | . . . | 63.881 .890 .890 | 64.492 .443 .473 | . . . 14 ^h .0 s. t. | 333.0 330.0 331.0 330.8 | . . . | 3 A | 3 | H. | |
| | Mean | | | 63.887 | 64.469 | . . . | 331.2 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|-----------------|-----------------------------|---------------------------|-----------------------|-------------------------------|-------------------------------|--|-----------------------------------|----------|------------|--------|-----------|-----------------------------------|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. June 8 | ξ Bootis. | 290 | h. m. . . | r. 63.690 .711 .706 | r. 64.657 .633 .633 | h. m. . . 14 ^h .4 s. t. | ° 21.3 21.6 21.3 19.6 | ° . . | 3 A | 3 | H. | Images blurred. Parallel, 211°.6. |
| | Mean | . . | . . | 63.702 | 64.641 | | 21.0 | | | | | |
| | δ Serpentis. | 190 | . . | 63.793 .804 .808 | 64.520 .520 .540 | . . 14 ^h .7 s. t. | 291.8 291.2 290.2 292.0 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.802 | 64.527 | | 291.3 | | | | | |
| 9 | ζ Bootis. | 300 | . . | 64.100 .094 | 64.231 .243 | . . 13 ^h .6 s. t. | 358.6 357.7 358.2 358.1 | . . | 5 A | 3 | H. | |
| | Mean | . . | . . | 64.097 | 64.237 | | 358.2 | | | | | |
| | ϵ Bootis. | 330 | . . | 63.889 .851 .870 | 64.497 .498 .481 | . . 14 ^h .0 s. t. | 157.1 153.2 154.2 153.2 | . . | 3 A | 2 | H. | |
| | Mean | . . | . . | 63.870 | 64.492 | | 154.4 | | | | | |
| | ξ Bootis. | 290 | . . | 63.688 .705 .710 | 64.622 .624 .658 | . . 14 ^h .3 s. t. | 18.0 16.4 15.2 18.4 | . . | 3 A | 2 | H. | |
| | Mean | . . | . . | 63.701 | 64.635 | | 17.0 | | | | | |
| | η Cor. Bor. | 260 | . . | 64.091 .095 | 64.262 .268 | . . 14 ^h .7 s. t. | 227.6 231.6 232.4 233.6 | . . | 5 A | 2 | H. | |
| | Mean | . . | . . | 64.093 | 64.265 | | 231.3 | | | | | |
| | μ_2 Bootis | 150 | . . | 64.097 .104 | 64.246 .235 | 15 ^h .0 s. t. | 153.7 154.6 151.2 151.3 | . . | 5 A | 2 | H. | |
| | Mean | . . | . . | 64.100 | 64.240 | | 152.7 | | | | | |
| 10 | η Cor. Bor. | 260 | . . | 64.104 .105 | 64.240 .252 | . . 14 ^h .3 s. t. | 231.8 233.2 233.0 229.8 | . . | 5 A | 2 | H. | |
| | Mean | . . | . . | 64.104 | 64.246 | | 231.9 | | | | | |
| | μ_2 Bootis | 160 | . . | 64.096 .095 | 64.243 .237 | 14 ^h .5 s. t. | 158.2 159.1 158.3 158.7 | . . | 5 A | 3 | H. | |
| | Mean | . . | . . | 64.095 | 64.240 | | 158.6 | | | | | |
| | ζ Cor. Bor. | 300 | . . | 63.548 .520 .539 | 64.800 .804 .819 | . . 14 ^h .7 s. t. | 180.1 178.6 179.2 178.5 | . . | 3 A | 3 | H. | Parallel, 31°.6. |
| | Mean | . . | . . | 63.536 | 64.808 | | 179.1 | | | | | |
| 13 | μ_2 Bootis | 150 | . . | 64.100 .106 | 64.252 .246 | . . 14 ^h .4 s. t. | 160.7 158.3 158.2 156.7 | . . | 5 A | 2 | H. | |
| | Mean | . . | . . | 64.103 | 64.249 | | 158.5 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|---------------------------------------|---------------------------|-----------------------|-------------------------------|-------------------------------|--------------------------|------------------|----------|-------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. June 13 | ζ Cor. Bor. | 300 | h. m. | r. | r. | h. m. | ° | ° | 3 A | 2 | H. | |
| | | | | 63.556 | 64.808 | | 179.7 | | | | | |
| | | | | .568 | .821 | | 179.0 | | | | | |
| | | | | .532 | .788 | 15 ^h .0 s. t. | 177.8 | | | | | |
| | | | | | | | 179.8 | | | | | |
| | Mean | . . | . . | 63.552 | 64.806 | | 179.1 | | | | | |
| | 49 <i>Serpentis</i> | 330 | . . | 63.780 | 64.545 | . . | 151.8 | . . | 3 A | 2 | H. | |
| | | | | .780 | .540 | | 152.4 | | | | | |
| | | | | .781 | .551 | 15 ^h .3 s. t. | 153.5 | | | | | |
| | | | | | | | 152.8 | | | | | |
| | Mean | . . | . . | 63.780 | 64.545 | | 152.6 | | | | | |
| | σ Cor. Bor. | 200 | . . | 63.835 | 64.515 | . . | 99.9 | . . | 3 A | 2 | H. | |
| | | | | .810 | .509 | | 101.6 | | | | | |
| | | | | .794 | .497 | 15 ^h .8 s. t. | 99.7 | | | | | |
| | | | | | | | 100.7 | | | | | |
| | Mean | . . | . . | 63.813 | 64.505 | | 100.5 | | | | | |
| | λ <i>Ophiuchi</i> | 30 | . . | 64.021 | 64.300 | . . | 85.0 | . . | 3 A | 2 | H. | Parallel, 31°.6. Cloudy at times. |
| | | | | .009 | .312 | | 87.1 | | | | | |
| | | | | | | 16 ^h .1 s. t. | 84.8 | | | | | |
| | | | | | | | 85.2 | | | | | |
| | Mean | . . | . . | 64.015 | 64.306 | | 85.5 | | | | | |
| 14 | Σ 1867 | 10 | . . | 64.066 | 64.337 | . . | 105.6 | . . | 3 A | 3 | H. | Clock stopped and much delay. |
| | | | | .040 | .326 | | 104.7 | | | | | |
| | | | | | | 14 ^h .4 s. t. | 105.4 | | | | | |
| | | | | | | | 103.6 | | | | | |
| | Mean | . . | . . | 64.053 | 64.332 | | 104.8 | | | | | |
| | η Cor. Bor. | 250 | . . | 64.106 | 64.258 | . . | 50.2 | . . | 5 A | 3 | H. | |
| | | | | .100 | .251 | | 48.4 | | | | | |
| | | | | | | 14 ^h .8 s. t. | 50.3 | | | | | |
| | | | | | | | 50.8 | | | | | |
| | Mean | . . | . . | 64.103 | 64.254 | | 49.9 | | | | | |
| | ζ Cor. Bor. | 300 | . . | 63.503 | 64.790 | . . | 1.2 | . . | 3 A | . | P. | P = H. S. PRITCHETT. |
| | | | | .562 | .748 | | 1.4 | | | | | |
| | | | | | | 15 ^h .2 s. t. | 2.8 | | | | | |
| | | | | | | | 1.6 | | | | | |
| | Mean | . . | . . | 63.532 | 64.769 | | 1.7 | | | | | |
| | γ Cor. Bor. | . . | . . | . . | . . | . . | . . | . . | 3 A and 5 A | . | H. | I cannot divide this with either power, 600 A or 400 A. The night an average one. |
| | 49 <i>Serpentis</i> | 330 | . . | 63.794 | 64.531 | . . | 151.6 | . . | 3 A | 2 | H. | |
| | | | | .707 | .534 | 15 ^h .8 s. t. | 153.8 | | | | | |
| | | | | .770 | .550 | | 152.2 | | | | | |
| | | | | | | | 153.1 | | | | | |
| | Mean | . . | . . | 63.777 | 64.538 | | 152.7 | | | | | |
| | σ Cor. Bor. A and B | 200 | . . | 63.820 | 64.556 | . . | 102.8 | . . | 3 A | 3 | H. | |
| | | | | .835 | .541 | 16 ^h .1 s. t. | 101.5 | | | | | |
| | | | | .828 | .547 | | 100.6 | | | | | |
| | | | | | | | 101.6 | | | | | |
| | Mean | . . | . . | 63.828 | 64.548 | | 101.6 | | | | | |
| | σ Cor. Bor. A and C | 240 | . . | . . | 65.760 | . . | 79.4 | . . | 3 A | 2 | H. | Magnitude 16th. Another companion of 11th magnitude; $p = 60^\circ$, and $s = 40''$. Coincidence of wires, 64 ^r .160. |
| | | | | | .750 | 16 ^h .2 s. t. | 78.4 | | | | | |
| | Mean | . . | . . | . . | 65.760 | | 78.9 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (small-est reading). | Microm. II (large-est reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|--|---------------------------|-----------------------|--------------------------------|---------------------------------|----------------------------------|----------------------------------|----------|------------|--------|-----------|--------------------|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. June 14 | λ Ophiuchi | 30° | h. m. | r. | r. | h. m. | ° | ° | 3 A | 1½ | H. | |
| | | | | 63.990 64.010 | 64.291 .310 | . . . 16 ^h 5 s. t. | 88.0 87.8 88.2 87.7 | . . . | | | | |
| | Mean | . . | . . | 64.000 | 64.300 | . . | 87.9 | | | | | |
| 15 | σ Cor. Bor. | 200° | . . | 63.844 .812 .827 | 64.532 .516 .522 | . . . 15 ^h 5 s. t. | 101.9 103.5 103.6 101.6 | . . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.828 | 64.523 | . . | 102.6 | | | | | |
| 49 | Serpentis | 330° | . . | 63.785 .764 .791 | 64.537 .558 .560 | . . . 15 ^h 8 s. t. | 153.5 153.0 153.2 153.0 | . . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.780 | 64.552 | . . | 153.2 | | | | | |
| | ζ Hercules | 150° | . . | 64.040 .042 | 64.300 .302 | . . . 16 ^h 2 s. t. | 158.0 156.2 157.6 158.8 | . . . | 5 A | 2 | H. | Very much blurred. |
| | Mean | . . | . . | 64.041 | 64.301 | . . | 157.6 | | | | | |
| | λ Ophiuchi | 30° | . . | 64.014 .025 .012 | 64.330 .324 .314 | . . . 16 ^h 4 s. t. | 88.4 87.3 87.7 88.4 | . . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 64.017 | 64.323 | . . | 87.9 | | | | | |
| | Σ 2120 | 260° | . . | 63.718 .718 .709 | 64.634 .658 .654 | . . . 16 ^h 7 s. t. | 227.1 224.6 225.7 225.4 | . . . | 3 A | 4 | H. | |
| | Mean | . . | . . | 63.715 | 64.649 | . . | 225.7 | | | | | |
| | Σ 2173 | 160° | . . | 64.118 .105 | 64.241 .245 | . . . 17 ^h 0 s. t. | 153.5 153.7 153.1 153.0 | . . . | 5 A | 3 | H. | |
| | Mean | . . | . . | 64.111 | 64.243 | . . | 153.3 | | | | | |
| 20 | Σ 1867 | 10° | . . | 64.068 .061 | 64.298 .295 | . . . 14 ^h 0 s. t. | 108.8 107.0 108.0 108.6 | . . . | 5 A | 2 | H. | |
| | Mean | . . | . . | 64.064 | 64.296 | . . | 108.1 | | | | | |
| | Σ 1909 | 210° | . . | 63.695 .677 .682 | 64.713 .690 .691 | . . . 14 ^h 3 s. t. | 240.0 243.5 241.2 240.3 | . . . | 3 A | 3 | H. | Some clouds. |
| | Mean | . . | . . | 63.685 | 64.698 | . . | 241.2 | | | | | |
| | ξ Scorpii A and B. | 0° | . . | 64.050 .061 .057 | 64.297 .302 .310 | . . . 14 ^h 7 s. t. | 118.9 119.6 120.2 118.3 | . . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 64.056 | 64.303 | . . | 119.1 | | | | | |
| | ξ Scorpii $\frac{A+B}{2}$ and C | 70° | . . | 63.417 .428 | 64.881 .887 | . . . 15 ^h 0 s. t. | 57.7 55.7 55.5 54.7 | . . . | 3 A | 3 | H. | Clouds. |
| | Mean | . . | . . | 63.422 | 64.884 | . . | 55.9 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|------------------------------|---------------------------|-----------------------|--------------------------------|--------------------------------|-------------------------|--------------------------------------|----------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. June 20 | λ Ophiuchi | ° 40 | h. m. . . | r. . . | r. . . | h. m. . . | ° 90.2 88.8 90.1 90.7 | ° . . | 3 A | 2 | H. | Cloudy. |
| | Mean | . . | . . | . . | . . | . . | 89.9 | | | | | |
| 23 | Σ 1867 | 0 | . . | 64.056 .063 | 64.300 .299 | . . | 104.9 103.6 104.0 105.3 | . . | 3 A | 4 | H. | |
| | Mean | . . | . . | 64.059 | 64.300 | . . | 104.4 | | | | | |
| | Σ 1909 | 210 | . . | 63.701 .660 .673 | 64.678 .697 .688 | . . | 241.6 240.6 240.9 241.1 | . . | 3 A | 3 | H. | Clouds. Very good seeing for a short time before clouds. |
| | Mean | . . | . . | 63.678 | 64.688 | . . | 241.0 | | | | | |
| 26 | L. 27579 (Br.) . . . | 40 | . . | 63.792 .786 | 64.570 .584 | . . | 84.0 81.8 83.8 84.9 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.789 | 64.577 | . . | 83.6 | | | | | |
| | B. A. C. 5020 (Br.) . | 170 | . . | 64.021 63.996 | 64.298 .311 | . . | 138.6 140.6 140.6 142.1 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 64.008 | 64.304 | . . | 140.5 | | | | | |
| 30 | L. 27579 | . . | . . | . . | . . | . . | 84.8 86.0 85.3 84.0 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | . . | . . | . . | 85.0 | | | | | |
| July 15 | ξ Scorpii | . . | . . | . . | . . | . . | . . | . . | 3 A | . | H. | Cleared up but some clouds passing. Images too bad for observation. |
| | λ Ophiuchi | . . | . . | . . | . . | . . | . . | . . | . . | . | H. | Images too bad and gave up double stars. |
| | JAPETUS | 85 | 15 37 | 39.441 .519 .522 .531 | 93.924 .928 .929 .930 | 15 26 29 30 32 | 306.15 305.44 305.32 305.20 | . . | 3 A | 2 | H. | Setting for s , 305.30. Zero for long wire, 301.35. Images rather poor. Observed p with long wire. Chron. corr., + 0 ^m .9. |
| | Mean | . . | 15 41 | 39.503 | 93.928 | 15 30 | 305.28 | | | | | |
| 16 | L. 27579 | 40 | . . | 63.760 .769 | 64.580 .560 | . . | 91.2 90.2 90.4 92.6 | . . | 3 A | 2 | H. | Tried several pairs, but seeing too bad. Parallel, 36°.7. |
| | Mean | . . | . . | 63.764 | 64.570 | . . | 91.1 | | | | | |
| | Mimas ? | 90 | 14 42 46 | 61.610 .547 | 66.801 .831 | 14 35 40 | 36.5 36.8 36.4 36.7 | . . | 3 A | 2 | H. | Time by watch—corr. to watch—1 ^m .5. |
| | Mean | . . | 14 43 | 61.578 | 66.816 | 14 36 | 36.6 | | | | | |
| | JAPETUS | 85 | 15 48 | 39.581 .612 .583 | 93.920 .906 .916 | 15 37 44 | 130.27 130.21 130.30 | . . | 3 A | 3 | H. | Setting for s at 130°.27. Time by chronometer. Zero for long wire, 126°.27. Very good seeing at 3 o'clock. Division in ring well seen. All the inner satellites visible except <i>Mimas</i> . Chron. corr., + 0 ^m .9. |
| | Mean | . . | 15 51 | 39.592 | 93.914 | 15 41 | 130.26 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|-----------------------------------|---------------------------|-----------------------|-------------------------------|-------------------------------|---------------------------------|---------------------------------------|----------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. July 17 | B. A. C. 5020 . . . | 165 | h. m. . . | r. 64.061 .050 .040 | r. 64.270 .281 .301 | h. m. . . 15.7 | ° 139.4 142.7 142.2 141.6 | . . | 3 A | 2 | H. | |
| | Mean . . . | . . | . . | 64.050 | 64.284 | . . | 141.5 | | | | | |
| | ξ <i>Scorpii</i> | 5 | . . | 64.070 .068 | 64.299 .300 | . . 16.0 | 120.5 121.5 121.4 121.3 | . . | 3 A | 3 | H. | |
| | Mean . . . | . . | . . | 64.069 | 64.300 | | 121.2 | | | | | |
| | λ <i>Ophiuchi</i> | 30 | . . | 64.005 .008 | 64.340 .333 | . . 16.3 | 94.4 95.7 94.9 93.3 | . . | 3 A | 3 | H. | |
| | Mean . . . | . . | . . | 64.006 | 64.336 | | 94.6 | | | | | |
| | Σ 2120 | 260 | . . | 63.695 .700 | 64.599 .627 | . . 16.6 | 229.7 229.6 229.3 229.6 | . . | 3 A | 3 | H. | |
| | Mean . . . | . . | . . | 63.698 | 64.613 | | 229.5 | | | | | |
| | Σ 2173 | 160 | . . | 64.066 .082 | 64.254 .258 | . . 16.8 | 154.6 154.7 153.0 153.9 | . . | 3 A | 2 | H. | Wind shakes telescope a good deal. In the morning too cloudy to observe SATURN. Saw all the inner satellites but <i>Mimas</i> for a few minutes. |
| | Mean . . . | . . | . . | 64.074 | 64.256 | | 154.1 | | | | | |
| 18 | | . . | . . | . . | . . | . . | . . | . . | . . | . . | . . | Inserted a double wire near wire B. Parallel, 38°.2. |
| | ξ <i>Scorpii</i> | 5 | . . | 64.074 .064 | 64.283 .280 | . . 16.1 | 124.1 124.5 124.1 125.6 | . . | 3 A | 2 | H. | |
| | Mean . . . | . . | . . | 64.069 | 64.281 | | 124.6 | | | | | |
| | ξ <i>Scorpii</i> | 70 | . . | 63.453 .416 | 64.937 .880 | . . 16 ^h .3 s. t. | 58.7 59.7 59.1 59.9 | . . | 3 A | 2 | H. | |
| | $\frac{A+B}{2}$ and C | | | | | | | | | | | |
| | Mean . . . | . . | . . | 63.434 | 64.908 | | 59.3 | | | | | |
| | Σ 2120 | 260 | . . | 63.684 .718 | 64.628 .616 | . . 16.5 | 51.9 50.3 51.6 52.2 | . . | 3 A | 3 | H. | |
| | Mean . . . | . . | . . | 63.701 | 64.622 | | 51.5 | | | | | |
| | Σ 2173 | 160 | . . | 64.090 .105 | 64.255 .246 | . . 16.8 | 163.8 162.2 161.0 160.7 | . . | 3 A | 2 | H. | |
| | Mean . . . | . . | . . | 64.098 | 64.250 | | 161.9 | | | | | |
| | μ^1 <i>Herculis</i> | 240 | . . | 64.102 .104 | 64.256 .260 | . . 17 ^h .1 s. t. | 83.8 80.6 81.3 84.9 | . . | 3 A | 2 | H. | |
| | Mean . . . | . . | . . | 64.103 | 64.258 | | 82.6 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|--|---------------------------|-----------------------|------------------------------------|--------------------------------|---------------------------|----------------------------------|----------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. July 18 | JAPETUS | 85 | h. m. 15 26 | r. 41.267 .278 30 .261 | r. 94.469 .470 .474 | h. m. 15 17 22 | ° 132.47 132.43 132.53 | ° . . | 3 A | 3 | H. | Double wire used (A). |
| | Mean | . . | 15 29 | 41.269 | 94.471 | 15 20 | 132.48 | | | | | |
| | TITAN | 270 | 15 48 50 | 49.126 .112 .080 | 64.166 .166 .169 | 15 43 46 | 37.8 37.6 37.6 | . . | 3 A | 3 | H. | JAPETUS and TITAN observed in distance by single distances; JAPETUS with long wire in <i>p</i> , and TITAN with short wire; the seeing very variable. Some haze and JAPETUS rather faint at times. Occasionally fine images. An object came out on preceding side and south, probably <i>Tethys</i> . Double wire used for observing JAPETUS and appears to work very well. Chron. corr., + 1 ^m .0. |
| | Mean | . . | 15 50 | 49.106 | 64.167 | 15 45 | 37.67 | | | | | |
| 21 | JAPETUS | 85 | 15 11 17 | 45.504 .441 .531 .532 | 94.470 .471 .476 .466 | 15 4 8 | 133.55 .30 .20 .40 | . . | 3 A | 2 | H. | Double wire (A). Much cooler this morning and images unsteady. Thermometer 70°.5. Chron. corr., + 1 ^m .2. Parallel = 127°.97. |
| | Mean | . . | 15 15 | 45.502 | 94.471 | 15 7 | 133.36 | | | | | |
| 22 | ζ <i>Herculis</i> | 150 | . . | 64.021 .033 | 64.294 .295 | . . 16 ^m .1 | 166.0 166.0 165.0 165.6 | . . | 3 A | 2 | H. | |
| | Mean | . . | . . | 64.027 | 64.294 | . . | 165.6 | | | | | |
| | O. Arg S. 14417 . . | 300 | . . | 63.190 .156 | 65.256 .254 | . . 16 ^m .4 | 5.0 5.2 4.9 4.5 | . . | 3 A | 3 | H. | Magnitude 9.5 and 12. |
| | Mean | . . | . . | 63.173 | 65.255 | . . | 4.9 | | | | | |
| | 36 <i>Ophiuchi</i> | 210 | . . | 63.737 .718 | 64.604 .648 | . . 16 ^m .8 | 106.5 106.2 105.6 105.6 | . . | 3 A | 2 | H. | |
| | Mean | . . | . . | 63.728 | 64.626 | | 106.0 | | | | | |
| | μ ¹ <i>Herculis</i> | 220 | . . | 64.106 .110 | 64.241 .246 | . . | 83.6 83.2 84.2 85.1 | | | | | |
| | Mean | . . | . . | 64.108 | 64.244 | . . | 84.0 | | | | | |
| 24 | JAPETUS | 85 | 15 3 8 | 52.608 .601 .578 | 94.455 .476 .468 | 14 55 15 0 | 134.40 .20 .17 | . . | 3 A | 2 | H. | Double wire (A). |
| | Mean | . . | 15 7 | 52.596 | 94.466 | 14 59 | 134.26 | | | | | |
| | HYPERION | 95 | 15 24 27 | 64.151 .148 .158 | 87.201 .156 .108 | 15 19 21 | 34.7 34.6 34.7 | . . | 3 A | 2 | H. | Chron. corr., + 1 ^m .4. |
| | Mean | . . | 15 27 | 64.152 | 87.155 | 15 21 | 34.67 | | | | | |
| 26 | ζ <i>Herculis</i> | . . | . . | . . | . . | . . | . . | . . | 3 A | . . | H. | Seeing too bad for measurements. Tried double-image chronometer on JUPITER and found GARDNER's adapter all right. GARDNER will put scale and mark on adapter. Parallel, 18°.9. |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|---------------------|---------------------------|-----------------------|---------------------------------|--------------------------------|-----------------------|----------------------------------|----------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. July 26 | JAPETUS | 85 | h. m. 15 9 | r. 58.668 .684 13 .683 | r. | h. m. 15 2 6 | 115.85 115.57 115.45 | . . | 3 A | 3 | H. | Long wire (A). |
| | Mean | . . | 15 11 | 58.678 | . . | 15 4 | 115.62 | | | | | |
| | TITAN | 95 | 15 21 24 | 77.799 .714 .716 | 94.467 .462 .471 | 15 15 18 | 106.98 107.42 107.40 | . . | 3 A | 3 | II. | Zero for long wire = 108°.45. Temperature 63°.5. Hazy during transit observations, but better seeing afterwards; sky too thick for HYPERION. |
| | Mean | . . | 15 22 | 77.743 | 94.467 | 15 16 | 107.27 | | | | | Chron. corr., - 0 ^m .5. |
| 27 | MIMAS (?) | 90 | . . | . . | . . | . . | 15 9 | 15.3 | 3 A | 2 | H. | The haze cleared off suddenly, showing all the satellites, but I had hardly time to place the wire on MIMAS, when clouds stopped all work. The above object, supposed to be MIMAS, was between ENCELADUS and the ring. Some haze during the transit observations, but images steady. |
| | | | | | | | | | | | | Chron. corr., - 0 ^m .5. |
| Aug. 5 | RHEA | 95 | 12 40 46 | 56.253 .263 | 72.140 .102 | 12 32 36 | 10.7 10.6 10.6 11.0 | . . | 3 A | 4 | H. | |
| | Mean | . . | 12 43 | 56.258 | 72.121 | 12 34 | 10.7 | | | | | |
| | TETHYS | 100 | 12 57 13 3 | 61.626 .631 | 66.774 .732 | 12 50 54 | 2.3 2.3 2.4 2.9 | . . | 3 A | 4 | H. | |
| | Mean | . . | 13 0 | 61.628 | 66.753 | 12 52 | 2.5 | | | | | |
| | JAPETUS | 290 | 13 17 24 | 59.006 58.989 | 69.373 .392 | 13 5 12 | 352.7 352.3 352.5 352.8 | . . | 3 A | 3 | H. | |
| | Mean | . . | 13 21 | 58.998 | 69.382 | 13 9 | 352.6 | | | | | |
| | DIONE | 270 | 13 41 45 | 59.601 .552 | 68.782 .762 | 13 26 30 | 18.9 19.2 19.4 19.5 | . . | 3 A | 3 | H. | |
| | Mean | . . | 13 43 | 59.577 | 68.772 | 13 28 | 19.2 | | | | | |
| | ENCELADUS | 270 | 13 52 56 | 60.547 568 | 67.898 .826 | 13 47 50 | 16.1 15.7 15.2 14.9 | . . | 3 A | 3 | H. | |
| | Mean | . . | 13 54 | 60.557 | 67.862 | 13 49 | 15.5 | | | | | |
| | MIMAS (?) | 275 | 14 3 8 | 61.375 .299 | 67.085 .004 | 13 59 14 1 | 14.1 13.5 13.3 13.0 | . . | 3 A | 2 | H. | Scarcely visible; for MIMAS ρ with single wire. |
| | Mean | . . | 14 6 | 61.337 | 67.044 | 14 0 | 13.5 | | | | | |
| | TITAN | 270 | 14 22 25 | 64.173 .170 .172 .171 | 82.590 .530 .561 .584 | 14 12 19 | 11.9 11.9 12.2 11.9 | . . | 3 A | 3 | H. | Temp., 74°.6. Parallel, 18°.18. Strong moonlight and hazy at times but images very steady, and SATURN very well seen occasionally. The division in ring clear and sharp, and the belts on the ball pretty well seen. |
| | Mean | . . | 14 24 | 64.171 | 82.566 | 14 16 | 11.98 | | | | | On and after this date angles of position measured with double wire. Exceptions noted. |
| | | | | | | | | | | | | Chron. corr., + 0 ^m .0. |

| Date. | Object observed, | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|-----------------|---------------------------------|---------------------------|-----------------------|--------------------------------------|--------------------------------------|---------------------------------|-----------------------------------|----------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Aug. 9 | TITAN | 75 | h. m. 12 41 | r. 89.135 .107 .095 .130 | r. 94.470 .459 .468 .458 | h. m. 12 34 | ° 39.6 39.6 39.5 39.8 | ° . . | 3 A | 3 | H. | |
| | Mean | . . | 12 43 | 89.117 | 94.464 | 12 36 | 39.62 | | | | | |
| | JAPETUS | 275 | 12 59 | 72.742 .669 .733 .720 | 94.464 | 12 52 | 16.3 16.3 16.2 16.1 | . . | 3 A | 2 | H. | |
| | Mean | . . | 13 2 | 72.716 | . . | 12 54 | 16.22 | | | | | |
| | RHEA | 95 | 13 13 19 | 56.379 .372 | 71.861 .861 | 13 8 | 16.6 16.1 16.1 16.3 | . . | 3 A | 3 | H. | |
| | Mean | . . | 13 16 | 56.376 | 71.861 | 13 10 | 16.3 | | | | | |
| | DIONE | 85 | 13 27 32 | 60.810 .814 | 67.488 .528 | 13 21 | 24.0 23.4 23.2 23.4 | . . | 3 A | 3 | H. | Parallel, 18°.90. Some haze to-night and strong moonlight, but seeing fair at times. Angles of position with the double wire. |
| | Mean | . . | 13 30 | 60.812 | 67.508 | 13 23 | 23.5 | | | | | Chron. corr., +0 ^m .3. |
| | 14 36 <i>Ophiuchi</i> | 200 | . . | 63.681 .695 .727 | 64.617 .641 .616 | . . 17 ^h .5 s. t. | 83.8 84.7 84.7 84.4 | . . | 3 A | 2 | H. | |
| | Mean | . . | . . | 63.701 | 64.625 | . . | 84.4 | | | | | |
| | μ <i>Herculis</i> | 220 | . . | 64.104 .098 | 64.245 .246 | . . 17 ^h .9 s. t. | 66.9 66.7 66.0 63.0 | . . | 5 A | 3 | H. | |
| | Mean | . . | . . | 64.101 | 64.246 | . . | 65.6 | | | | | |
| 14 | MIMAS | 90 | 12 18 23 | 61.269 .264 | 67.113 .032 | 12 11 | 14.6 14.6 14.8 15.9 | . . | 3 A | 2 | H. | |
| | Mean | . . | 12 21 | 61.266 | 67.072 | 12 14 | 15.0 | | | | | |
| | HYPERION | 90 | 12 32 | 71.110 .314 .364 .308 | 94.466 | 12 26 | 15.9 15.6 15.1 15.9 | . . | 3 A | 2 | H. | |
| | Mean | . . | 12 35 | 71.349 | . . | 12 28 | 15.88 | | | | | |
| | TITAN | 95 | 12 50 | 77.861 .889 .850 .866 | 94.466 | 12 40 | 8.3 8.4 8.3 8.4 | . . | 3 A | 3 | H. | |
| | Mean | . . | 12 53 | 77.866 | . . | 12 43 | 8.35 | | | | | |
| | ENCELADUS | 95 | 13 8 12 | 60.410 .429 | 67.898 .866 | 12 57 | 12.4 13.0 13.7 13.0 | . . | 3 A | 3 | H. | |
| | Mean | . . | 13 11 | 60.420 | 67.882 | 13 0 | 13.0 | | | | | |
| | MIMAS (?) | 95 | 13 17 23 | 61.387 .346 | 66.838 .867 | . . | . . | . . | 3 A | 3 | H. | |
| | Mean | . . | 13 21 | 61.366 | 66.852 | | | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|-----------------------------------|---------------------------|-----------------------|--------------------------------------|---------------------------------|-----------------------|---------------------------------------|------------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Aug. 14 | JAPETUS | 270 | h. m. 13 41 | r. 54.406 .423 .410 .399 | r. . . . | h. m. 13 29 | ° 109.5 109.8 109.8 109.7 | ° . . . | 3 A | 3 | H. | |
| | Mean | . . | 13 44 | 54.409 | 94.469* .462 .467 .464 | 13 31 | 109.70 | . . . | . . . | . . . | . . . | Parallel for long wire, 108°.50; for short wire, 108°.30. Temp., 72°.0. Hazy at first but good seeing at last. Chron. corr., + 0 ^m .6. |
| | Mean | . . | . . . | . . . | 94.466 | . . . | . . . | . . . | . . . | . . . | . . . | *Coincidence. |
| 15 | HYPERION | 95 | 12 35 | 71.283 .366 .231 .256 | 94.463 | 12 27 | 13.3 13.5 13.6 13.5 | . . . | 3 A | 2 | H. | Looked at SATURN from 11½ to 12½ o'clock. The seeing very bad at first and not good at any time. The planet very much blurred and without definition. |
| | Mean | . . | 12 37 | 71.284 | . . . | 12 30 | 13.48 | . . . | . . . | . . . | . . . | Chron. corr., + 0 ^m .6. |
| 16 | μ ¹ Herculis | 220 | . . . | 64.101 .100 | 64.242 64.244 | . . . | 67.8 69.2 67.3 68.7 | . . . | 5 A | 2 | H. | |
| | Mean | . . | . . . | 64.100 | 64.243 | . . . | 68.2 | . . . | . . . | . . . | . . . | |
| | τ Ophiuchi | 260 | . . . | 64.004 63.996 | 64.342 .345 | . . . | 38.2 39.4 37.3 37.8 | . . . | 3 A | 3 | H. | |
| | Mean | . . | . . . | 64.000 | 64.343 | . . . | 38.2 | . . . | . . . | . . . | . . . | |
| | 70 Ophiuchi | 90 | . . . | 63.800 .799 .797 | 64.520 .522 .505 | . . . | 27.6 27.2 28.1 30.5 | . . . | 3 A | 3 | H. | |
| | Mean | . . | . . . | 63.799 | 64.516 | . . . | 28.3 | . . . | . . . | . . . | . . . | |
| 20 | TITAN | 275 | 11 46 | 75.961 .967 .951 .948 | 94.484 | 11 33 | 15.2 15.1 14.8 14.9 | . . . | 3 A | 2 | H. | |
| | Mean | . . | 11 50 | 75.957 | . . . | 11 35 | 15.00 | . . . | . . . | . . . | . . . | |
| | JAPETUS | 270 | 12 9 | 40.460 .475 .479 .477 | . . . | 11 59 | 111.2 111.2 111.0 111.2 | . . . | 3 A | 2 | H. | |
| | Mean | . . | 12 12 | 40.473 | . . . | 12 2 | 111.15 | . . . | . . . | . . . | . . . | |
| | Mean | . . | . . . | . . . | 94.483* .490 .480 .484 | . . . | . . . | . . . | . . . | . . . | . . . | Parallel for long wire, = 108°.60. Temperature, 66°.0; poor seeing. Chron. corr., + 1 ^m .0. |
| | Mean | . . | . . . | . . . | 94.484 | . . . | . . . | . . . | . . . | . . . | . . . | *Coincidence. |
| 21 | 36 Ophiuchi | 200 | . . . | 63.705 .703 .710 | 64.602 .630 .627 | . . . | 85.9 86.2 86.0 85.6 | . . . | 3 A | 2 | H. | |
| | Mean | . . | . . . | 63.706 | 64.620 | . . . | 85.9 | . . . | . . . | . . . | . . . | |
| | τ Ophiuchi | 260 | . . . | 63.966 64.002 | 64.318 .337 | . . . | 38.1 38.5 36.7 39.8 | . . . | 3 A | 2 | H. | |
| | Mean | . . | . . . | 63.984 | 64.328 | . . . | 38.3 | . . . | . . . | . . . | . . . | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|-----------------------------|---------------------------|-----------------------|--------------------------------------|--------------------------------|--|--------------------------------------|------------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Aug. 21 | 70 <i>Ophiuchi</i> | 85 | h. m. . . . | r. 63.780 .811 .787 | r. 64.529 .516 .531 | h. m. . . . 17 ^h .9 s. t. | ° 28.7 26.7 27.9 28.0 | ° . . . | 3 A | 2 | H. | Images bad. |
| | Mean | . . | . . | 63.793 | 64.525 | . . | 27.8 | | | | | |
| | JAPETUS | 270 | 13 21 25 | 39.035 .026 .040 | . . . | 13 1 6 | 111.46 111.47 111.47 111.40 | . . . | 3 A | 2 | H. | |
| | Mean | . . | 13 24 | 39.034 | . . . | 13 4 | 111.45 | | | | | |
| | TITAN | 275 | 13 28 31 | 76.076 .098 .081 | 94.461 .452 .453 | 13 8 13 10 | 100.65 100.70 101.00 100.60 | . . . | 3 A | 2 | H. | Saw MIMAS very well at 12 hours, but delayed by chronograph, and fog came on and put it out. $p = 265^\circ$ by estimate at 12 hours. Temp. = 57° . Chron. corr., +1 ^m .0. |
| | Mean | . . | 13 30 | 76.085 | 94.455 | 13 10 | 100.74 | | | | | |
| 22 | 70 <i>Ophiuchi</i> | 260 | . . . | 64.000 63.989 63.991 | 64.318 .350 .357 | . . . 17 ^h .7 s. t. | 37.5 36.7 35.8 36.6 | . . . | 3 A | 2 | H. | |
| | Mean | . . | . . | 63.993 | 64.342 | . . | 36.7 | | | | | |
| | 70 <i>Ophiuchi</i> | 85 | . . . | 63.827 .815 .841 | 64.531 .523 .520 | . . . 18 ^h .0 s. t. | 27.2 27.3 27.2 28.1 | . . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.828 | 64.525 | . . | 27.5 | | | | | |
| | JAPETUS | 267 | 12 20 23 | 38.144 .108 .163 | . . . | 11 58 12 0 | 111.48 111.46 111.60 | . . . | 3 A | 3 | H. | |
| | Mean | . . | 12 22 | 38.138 | . . . | 12 0 | 111.51 | | | | | |
| | TITAN | . . | 12 14 16 | 79.090 .115 .080 | . . . | 12 6 9 | 98.38 97.63 97.13 97.30 | . . . | 3 A | 3 | H. | |
| | Mean | . . | 12 16 | 79.095 | . . . | 12 8 | 97.61 | | | | | |
| | | . . | . . | . . . | 94.480* .472 .480 | . . . | . . . | . . . | . . . | . . . | . . . | *Coincidence. Parallel for long wire, 108°.60. Temp. 67°. Too foggy for anything else. Chron. corr., +1 ^m .0. |
| | Mean | . . | . . | . . . | 94.477 | . . . | . . . | . . . | . . . | . . . | . . . | |
| 24 | HYPERION | 270 | 12 13 17 | 41.020 40.940 40.984 41.042 | 64.159 | 12 7 10 | 14.2 14.1 14.2 14.5 | . . . | 3 A | 4 | H. | At 11½ hours, cloudy; at 12½ hours, very fine seeing, and SATURN excellent. The divisions in ring very sharp and belts on ball well shown. Directly after observation of HYPERION the rope carrying weights broke and stopped work with micrometer. Parallel by TITAN, 18°.87. Chron. corr., -0 ^m .9. |
| | Mean | . . | 12 14 | 40.997 | . . . | 12 8 | 14.25 | | | | | |
| 26 | β <i>Lyræ</i> | 170 | . . . | 59.546 .577 .529 .540 | 68.751 .786 .770 .774 | . . . 18 ^h .3 s. t. | 320.1 320.0 319.7 319.8 | . . . | 3 A | 2 | H. | A small star 12 ^m precedes β <i>Lyræ</i> at nearly same distance as above companion and nearly at right angles to it. |
| | Mean | . . | . . | 59.548 | 68.770 | . . . | 319.90 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|------------------------|---------------------------|-----------------------|--------------------------------------|--------------------------------------|-------------------------------------|---|----------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Aug. 26 | JAPETUS | 267 | h. m. 11 56 | r. 38.050 .034 .060 .065 | r. 94.490 .480 .488 .489 | h. m. 11 45 11 49 | ° 112.13 112.18 112.13 112.12 | ° . . | 3 A | 2 | H. | Temp., 67°. Chron. corr., -0 ^m .8. |
| | Mean | . . | 11 59 | 38.052 | 94.487 | 11 46 | 112.14 | | | | | |
| 27 | β Lyra | 150 | . . | 59.530 .530 .520 .563 | 68.745 .734 .785 .770 | . . 18 ^h .2 s. t. | 319.6 319.6 320.1 319.8 | . . | 3 A | 2 | H. | Face north. Temp., 70°. |
| | Mean | . . | . . | 59.536 | 68.758 | . . | 319.78 | | | | | |
| | 452 P. | 260 | . . | 61.560 | 66.740 | . . | 218.5 220.0 | . . | 3 A | 2 | H. | Companion is of 13th magnitude. 452 P. is the star noticed by Mr. Ward, said to have very sharp eyes. I don't know if this is Ward's companion. |
| | Mean | . . | . . | . . | . . | . . | 219.2 | | | | | |
| | JAPETUS | 267 | 11 56 | 38.942 39.000 38.960 38.938 | 94.490 .475 .473 .479 | 11 48 51 | 112.15 112.20 112.40 112.38 | . . | 3 A | 2 | H. | Long wire. |
| | Mean | . . | 11 57 | 38.960 | 94.479 | 11 49 | 112.28 | | | | | |
| | TITAN | 90 | 12 16 19 | 77.111 .152 .176 .121 | 94.479 | 12 9 12 | 17.75 17.90 17.80 18.00 | . . | 3 A | 2 | H. | Parallel for long wire = 108°.53. Chron. corr., -0 ^m .8. |
| | Mean | . . | 12 17 | 77.140 | . . | 12 10 | 17.86 | | | | | |
| 28 | β Lyra | 150 | . . | 59.548 .570 .540 .570 | 68.771 .760 .756 .774 | . . 17 ^h .6 s. t. | 139.3 139.7 139.7 139.6 | . . | 3 A | 2 | H. | Face south. |
| | Mean | . . | . . | 59.557 | 68.765 | . . | 139.58 | | | | | |
| | JAPETUS | 267 | 12 7 11 | 40.151 .136 .110 .152 | 94.482 .471 .478 .479 | 11 56 12 0 | 112.47 112.37 112.45 112.36 | . . | 3 A | 3 | H. | Long wire. |
| | Mean | . . | 12 8 | 40.137 | 94.478 | 11 57 | 112.41 | | | | | |
| | TITAN | 93 | 12 27 31 | 74.719 .741 .686 .723 | 94.478 | 12 22 25 | 14.3 14.3 14.5 14.4 | . . | 3 A | 3 | H. | Double wires. Chron. corr., -0 ^m .7. |
| | Mean | . . | 12 28 | 74.717 | . . | 12 23 | 14.38 | | | | | |
| 29 | β Lyra | 150 | . . | 59.579 .570 .560 .556 | 68.761 .771 .755 .762 | . . 18 ^h .2 s. t. | 139.1 139.9 140.1 139.8 | . . | 3 A | 3 | H. | Face south. Cloudy. |
| | Mean | . . | . . | 59.566 | 68.762 | . . | 139.72 | | | | | |
| | TITAN | 95 | 12 5 8 | 75.040 .075 .096 .078 | . . | 12 0 3 | 11.33 11.28 11.37 11.65 | . . | 3 A | 3 | H. | Chron. corr., -0 ^m .7. Clouds. |
| | Mean | . . | 12 6 | 75.072 | . . | 12 1 | 11.41 | | | | | |
| 31 | β Lyra | 150 | . . | 59.573 .550 .583 .539 | 68.790 .800 .751 .785 | . . 17 ^h .9 s. t. | 139.9 139.4 139.8 139.3 | . . | 5 A | 3 | H. | Face north. Parallel, 18°.91. |
| | Mean | . . | . . | 59.561 | 68.781 | . . | 139.60 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|--------------------------|---------------------------|-----------------------|--------------------------------------|--------------------------------|--|--------------------------------------|----------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Aug. 31 | Σ 2402 | 200 | h. m. . . | r. 64.093 .092 | r. 64.266 .268 | h. m. . . 18 ^h .6 s. t. | ° 87.1 89.0 87.2 87.0 | ° . . | 5 A | 3 | H. | Magnitudes 9½ and 10. |
| | Mean | . . | . . | 64.092 | 64.267 | . . | 87.6 | | | | | |
| | MIMAS | 90 | 10 25 10 2) | 61.273 .250 | 67.006 66.987 | 10 19 23 | 16.5 15.8 15.3 16.0 | . . | 3 A | 2 | H. | Very faint; strong moonlight. |
| | Mean | . . | 10 26 | 61.261 | 66.996 | 10 20 | 15.9 | | | | | |
| | JAPETUS | 266 | 12 22 34 | 45.951 46.002 45.930 45.970 | 94.478 | 11 16 20 | 113.06 112.78 112.82 112.87 | . . | 3 A | 2 | H. | Long wire. Driving clock unsteady. |
| | Mean | . . | 12 27 | 45.963 | . . | 11 17 | 112.88 | | | | | |
| | ENCELADUS | 270 | 12 47 12 49 | 61.140 | 67.229 | 12 42 45 | 18.8 18.9 18.5 18.6 | . . | 3 A | 3 | H. | Much interruption by clouds. Chron. corr., -0 ^m .6. |
| | Mean | . . | 12 47 | . . | . . | 12 43 | 18.7 | | | | | |
| | Sept. 2 β Lyræ | 150 | . . | 59.563 .558 .567 .552 | 68.753 .787 .809 .810 | . . 18 ^h .2 s. t. | 140.0 139.5 139.6 139.9 | . . | 5 A | 2 | H. | Observed for position of instrument. |
| | Mean | . . | . . | 59.560 | 68.790 | . . | 139.75 | | | | | |
| | 4 β Lyræ | 150 | . . | 59.559 .560 .551 .558 | 68.769 .784 .750 .761 | . . 18 ^h .1 s. t. | 139.5 139.4 139.7 139.7 | . . | 5 A | 2 | H. | Face south. |
| | Mean | . . | . . | 59.557 | 68.766 | . . | 139.58 | | | | | |
| | Anonymous G. A. . . | 95 | . . | 63.906 .929 | 64.378 .388 | . . 18 ^h .4 s. t. | 14.3 13.8 16.2 14.5 | . . | 5 A | 3 | H. | Magnitudes 10 and 11. |
| | Mean | . . | . . | 63.918 | 64.383 | . . | 14.7 | | | | | |
| | Anonymous | 220 | . . | 64.061 .062 | 64.248 .261 | . . 18 ^h .8 s. t. | 68.0 63.7 62.6 63.7 | . . | 3 A | 2 | H. | Magnitudes 9 and 11. |
| | Mean | . . | . . | 64.062 | 64.255 | . . | 64.5 | | | | | |
| | Σ 2402 (?) | 200 | . . | 64.088 .077 | 64.254 .258 | . . 19 ^h .2 s. t. | 87.1 83.6 83.6 82.8 | . . | 3 A | 2 | H. | Many double stars in this region, and am not sure that the above star is really Σ 2402. This star is brighter than the one observed August 31. |
| | Mean | . . | . . | 64.072 | 64.256 | . . | 84.3 | | | | | |
| | 15 β Lyræ | 150 | . . | 59.550 .555 .560 .532 | 68.755 .763 .772 .757 | . . 18 ^h .2 s. t. | 139.9 139.4 139.8 139.9 | . . | 5 A | 2 | H. | Faint, through clouds. Face south. |
| | Mean | . . | . . | 59.549 | 68.762 | . . | 139.75 | | | | | |
| | 20 OΣ 342 | . . | . . | . . | . . | . . | . . | . . | 3 A | 3 | H. | No close companion visible. Images good through slight haze. |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (small-est reading). | Microm. II (larg-est reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|-------------------|-------------------------------|---------------------------|-----------------------|--------------------------------|--------------------------------|--------------------------|--------------------------------------|----------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Sept. 20 | δ Cygni | 180 | h. m. | r. | r. | h. m. | ° | ° | 3 A | 2 | H. | Images bad. |
| | | | | 64.030 .034 | 64.266 .284 | | 308.6 309.1 311.0 309.4 | | | | | |
| | | | | | | 10 ^h .4 s. t. | | | | | | |
| | Mean | | | 64.032 | 64.275 | | 309.5 | | | | | |
| | α^2 Capricorni | 240 | | | | | 44.1 45.5 45.6 47.9 | | 3 A | 2 | H. | Sky became too hazy to get distance. |
| | Mean | | | | | | 45.8 | | | | | |
| 25 | O Σ 342 | | | | | | | | 3 A | 3 | H. | No close companion visible. Seeing fair. Twilight. A distant companion in $p = 168^\circ$ and $s = 51''.2$ and of 11-12th magnitude. |
| | δ Cygni | 340 | | 63.987 64.000 | 64.290 .302 | | 313.1 315.4 315.2 314.8 | | 3 A | 2 | H. | |
| | Mean | | | 63.994 | 64.296 | | 314.6 | | | | | |
| | ENCELADUS | 275 | 9 21 | | 67.775 | 9 13 14 19 | 12.9 13.0 11.7 | | 3 A | 2 | H. | This observation very doubtful. Clouds. Chron. corr., +1 ^m .0. |
| | Mean | | | | | 9 15 | 12.5 | | | | | |
| 26 | HYPERION | 95 | 8 39 | 41.076 .079 .019 44 | 64.159 .161 .158 .160 | 8 34 36 | 13.9 14.3 14.3 14.6 | | 3 A | 2 | H. | |
| | Mean | | 8 42 | 41.042 | 64.160 | 8 36 | 14.28 | | | | | |
| | JAPETUS | 90 | 9 2 | 43.338 .220 .290 7 | 91.450 .452 .462 .451 | 8 54 57 | 110.93 110.78 110.73 110.70 | | 3 A | 2 | H. | Zero for long wire = 108°.65. Images very bad. Temperature 56°. Chron. corr., +1 ^m .0. |
| | Mean | | 9 5 | 45.299 | 94.454 | 8 56 | 110.78 | | | | | |
| 27 | HYPERION | 95 | 8 24 28 | 42.352 .336 .271 | 64.160 .155 .153 | 8 14 18 | 11.8 11.6 12.0 11.9 | | 3 A | 2 | H. | Extremely faint. |
| | Mean | | 8 27 | 42.320 | 64.156 | 8 17 | 11.82 | | | | | |
| | JAPETUS | | | | | | | | | | H. | The images are so bad that I will not observe. |
| 28 | δ Cygni | 350 | | 63.980 .989 .994 | 64.328 .316 .323 | | 140.9 139.5 130.8 133.2 | | 3 A | 2 | H. | |
| | Mean | | | 63.988 | 64.322 | | 137.6 | | | | | |
| | ϵ Draconis | 0 | | 63.860 .876 .855 .868 | 64.470 .447 .475 .490 | | 283.7 283.8 285.0 285.8 | | 3 A | 3 | H. | |
| | Mean | | | 63.865 | 64.470 | | 284.6 | | | | | |
| | κ Cephei | 140 | | 63.414 .379 .388 .404 | 64.892 .938 .901 .919 | | 167.4 168.3 169.0 168.7 | | 3 A | 3 | H. | |
| | Mean | | | 63.396 | 64.912 | | 168.4 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|-------------------|-------------------------------|---------------------------|-----------------------|-------------------------------|-------------------------------|--------------------------|------------------|----------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Sept. 28 | Σ 2796 | 30 | h. m. | r. | r. | h. m. | ° | ° | 3 A | 3 | H. | |
| | | | | 61.630 | 66.650 | | 245.4 | | | | | |
| | | | | .631 | .655 | | 245.5 | | | | | |
| | | | | .587 | .703 | 20 ^h .1 s. t. | 245.0 | | | | | |
| | | | | .643 | .688 | | 245.3 | | | | | |
| | Mean | | | 61.623 | 66.674 | | 245.30 | | | | | |
| | HYPERION | 100 | 8 34 | 45.654 | 64.160 | 8 25 | 8.3 | | 3 A | 2 | H. | Extremely faint; moonlight. |
| | | | 39 | .540 | | | 8.5 | | | | | |
| | | | | | | 30 | 8.3 | | | | | |
| | Mean | | 8 37 | 45.597 | | 8 28 | 8.32 | | | | | |
| | TITAN | 90 | 8 47 | 77.261 | 94.456 | 8 42 | 17.8 | | 3 A | 2 | H. | |
| | | | | .259 | | | 17.9 | | | | | |
| | | | 54 | .240 | | 44 | 18.0 | | | | | |
| | | | | .260 | | | 17.8 | | | | | |
| 29 | Mean | | 8 51 | 77.255 | | 8 44 | 17.88 | | | | | |
| | JAPETUS | 87 | 9 6 | 42.155 | 94.452 | 8 58 | 110.80 | | 3 A | 2 | H. | Zero for long wire, 108°.54. Clock stopped during observation of JAPETUS; running badly during observation of TITAN and JAPETUS. Parallel, 108.87. |
| | | | | .129 | .456 | | 110.70 | | | | | |
| | | | | .033 | .454 | 9 2 | 111.07 | | | | | |
| | | | 42 | .028 | .461 | | 111.00 | | | | | |
| | Mean | | 9 25 | 42.086 | 94.456 | 9 1 | 110.89 | | | | | |
| | Satellite of NEPTUNE | 200 | 11 48 | 63.062 | 65.269 | 11 30 | 271.0 | | 6 A | | Hn. | Weight, 3 for p ; 4 for s . |
| | | | | .059 | .303 | | 272.6 | | | | | |
| | | | | .052 | .287 | | 273.1 | | | | | |
| | | | 12 8 | .008 | .296 | 42 | 274.2 | | | | | |
| | | | | .129 | .240 | | 274.8 | | | | | |
| | Mean | | 11 59 | 63.062 | 65.279 | 11 37 | 275.2 | | | | | |
| | | | | | | 12 16 | 276.3 | | | | | Chron. corr., + 1 ^m .0. |
| | Mean | | | | | 19 | 276.3 | | | | | |
| | Mean | | | | | 12 18 | 276.3 | | | | | |
| | δ Cygni | 350 | | 64.001 | 64.342 | | 127.7 | | 3 A | 2 | H. | |
| | | | | 63.983 | .340 | | 133.1 | | | | | |
| | | | | .998 | .320 | 18 ^h .7 s. t. | 139.0 | | | | | |
| | | | | 64.000 | .329 | | 141.5 | | | | | |
| | Mean | | | 63.996 | 64.333 | | 135.3 | | | | | |
| | O Σ 387 | 100 | | 64.114 | 64.200 | | 84.4 | | 5 A | 3 | H. | |
| | | | | .104 | .220 | 19 ^h .0 s. t. | 85.5 | | | | | |
| | | | | | | | 82.3 | | | | | |
| | | | | | | | 82.8 | | | | | |
| | Mean | | | 64.109 | 64.210 | | 83.8 | | | | | |
| | Σ 2571 | 25 | | 62.993 | 65.295 | | 265.6 | | 3 A | 4 | H. | |
| | | | | 63.000 | .316 | | 266.3 | | | | | |
| | | | | .007 | .308 | 19 ^h .3 s. t. | 266.6 | | | | | |
| | | | | 62.986 | .299 | | 266.5 | | | | | |
| | Mean | | | 62.995 | 65.304 | | 266.2 | | | | | |
| | ϵ Draconis | 0 | | 63.882 | 64.478 | | 287.8 | | 3 A | 3 | H. | |
| | | | | .860 | .474 | | 287.6 | | | | | |
| | | | | .865 | .466 | 19 ^h .7 s. t. | 286.0 | | | | | |
| | | | | .856 | .433 | | 284.8 | | | | | |
| | Mean | | | 63.866 | 64.463 | | 286.5 | | | | | |
| | κ Cephei | 130 | | 63.411 | 64.891 | | 166.5 | | 3 A | 3 | H. | |
| | | | | .390 | .924 | | 168.1 | | | | | |
| | | | | .384 | .902 | 20 ^h .0 s. t. | 167.1 | | | | | |
| | | | | .426 | .920 | | 166.9 | | | | | |
| | Mean | | | 63.403 | 64.909 | | 167.1 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. | | | |
|-----------------------------|-------------------|---------------------------|-----------------------|---|--------------------------------------|--|--|--|------------|--------|---|----------------------------------|--------------------------------------|----------------------------------|-----|
| | | | | | | | Ver. I. | Ver. II. | | | | | | | |
| 1876. Sept. 29 | Σ 2796 | 40 | h. m. . . | r. 61.641 .647 .619 .638 | r. 66.684 .682 .712 .670 | h. m. . . 20 ^h .3 s. t. | ° 245.4 245.6 245.6 244.8 | ° . . | 3 A | 3 | H. | | | | |
| | | | | Mean | | | 61.636 66.687 | . . | | | | | 245.35 | | |
| | | | | Σ 2801 | 270 | | . . | 63.996 64.323 64.000 .311 63.996 .320 .975 .310 | | | | | . . | 198.6 199.0 199.3 199.0 | . . |
| | TITAN | 95 | 8 59 9 3 | 63.992 64.316 74.996 94.450 75.091 .059 .068 | . . | 8 54 57 | 199.0 13.9 14.3 13.9 14.2 | . . | 3 A | 3 | H. | | | | |
| | | | | Mean | . . | 9 1 | 75.054 . . | 8 56 | | | | | 14.08 | | |
| | | | | JAPETUS | 87 | 9 18 25 | 40.985 94.455 41.038 .449 40.984 .448 .982 .450 | 9 8 11 14 15 | | | | | 111.15 110.90 111.27 111.10 | . . | 3 A |
| | JAPETUS | 87 | 8 34 43 | 40.997 94.450 39.782 94.452 .775 .444 .734 .450 .851 .448 | 9 13 8 26 28 | 111.10 111.35 111.27 111.18 111.20 | . . | 3 A | 3 | H. | Parallel for long wire, 108°.53. Temperature 50°. | | | | |
| | | | | Mean | . . | 8 39 | 39.785 94.448 | | | | | | 8 28 | 111.25 | |
| | | | | Satellite of NEPTUNE . | . . | . . | . . | | | | | | . . | . . | . . |
| | Oct. 2 | O Σ 387 | 100 | . . | 64.106 64.202 .104 .20/ | . . | 19 ^h .1 s. t. | 88.0 88.6 87.9 90.1 | . . | 5 A | 2 | | H. | Stars of 9th magnitude. | |
| Mean | | | | | . . | . . | | 64.105 64.205 | . . | | | 88.6 | | | |
| Σ 2571 | | | | | 20 | . . | | 63.012 65.307 .024 .292 .002 .317 .027 .276 | . . | | | 267.1 266.7 267.7 267.4 | | | . . |
| ε <i>Draconis</i> | | 0 | . . | 63.016 65.298 63.860 64.472 .830 .433 .841 .448 .862 .460 | . . | 19 ^h .6 s. t. | 267.2 288.8 287.8 287.4 287.1 | . . | 3 A | 2 | H. | | | | |
| | | | | Mean | . . | | . . | 63.848 64.453 | | | | . . | 287.8 | | |
| | | | | κ <i>Cephei</i> | 125 | | . . | 63.399 64.892 .387 .896 .372 .917 .372 .884 | | | | . . | 167.7 167.4 167.3 167.3 | | . . |
| Σ 2796 | | 40 | . . | 63.382 64.897 61.590 66.680 .610 .680 .603 .674 .639 .681 | . . | 20 ^h .4 s. t. | 167.4 245.6 245.3 245.4 245.1 | . . | 3 A | 2 | H. | | | | |
| | | | | Mean | . . | | . . | 61.610 66.679 | | | | . . | 245.35 | | |
| | | | | Mean | . . | | . . | 61.610 66.679 | | | | . . | 245.35 | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|-----------------|-----------------------------|---------------------------|-----------------------|-------------------------------|-------------------------------|--------------------------|------------------|----------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Oct. 3 | Σ 2801 | 270 | h. m. | r. | r. | h. m. | ° | ° | 3 A | 2 | H. | |
| | | | | 63.979 | 64.307 | | 196.8 | | | | | |
| | | | | .978 | .330 | | 197.3 | | | | | |
| | | | | .966 | .339 | 20 ^h .6 s. t. | 196.2 | | | | | |
| | | | | .980 | .320 | | 195.6 | | | | | |
| | Mean | | | 63.976 | 64.324 | | 196.5 | | | | | |
| | Σ 2806 | 260 | | 62.761 | 65.510 | | 218.5 | | 3 A | 3 | H. | |
| | | | | .753 | .508 | | 218.2 | | | | | |
| | | | | .763 | .496 | 21 ^h .0 s. t. | 217.6 | | | | | |
| | | | | .760 | .490 | | 218.4 | | | | | |
| | Mean | | | 62.759 | 65.501 | | 218.2 | | | | | |
| | TITAN | 150 | 8 40 | 59.641 | 68.571 | 8 34 | 153.2 | | 3 A | 2 | H. | |
| | | | 44 | .598 | 68.621 | | 152.8 | | | | | |
| | | | | | | 37 | 151.9 | | | | | |
| | | | | | | | 152.9 | | | | | |
| | Mean | | 8 43 | 59.620 | 68.596 | 8 37 | 152.7 | | | | | |
| | JAPETUS | 87 | 8 55 | 40.120 | 94.442 | 8 48 | 111.65 | | 3 A | 2 | H. | Parallel for long wire = 108° 53. Images unsteady. Temp. = 54°.0. |
| | | | | .086 | .445 | | 111.42 | | | | | Chron. corr., + 1 ^m .4. |
| | | | 9 4 | .088 | .441 | 51 | 111.37 | | | | | |
| | | | | .048 | .452 | | 111.42 | | | | | |
| | Mean | | 9 1 | 40.086 | 94.445 | 8 51 | 111.47 | | | | | |
| 7 | Satellite of NEPTUNE . | | | | | 10 0 | 247.8 | | 6 A | 1 | Hn. | Telescope west. Image of planet very unsteady and satellite very faint in the moonlight. Distances would be very uncertain if measured. |
| | | | | | | 8 | 250.7 | | | | | |
| | | | | | | | 247.2 | | | | | |
| | | | | | | | 252.4 | | | | | |
| | Mean | | | | | 10 5 | 249.5 | | | | | |
| | Satellite of NEPTUNE . | 15 | | | | 11 1 | 104.3 | | | | Hn. | |
| | | | | | | | 102.8 | | | | | |
| | | | | | | 17 | 103.6 | | | | | |
| | Mean | | | | | 11 9 | 104.2 | | | | | |
| | TITAN | 280 | 8 46 | 64.150 | 78.524 | 8 40 | 6.0 | | 3 A | 3 | H. | Temp. = 48°.8. |
| | | | | .154 | .552 | | 5.8 | | | | | |
| | | | | .146 | .492 | | 5.9 | | | | | |
| 9 | | | 49 | .149 | .496 | 44 | 6.0 | | | | | |
| | Mean | | 8 47 | 64.150 | 78.516 | 8 42 | 5.92 | | | | | |
| | JAPETUS | 88 | 9 8 | 49.316 | 94.447 | 8 55 | 111.87 | | 3 A | 2 | H. | Hazy. Parallel 18°.87. |
| | | | 11 | .350 | | 9 5 | 111.86 | | | | | Chron. corr., - 0 ^m .4. |
| | Mean | | 9 9 | 49.333 | | 9 0 | 111.86 | | | | | |
| | ε <i>Draconis</i> | 0 | | 63.818 | 64.490 | | 288.9 | | 3 A | 2 | H. | Images blurred. |
| | | | | .860 | .488 | | 289.7 | | | | | |
| | | | | .871 | .465 | 19 ^h .8 s. t. | 289.6 | | | | | |
| | | | | .822 | .468 | | 288.5 | | | | | |
| | Mean | | | 63.843 | 64.478 | | 289.2 | | | | | |
| | κ <i>Cephei</i> | 130 | | 63.403 | 64.882 | | 168.2 | | 3 A | 2 | H. | |
| | | | | .372 | .902 | | 168.2 | | | | | |
| 10 | | | | .380 | .919 | 20 ^h .2 s. t. | 167.2 | | | | | |
| | | | | .396 | .905 | | 167.8 | | | | | |
| | Mean | | | 63.388 | 64.902 | | 167.8 | | | | | |
| | Σ 2796 | 40 | | 61.586 | 66.683 | | 245.7 | | 3 A | 2 | H. | Images very unsteady. The night too bad for double stars. |
| | | | | .618 | .651 | | 245.8 | | | | | |
| | | | | .619 | .660 | 20 ^h .5 s. t. | 245.4 | | | | | |
| | | | | .654 | .621 | | 246.0 | | | | | |
| | Mean | | | 61.619 | 66.654 | | 245.72 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|---------------------------|---------------------------|-----------------------|----------------------------------|--------------------------------|--|---------------------------------------|---|------------|--------|-----------|------------------------------------|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Oct. 11 | Σ 2452 | 230 | h. m. . . | r. 63.610 .601 .615 | r. 64.704 .732 .738 | h. m. . . 19 ^h .3 s. t. | ° 249.2 249.2 251.8 251.2 | ° . . | 3 A | 2 | H. | |
| | Mean | . . | . . | 63.609 | 64.725 | . . | 250.4 | | | | | |
| | Σ 2571 | 40 | . . | 62.997 63.030 .008 .042 | 65.301 .285 .337 .289 | . . 19 ^h .6 s. t. | 267.5 267.3 265.8 267.3 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.019 | 65.303 | . . | 267.0 | | | | | |
| | ε <i>Draconis</i> | 0 | . . | 63.883 .882 .871 .882 | 64.500 .490 .499 .478 | . . 19 ^h .8 s. t. | 289.0 289.3 288.4 289.0 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.880 | 64.492 | . . | 288.9 | | | | | |
| | Σ 2801 | 270 | . . | 64.028 63.991 .994 | 64.350 .366 .340 | . . 20 ^h .4 s. t. | 195.2 195.9 195.7 197.2 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 64.004 | 64.352 | . . | 196.0 | | | | | |
| | Σ 2806 | 250 | . . | 62.814 .816 .812 .816 | 65.542 .503 .509 .536 | . . 20 ^h .7 s. t. | 217.8 219.7 219.4 218.6 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 62.814 | 65.522 | . . | 218.9 | | | | | |
| | Σ 2893 | 340 | . . | 61.232 .283 .266 .270 | 67.066 .069 .083 .062 | . . 21 ^h .1 s. t. | 300.8 301.3 300.6 301.1 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 61.263 | 67.070 | . . | 300.95 | | | | | |
| | JAPETUS | 87 | 9 17 27 | 54.815 .754 .796 | 94.463 .464 .469 | 9 10 13 | 112.50 112.20 112.08 112.27 | . . | 3 A | 3 | H. | Parallel for long wire, 108°.50. |
| | Mean | . . | 9 22 | 54.788 | 94.465 | 9 12 | 112.26 | | | | | |
| | TITAN | 350 | 9 50 54 | 61.076 .036 | 67.216 .185 | 9 45 48 | 119.2 118.0 119.0 118.5 | . . | 3 A | 3 | H. | Chron. corr., — 0 ^m .3. |
| | Mean | . . | 9 52 | 61.056 | 67.200 | 9 47 | 118.7 | | | | | |
| | 12 | Satellite of NEPTUNE | 60 | 10 58 11 18 | 63.102 62.960 62.971 | 65.420 .421 .413 | 10 23 35 | 227.6 229.5 227.9 227.1 227.5 | . . | 6 A | 1 | Hn. |
| Mean | | . . | 11 8 | 63.011 | 65.418 | 10 29 | 227.9 | | | | | |
| Σ 2452 | | 250 | . . | 63.576 .569 .585 .600 | 64.730 .718 .735 .777 | . . 19 ^h .3 s. t. | 253.0 252.2 250.7 252.0 | . . | 3 A | 2 | H. | |
| Mean | | . . | . . | 63.582 | 64.740 | . . | 252.0 | | | | | |
| Σ 2571 | | 40 | . . | 62.989 63.002 .023 .951 | 65.300 .301 .281 .281 | . . 19 ^h .6 s. t. | 267.4 267.3 266.9 267.0 | . . | 3 A | 2 | H. | |
| Mean | | . . | . . | 62.991 | 65.291 | . . | 267.1 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|----------------------|---------------------------|-----------------------|--|--------------------------------------|--|---------------------------------------|----------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Oct. 12 | Σ 2801 | 270 | h. m. . . | r. 63.994 .950 .961 64.002 | r. 64.323 .330 .340 .336 | h. m. . . 20 ^h .1 s. t. | ° 196.0 196.2 195.3 195.8 | ° . . | 3 A | 2 | H. | |
| | Mean | . . | . . | 63.977 | 64.332 | . . | 195.8 | | | | | |
| | Σ 2806 | 250 | . . | 62.779 .789 .786 .808 | 65.488 .505 .510 .506 | . . 20 ^h .4 s. t. | 216.5 216.8 219.4 218.4 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 62.790 | 65.502 | . . | 217.8 | | | | | |
| | MIMAS | 265 | . . | . . | . . | 8 10 15 | 16.9 17.6 16.6 16.6 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | . . | . . | 8 12 | 16.9 | | | | | |
| | TITAN | 60 | 8 55 9 0 | 57.354 .300 | 71.078 .031 | 8 18 20 | 37.8 38.6 38.4 38.5 | . . | 3 A | 3 | H. | Clock running wild. |
| | Mean | . . | 8 57 | 57.327 | 71.055 | 8 19 | 38.32 | | | | | |
| | MIMAS | 270 | 9 42 46 | 61.371 .295 | 66.950 67.027 | 9 2 7 | 15.8 14.6 14.7 | . . | 3 A | 3 | H. | Very faint. |
| | Mean | . . | 9 44 | 61.333 | 66.988 | 9 4 | 15.0 | | | | | |
| | RHEA | 100 | 9 57 10 5 | 57.221 .205 | 71.180 .075 | 9 53 54 | 7.7 7.4 7.1 | . . | 3 A | 3 | H. | At 8 ^h M. T., seeing very fine for a few minutes. The belts on SATURN and the divisions of the rings well seen. |
| | Mean | . . | 10 1 | 57.213 | 71.127 | 9 53 | 7.4 | | | | | |
| 13 | Satellite of NEPTUNE | 40 | 11 3 25 | 62.451 .414 .383 .474 | 65.915 .854 .821 .924 | 10 41 49 | 73.7 72.3 72.5 73.3 | . . | 6 A | 3 | Hn. | Images fair but driving clock going badly. Chron. corr., - 0 ^m .2. |
| | Mean | . . | 11 14 | 62.431 | 65.879 | 10 45 | 72.9 | | | | | |
| | Σ 2452 | 230 | . . | 63.597 .600 .570 .588 | 64.746 .744 .735 .725 | . . 19 ^h .3 s. t. | 250.3 251.7 251.0 251.2 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.589 | 64.738 | . . | 251.0 | | | | | |
| | O Σ 387 | 100 | . . | 64.115 .118 | 64.208 .202 | . . | 91.4 91.9 91.8 92.4 | . . | 5 A | 3 | H. | |
| | Mean | . . | . . | 64.116 | 64.205 | . . | 91.9 | | | | | |
| | Σ 2708 (A and B) . . | 345 | . . | 61.951 .965 .976 | 66.330 .304 .354 | . . | 134.8 134.7 135.0 134.7 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 61.964 | 66.329 | . . | 134.8 | | | | | |
| | Σ 2708 (A and C) . . | 40 | . . | 62.601 .619 | 65.642 .600 | . . 20 ^h .2 s. t. | 60.1 59.1 59.4 | . . | 3 A | 3 | H. | C is of 15th magnitude. |
| | Mean | . . | . . | 62.610 | 65.621 | . . | 59.5 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|--------------------------|---------------------------|-----------------------|--|--|--|---|----------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Oct. 13 | O Σ 413 | ° 90 | h. m. . . | r. 64.084 .082 | r. 64.223 .228 | h. m. . . 20 ^h .4 s. t. | ° 203.9 203.0 205.4 205.5 | ° . . | 5 A | 2 | H. | |
| | Mean | . . | . . | 64.083 | 64.226 | . . | 205.2 | . . | | | | |
| | Σ 2806 | 250 | . . | 62.776 .776 .762 .774 | 65.515 .498 .536 .527 | . . 20 ^h .6 s. t. | 218.0 219.8 219.0 218.1 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 62.772 | 65.519 | . . | 218.7 | . . | | | | |
| | MIMAS | 275 | 8 12 16 | 61.278 .359 | 67.040 .014 | 8 7 10 | 13.7 13.6 13.9 14.4 | . . | 3 A | 5 | H. | MIMAS fully as bright, perhaps brighter than ENCELADUS. |
| | Mean | . . | 8 14 | 61.318 | 67.027 | 8 8 | 13.9 | . . | | | | |
| | ENCELADUS | 290 | 8 23 26 | 61.995 .957 | 66.318 .353 | 8 19 22 | 181.7 181.9 182.4 181.6 | . . | 3 A | 4 | H. | |
| | Mean | . . | 8 24 | 61.976 | 66.336 | 8 20 | 181.9 | . . | | | | |
| | RHEA | 250 | 8 30 33 | 61.508 .535 | 66.701 .726 | 8 27 29 | 43.3 41.0 41.1 41.0 | . . | 3 A | 4 | H. | |
| | Mean | . . | 8 31 | 61.521 | 66.713 | 8 28 | 41.6 | . . | | | | |
| | DIONE | 280 | 8 36 38 | 58.420 .412 | 69.854 .860 | 8 34 35 | 10.8 11.1 11.0 11.2 | . . | 3 A | 4 | H. | |
| | Mean | . . | 8 37 | 58.416 | 69.857 | 8 34 | 11.0 | . . | | | | |
| | TETHYS | 285 | 8 43 46 | 60.902 .890 | 67.380 .481 | 8 40 41 | 4.4 3.7 4.2 4.2 | . . | 3 A | 4 | H. | |
| | Mean | . . | 8 44 | 60.896 | 67.430 | 8 40 | 4.1 | . . | | | | |
| | TITAN | 80 | 8 53 55 | 64.159 .155 .158 .154 | 76.970 .976 .965 .958 | 8 49 51 | 23.3 23.2 23.1 23.0 | . . | 3 A | 4 | H. | |
| | Mean | . . | 8 54 | 64.157 | 76.967 | 8 50 | 23.15 | . . | | | | |
| | JAPETUS | 85 | 9 3 5 | 30.764 .758 .757 .849 | 64.157 | 8 59 9 1 | 23.20 23.10 23.20 23.07 | . . | 3 A | 4 | H. | Short wire. |
| | Mean | . . | 9 4 | 30.782 | . . | 9 0 | 23.14 | . . | | | | |
| | HYPERION | 75 | 9 23 35 | 53.698 .659 .582 | 64.157 | 9 28 31 | 35.0 34.6 34.3 34.8 | . . | 3 A | 3 | H. | Parallel, 18°.82. |
| | Mean | . . | 9 34 | 53.646 | . . | 9 29 | 34.68 | . . | | | | |
| | Satellite of NEPTUNE | 4 | 10 32 58 11 3 | 63.342 .362 .360 .414 .390 | 64.958 .938 .952 .973 .918 | 10 18 27 | 110.6 113.7 113.2 113.7 113.0 | . . | 6 A | 4 | Hn. | Chron. corr., - 0 ^m .2. |
| | Mean | . . | 10 48 | 63.374 | 64.948 | 10 23 | 112.8 | . . | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|-----------------------------|---------------------------|-----------------------|--------------------------------------|--------------------------------------|---|---------------------------------------|----------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Oct. 16 | <i>v Draconis</i> | 350 | h. m. | r. 57.905 .896 .944 .931 | r. 70.390 .357 .398 .352 | h. m. . . 19 ^h .6 s.t. | ° 156.3 156.2 156.6 156.4 | ° . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 57.919 | 70.374 | . . | 156.38 | | | | | |
| | Σ 2034 | 180 | . . | 64.038 .020 | 64.283 .280 | . . 20 ^h .1 s.t. | 171.1 169.1 170.6 169.9 | . . | 5 A | 2 | H. | |
| | Mean | . . | . . | 64.029 | 64.281 | . . | 170.2 | | | | | |
| | Σ 2326 | 240 | . . | 62.558 .542 .511 .562 | 65.739 .734 .770 .750 | . . 20 ^h .5 s.t. | 89.1 89.5 90.2 89.4 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 62.543 | 65.748 | . . | 89.6 | | | | | |
| | JAPETUS | 85 | 7 43 | 64.147 | 86.669 .676 .714 .704 | 7 38 40 | 204.3 204.4 204.6 204.5 | . . | 3 A | 2 | H. | |
| | Mean | . . | 7 45 | . . | 86.691 | 7 39 | 204.45 | | | | | |
| | HYPERION | 90 | 7 54 | 64.147 | 85.590 .578 .509 .692 | 7 50 52 | 197.4 197.4 197.7 197.7 | . . | 3 A | 3 | H. | |
| | Mean | . . | 7 56 | . . | 85.592 | 7 51 | 197.55 | | | | | |
| | TITAN | 95 | 8 20 | 64.150 .140 .148 .149 | 82.542 .560 .534 .498 | 8 15 18 | 190.5 190.7 190.6 190.7 | . . | 3 A | 3 | H. | Chron. corr., 0 ^m .0. |
| | Mean | . . | 8 22 | 64.147 | 82.534 | 8 16 | 190.62 | | | | | |
| | | . . | . . | . . | . . | . . | . . | . . | . . | . . | Hn. | NEPTUNE's satellite just visible; distance about 7"; the seeing quite bad. |
| 17 | <i>v Draconis</i> | 320 | . . | 57.916 .943 .850 .931 | 70.361 .358 .299 .381 | . . 19 ^h .5 s.t. | 156.4 156.4 156.45 156.15 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 57.918 | 70.350 | . . | 156.35 | | | | | |
| | Σ 2034 | 120 | . . | 64.019 .021 | 64.278 .285 | . . 19 ^h .9 s.t. | 165.4 169.2 169.9 169.6 | . . | 5 A | 2 | H. | Images much blurred. |
| | Mean | . . | . . | 64.020 | 64.282 | . . | 168.5 | | | | | |
| | Σ 2326 | 200 | . . | 62.549 .575 .538 .554 | 65.730 .821 .768 .744 | . . 20 ^h .3 s.t. | 90.3 89.0 89.2 89.4 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 62.554 | 65.766 | . . | 89.5 | | | | | |
| | Σ 2452 | 220 | . . | 63.556 .522 .572 .566 | 64.709 .721 .742 .727 | . . 20 ^h .6 s.t. | 68.3 68.8 70.3 68.9 | . . | 3 A | 2 | H. | |
| | Mean | . . | . . | 63.554 | 64.725 | . . | 69.1 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (small-est reading). | Microm. II (larg-est reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|-----------------------------|---------------------------|-----------------------|--------------------------------------|--------------------------------------|--|---------------------------------------|----------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Oct. 17 | Σ 2893 | ° 350 | h. m. . . | r. 61.194 .220 .239 .254 | r. 67.039 .090 .030 .030 | h. m. . . 21 ^h .0 s. t. | ° 301.4 301.3 300.5 300.8 | ° . . | 3 A | 2 | H. | Images very bad and stopped observing double stars. SATURN very bad. HYPERION just visible in about $p = 93^\circ$. |
| | Mean | . . | . . | 61.227 | 67.047 | . . | 301.0 | | | | | |
| 18 | <i>v</i> Draconis | 310 | . . | 57.898 .880 .922 .931 | 70.340 .335 .343 .352 | . . 19 ^h .4 s. t. | 156.6 156.6 156.4 156.2 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 57.908 | 70.342 | . . | 156.45 | | | | | |
| | Σ 2034 | 120 | . . | 64.020 .020 | 64.280 .299 | . . 19 ^h .8 s. t. | 168.5 170.9 172.0 171.1 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 64.020 | 64.289 | | 170.6 | | | | | |
| | Σ 2326 | 200 | . . | 62.540 .550 .549 .566 | 65.788 .740 .769 .738 | . . 20 ^h .1 s. t. | 88.8 88.4 89.0 89.6 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 62.551 | 65.759 | | 88.95 | | | | | |
| | Σ 2452 | 220 | . . | 63.600 .585 .577 .572 | 64.711 .725 .720 .718 | . . 20 ^h .4 s. t. | 67.0 67.8 67.7 68.1 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.584 | 64.718 | . . | 67.65 | | | | | |
| | Σ 2893 | 350 | . . | 61.280 .231 .242 .238 | 67.077 .054 .073 .049 | . . | 300.9 300.6 301.0 301.2 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 61.248 | 67.063 | . . | 300.92 | | | | | |
| | HYPERION | 95 | 7 55 59 | 42.730 .730 .715 .751 | 64.148 | 7 50 52 | 11.70 11.85 11.85 11.65 | . . | 3 A | 4 | H. | |
| | Mean | . . | 7 57 | 42.731 | . . | 7 51 | 11.76 | | | | | |
| | JAPETUS | 85 | 8 6 8 | 49.614 .658 .609 .671 | 64.151 .141 .150 .150 | 8 1 4 | 25.85 26.10 25.90 25.95 | . . | 3 A | 4 | H. | |
| | Mean | . . | 8 7 | 49.638 | 64.148 | 8 3 | 25.95 | | | | | |
| | TITAN | 110 | 8 22 27 | 54.110 .129 | 74.141 .113 | 8 16 20 | 357.8 357.9 357.7 357.95 | . . | 3 A | 4 | H. | |
| | Mean | . . | 8 24 | 54.120 | 74.127 | 8 18 | 357.84 | | | | | |
| | RHEA | 270 | 8 37 41 | 57.490 .482 | 70.755 .815 | 8 32 35 | 19.5 19.4 19.4 19.5 | . . | 3 A | 4 | H. | |
| | Mean | . . | 8 39 | 57.486 | 70.785 | 8 33 | 19.45 | | | | | |
| | DIONE | 260 | 8 45 50 | 60.339 .400 | 67.918 .908 | 8 42 44 | 23.4 23.5 23.7 24.1 | . . | 3 A | 4 | H. | Parallel $18^\circ.95$. Chron. corr., 0 ^m .0. |
| | Mean | . . | 8 47 | 60.369 | 67.913 | 8 43 | 23.7 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|-----------------------------|---------------------------|-----------------------|--|--|------------------------------------|--------------------------------------|----------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Oct. 18 | SATURN | ° | h. m. | r. | r. | h. m. | ° | ° | 3 A | . | H. | The seeing very fine from 7 ^h 50 ^m to 8 ^h 20 ^m . The belts on ball, the divisions of the rings and shadow of ball on ring, all steady and well defined. At times there seemed to be a division of the inner bright ring, but it was not certain. The dusky ring remarkably bright. The outline of shadow of ball on the rings very nearly straight, but slightly convex towards the ball. When a wire was placed near and parallel to edge of shadow the appearance of convexity remained. |
| | | | | | | | | | | | | |
| | Satellite of NEPTUNE | 30 | 10 6 | 62.504 .438 .478 .463 .473 | 65.808 .888 .822 .798 .851 | 9 51 10 1 | 76.4 75.0 73.9 75.2 75.6 | . . | 6 A | 4 | Hn. | Images steady, but diffused. |
| | Mean | . . | 10 18 | 62.471 | 65.833 | 9 56 | 75.2 | | | | | |
| 19 | <i>ν Draconis</i> | 310 | . . | 57.928 .960 .965 .956 | 70.364 .398 .401 .376 | . . 19 ^h 5 s. t. | 156.4 156.35 156.50 156.55 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 57.952 | 70.385 | . . | 156.45 | | | | | |
| | Σ 2034 | 120 | . . | 64.058 .040 | 64.270 .284 | . . 19 ^h 8 s. t. | 170.6 169.8 170.2 170.7 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 64.049 | 64.277 | . . | 170.3 | | | | | |
| | Σ 2326 | 200 | . . | . . | . . | . . 20.1 s. t. | 88.5 88.6 89.3 88.8 | . . | 3 A | 2 | H. | Thin clouds. |
| | Mean | . . | . . | . . | . . | . . | 88.8 | | | | | |
| 21 | Σ 2326 | 200 | . . | 62.576 .563 .560 .550 | 65.731 .732 .723 .761 | . . 20 ^h 0 s. t. | 89.9 88.6 88.5 89.8 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 62.562 | 65.737 | . . | 89.2 | | | | | |
| | O Σ 353 | 70 | . . | 64.109 .110 | 64.191 .195 | . . 20 ^h 3 s. t. | 56.9 54.3 55.6 51.4 | . . | 6 A | 3 | H. | |
| | Mean | . . | . . | 64.110 | 64.193 | | 54.5 | | | | | |
| | O Σ 363 | 40 | . . | 64.115 .104 | 64.186 .191 | . . 20 ^h 6 s. t. | 88.5 87.7 84.6 82.5 | . . | 6 A | 3 | H. | |
| | Mean | . . | . . | 64.110 | 64.189 | . . | 85.8 | | | | | |
| | Σ 2893 | 350 | . . | 61.212 .272 .265 .252 | 67.045 .033 .061 .040 | . . 21 ^h 1 s. t. | 301.5 300.9 300.4 300.5 | . . | 3 A | 4 | H. | |
| | Mean | . . | . . | 61.250 | 67.045 | . . | 300.82 | | | | | |
| | JAPETUS | 50 | 7 36 42 | 61.785 .828 .910 | 66.498 .465 .430 | 7 32 35 | 49.2 50.1 49.1 49.0 | . . | 3 A | 3 | H. | |
| | Mean | . . | 7 39 | 61.841 | 66.464 | 7 34 | 49.35 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|-------------------|---------------------------|-----------------------|--------------------------------|-------------------------------|---------------------------------|----------------------------------|----------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Oct. 21 | MIMAS | ° 95 | h. m. . . | r. . . | r. . . | h. m. 8 27 32 | ° 13.0 13.6 13.2 | ° . . | 3 A | 1 | H. | MIMAS excessively faint. Foggy. At 7 ^h 35 ^m , JAPETUS fainter by $\frac{1}{2}$ magnitude than TETHYS, which is n. f., and near JAPETUS. Parallel = 108°.90. Chron. corr., + 0 ^m .3. |
| | Mean | . . | . . | . . | . . | 8 30 | 13.3 | | | | | |
| 24 | O Σ 363 | 30 | . . | 64.120 .108 | 64.185 .187 | . . 20 .2 s. t. | 87.2 87.8 89.4 87.2 | . . | 6 A | 2 | H. | |
| | Mean | . . | . . | 64.114 | 64.186 | . . | 87.9 | | | | | |
| | Σ 2708 | 340 | . . | 61.956 .972 .968 | 66.340 .351 .346 | . . 21 ^h .1 s. t. | 135.5 134.9 135.6 135.1 | . . | 3 A | 3 | H. | Chron. corr., + 0 ^m .4. |
| | Mean | . . | . . | 61.965 | 66.346 | . . | 135.3 | | | | | |
| | JAPETUS | 275 | 7 44 49 | 53.635 .656 | 74.753 .704 | 7 36 40 | 15.8 15.8 15.7 16.1 | . . | 3 A | 3 | H. | |
| | Mean | . . | 7 47 | 53.645 | 74.728 | 7 38 | 15.85 | | | | | |
| 27 | O Σ 353 | 50 | . . | 64.102 .099 | 64.186 .192 | . . 19 ^h .9 s. t. | 55.8 53.8 56.0 54.6 | . . | 6 A | 3 | H. | |
| | Mean | . . | . . | 64.100 | 64.189 | . . | 55.0 | | | | | |
| | O Σ 363 | 20 | . . | 64.106 .110 | 64.193 .195 | . . 20 ^h .2 s. t. | 88.4 90.6 91.0 88.8 | . . | 6 A | 3 | H. | |
| | Mean | . . | . . | 64.108 | 64.194 | . . | 89.7 | | | | | |
| | O Σ 413 | 90 | . . | 64.066 .064 | 64.219 .225 | . . 20 ^h .7 s. t. | 208.0 203.7 202.7 200.6 | . . | 6 A | 2 | H. | |
| | Mean | . . | . . | 64.065 | 64.222 | . . | 203.8 | | | | | |
| | Σ 2924 | 270 | . . | 64.075 .063 | 64.237 .241 | . . 21 ^h 2 s. t. | 200.8 201.0 201.4 201.1 | . . | 6 A | 3 | H. | |
| | Mean | . . | . . | 64.069 | 64.239 | . . | 201.1 | | | | | |
| | Σ 2923 | 30 | . . | 63.208 .129 .179 .167 | 65.098 .120 .104 109 | . . 21 ^h .4 s. t. | 241.4 241.6 241.4 241.8 | . . | 3 A | 2 | H. | |
| | Mean | . . | . . | 63.171 | 65.108 | . . | 241.55 | | | | | |
| | O Σ 481 | 270 | . . | 63.902 .895 .910 | 64.382 .407 .420 | . . 21 ^h .7 s. t. | 201.3 199.9 201.2 201.0 | . . | 3 A | 2 | H. | |
| | Mean | . . | . . | 63.902 | 64.403 | . . | 200.8 | | | | | |
| | TETHYS | 95 | 7 51 55 | 59.791 .780 | 68.528 .500 | 7 47 49 | 12.5 12.5 12.9 13.0 | . . | 3 A | 3 | H. | |
| | Mean | . . | 7 54 | 59.786 | 68.514 | 7 49 | 12.7 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|----------------------|---------------------------|-----------------------|--|--|---------------------------------|--------------------------------------|----------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Oct. 27 | RHEA | 270 | h. m. 8 0 4 | r. 57.989 .984 | r. 70.339 .330 | h. m. 7 57 59 | ° 20.2 20.5 20.5 20.1 | ° . . | 3 A | 3 | H. | |
| | Mean | . . | 8 3 | 57.986 | 70.334 | 7 59 | 20.3 | | | | | |
| | DIONE | 285 | 8 8 13 | 60.431 .440 | 67.960 .855 | 8 5 7 | 2.3 1.9 2.8 1.8 | . . | 3 A | 3 | H. | |
| | Mean | . . | 8 11 | 60.436 | 67.908 | 8 7 | 2.2 | | | | | |
| | ENCELADUS | 85 | 8 20 23 | 61.790 .666 | 66.550 .600 | 8 16 18 | 21.5 22.1 23.8 22.1 | . . | 3 A | 2 | H. | Faint. |
| | Mean | . . | 8 22 | 61.728 | 66.575 | 8 18 | 22.4 | | | | | |
| | TITAN | 350 | 8 30 33 | 61.140 .179 | 67.143 .116 | 8 25 28 | 117.4 118.0 117.3 117.3 | . . | 3 A | 3 | H. | |
| | Mean | . . | 8 32 | 61.160 | 67.130 | 8 27 | 117.5 | | | | | |
| | JAPETUS | 270 | 8 42 45 | 64.146 .144 .146 .145 | 86.568 .540 .575 .563 | 8 36 40 | 108.5 108.2 108.4 108.7 | . . | 3 A | 3 | H. | Long wire. Parallel for long wire = 108°.50. Temperature, 43° 5. |
| | Mean | . . | 8 44 | 64.145 | 86.562 | 8 39 | 108.45 | | | | | |
| | Satellite of NEPTUNE | 210 | 9 40 10 10 | 62.543 .587 .559 .622 .593 | 65.762 .763 .716 .742 .721 | 9 25 35 | 78.7 77.2 77.7 78.0 78.5 | . . | 6 A | . | Hn. | Chron. corr., + 0 ^m .6. |
| | Mean | . . | 9 56 | 62.581 | 65.741 | 9 31 | 78.0 | | | | | |
| | O Σ 353 | 50 | . . | 64.096 .101 | 64.181 .188 | . . 20 ^h .1 s. t. | 55.2 56.7 55.0 56.5 | . . | 6 A | 2 | H. | |
| | Mean | . . | . . | 64.099 | 64.185 | . . | 55.8 | | | | | |
| | O Σ 363 | 20 | . . | 64.102 .094 | 64.181 .188 | . . 20 ^h .3 s. t. | 88.5 87.0 87.8 88.0 | . . | 6 A | 2 | H. | |
| | Mean | . . | . . | 64.098 | 64.185 | . . | 87.8 | | | | | |
| 31 | Σ 2924 | 260 | . . | 64.070 .075 | 64.229 .238 | . . 20 ^h .7 s. t. | 205.8 207.9 206.8 205.2 | . . | 5 A | 2 | H. | |
| | Mean | . . | . . | 64.072 | 64.233 | . . | 206.4 | | | | | |
| | Σ 2923 | 40 | . . | 63.210 .197 .205 .207 | 65.114 .102 .118 .100 | . . 20 ^h .9 s. t. | 242.8 242.1 241.9 242.8 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.205 | 65.108 | . . | 242.4 | | | | | |
| | O Σ 481 | 270 | . . | 63.925 .923 .900 | 64.370 .388 .383 | . . 21 ^h .3 s. t. | 199.8 199.5 199.4 198.4 | . . | 3 A | 3 | H. | |
| | Mean | . . | . . | 63.916 | 64.380 | . . | 199.3 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|----------------------|---------------------------|-----------------------|--------------------------------|--------------------------------|--------------------------|--------------------------------------|----------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Oct. 31 | MIMAS | ° 275 | h. m. 7 1 5 | r. 61.543 .540 | r. 66.734 .674 | h. m. 6 57 7 0 | ° 9.9 9.6 9.4 9.2 | ° . . | 3 A | 4 | H. | |
| | Mean | . . | 7 4 | 61.541 | 66.704 | 6 59 | 9.5 | | | | | |
| | TITAN | 90 | 7 22 25 | 75.855 .846 .870 .888 | 94.470 | 7 17 19 | 103.73 103.60 103.55 103.73 | . . | 3 A | 4 | H. | Long wire. |
| | Mean | . . | 7 24 | 75.865 | . . | 7 19 | 103.65 | | | | | |
| | JAPETUS | 270 | 7 37 44 | 58.576 .623 .606 .582 | 94.465 .468 .473 .472 | 7 30 33 | 109.95 109.87 109.98 109.95 | . . | 3 A | 4 | H. | Long wire. Parallel for short wire = 18°.90. Chron. corr., + 0m.8. |
| | Mean | . . | 7 41 | 58.597 | 94.470 | 7 32 | 109.94 | | | | | |
| | Satellite of NEPTUNE | 300 | . . | . . | . . | 9 36 52 | 160.0 157.3 156.4 156.6 | . . | 6 A | 5 | Hn. | Measures made with black wires, in a field illuminated by the nearly full moon, which is very close to NEPTUNE. No measure possible with the least illumination of the wires. An endeavor to measure the distance failed, as the images grew much worse. Object-glass covered with dew. |
| | Mean | . . | . . | . . | . . | 9 44 | 157.6 | | | | | |
| | TITAN | 95 | 7 51 54 | 76.611 .602 .604 .628 | 94.478 .471 .466 .479 | 7 46 48 | 99.85 100.17 100.00 99.83 | . . | 3 A | 4 | H. | |
| | Mean | . . | 7 53 | 76.611 | 94.474 | 7 48 | 99.96 | | | | | |
| Nov. 1 | JAPETUS | 270 | 8 6 9 | 55.708 .729 .771 .708 | 94.474 | 7 57 8 0 | 110.07 110.07 110.02 110.35 | . . | 3 A | 3 | H. | Parallel for long wire = 108°.53. |
| | Mean | . . | 8 8 | 55.729 | . . | 7 59 | 110.13 | | | | | |
| | Satellite of NEPTUNE | 220 | 9 51 56 | 64.149 .760 .790 | 65.751 .760 .790 | 9 38 44 | 61.1 60.8 61.0 | . . | 6 A | 3 | Hn. | Observations taken with illuminated wires, on a field illuminated with moonlight. Satellite extremely faint. Chron. corr., + 0m.8. |
| | Mean | . . | 9 54 | . . | 65.767 | 9 42 | 60.9 | | | | | |
| | Satellite of NEPTUNE | 220 | 12 2 17 | 62.492 .471 .448 .500 | 65.761 .850 .840 .808 | 11 46 54 | 245.8 245.4 246.1 246.1 | . . | 6 A | 2 | Hn. | Tel. E. Images unsteady and diffused. Chron. corr., - 2m.0. |
| | Mean | . . | 12 10 | 62.478 | 65.815 | 11 50 | 245.9 | | | | | |
| | HYPERION | 95 | 6 27 32 | 43.117 .070 | 64.139 | 6 19 23 | 12.8 12.8 13.0 12.4 | . . | 3 A | 2 | H. | Chron. corr., - 2m.0. |
| | Mean | . . | 6 28 | 43.094 | . . | 6 19 | 12.75 | | | | | |
| | JAPETUS | 268 | 6 22 35 | 41.869 .811 | 94.443 .447 | 6 6 14 | 110.93 110.93 110.98 110.97 | . . | 3 A | 2 | H. | Chron. corr., + 1m.5. Parallel for long wire = 108°.47. Temp., 43°.5. |
| | Mean | . . | 6 30 | 41.840 | 94.445 | 6 11 | 110.95 | | | | | |
| 12 | JAPETUS | 267 | 6 3 5 | 42.010 .054 | 94.460 | 5 52 56 | 111.13 111.15 111.20 111.18 | . . | 3 A | 3 | H. | |
| | Mean | . . | 6 5 | 42.032 | . . | 5 56 | 111.17 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|--------------------------|---------------------------|-----------------------|--------------------------------------|--------------------------------|---------------------------------|---------------------------------------|----------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Nov. 12 | TITAN | 350 | h. m. 6 20 25 | r. 61.158 .100 .139 | r. 67.132 .148 .141 | h. m. 6 14 18 | ° 121.4 121.6 121.2 121.3 | ° . . | 3 A | 3 | H. | Chron. corr., + 1 ^m .6. |
| | Mean | . . | 6 24 | 61.132 | 67.140 | 6 18 | 121.38 | | | | | |
| 22 | τ Cygni | 170 | . . | 64.030 .033 | 64.240 .240 | . . 21 ^h .7 s. t. | 307.8 307.1 307.1 306.2 | . . | 5 A | 2 | H. | Images became very bad. |
| | Mean | . . | . . | 64.031 | 64.240 | . . | 307.0 | | | | | |
| | JAPETUS | 267 | 6 26 30 | 61.023 60.992 61.044 60.995 | 94.441 .448 .446 .448 | 6 17 22 | 112.35 112.35 112.47 112.60 | . . | 3 A | 3 | H. | Temperature, 51° 0. Chron. corr., - 4 ^m .2. |
| | Mean | . . | 6 24 | 61.014 | 94.446 | 6 15 | 112.44 | | | | | |
| | 65 Piscium | 300 | . . | 63.674 .674 | 64.590 .592 | . . 0 ^h .0 s. t. | 172.2 175.0 174.7 172.4 | . . | 3 A | 2 | H. | |
| | Mean | . . | . . | 63.674 | 64.591 | . . | 173.6 | | | | | |
| | Satellite of NEPTUNE . | 40 | . . | . . | . . | 9 17 28 | 71.4 72.3 69.5 71.0 69.5 | . . | 6 A | 1 | Hn. | Images excessively unsteady, and no distance measured on that account. |
| | Mean | . . | . . | . . | . . | 9 23 | 70.7 | | | | | |
| 23 | MIMAS (?) | 95 | 7 5 | 61.551 | 66.862 | 6 55 57 | 13.8 14.4 14.7 | . . | 2 A | 2 | H. | Moon about 3 degrees distant from SATURN. Poor seeing with higher powers. It will be very curious if this object proves to be MIMAS. Chron. corr., + 2 ^m .3. |
| | Mean | . . | 7 7 | . . | . . | 6 58 | 14.3 | | | | | |
| 24 | τ^1 Cygni | 260 | . . | 62.570 .587 | 65.742 .720 | . . 21 ^h .8 s. t. | 208.8 210.2 207.8 207.8 | . . | 3 A | 2 | H. | Fifteenth magnitude. |
| | Mean | . . | . . | 62.578 | 65.731 | . . | 208.6 | | | | | |
| | τ^2 Cygni | 160 | . . | 64.039 .015 | 64.228 .241 | . . 22 ^h .1 s. t. | 309.6 310.7 309.2 312.3 | . . | 6 A | 2 | H. | |
| | Mean | . . | . . | 64.027 | 64.235 | . . | 310.4 | | | | | |
| | MIMAS | 95 | . . | . . | . . | 6 33 36 | 14.0 12.4 | . . | 3 A | 2 | H. | Very faint. |
| | Mean | . . | . . | . . | . . | 6 37 | 13.2 | | | | | |
| | JAPETUS | 266 | 6 46 50 | 67.724 .787 .770 .773 | 94.450 . . | 6 40 43 | 112.9 113.4 113.1 113.05 | . . | 3 A | 2 | H. | Long wire. Temperature, 34° 8. |
| | Mean | . . | 6 50 | 67.764 | . . | 6 44 | 113.11 | | | | | |
| | TITAN | 275 | 7 0 5 | 77.470 .459 .392 .484 | 94.453 .450 .452 .446 | 6 53 57 | 103.63 103.70 103.43 103.40 | . . | 3 A | 2 | H. | Chron. corr., + 2 ^m .4, long wire. Parallel for long wire = 108° 50. |
| | Mean | . . | 7 5 | 77.451 | 94.450 | 6 57 | 103.54 | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|----------------------|---------------------------|------------------------|--------------------------------------|--------------------------------------|--------------------------------|-----------------------------------|----------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Nov. 29 | JAPETUS | ° 260 | h. m. 6 2 | r. 56.469 .538 .591 .560 | r. 71.747 .784 .773 .758 | h. m. 5 56 6 0 | ° 30.0 30.0 29.6 30.0 | ° . . | 3 A | 1 | H. | JAPETUS is a very little brighter than DIONE; by estimation $\frac{1}{4}$ of a magnitude brighter. Images very bad and unsteady. Chron. corr., + 2 ^m .6. |
| | Mean | . . | 6 9 | 56.539 | 71.765 | 6 1 | 29.9 | | 3 A | | H. | |
| Dec. 1 | JAPETUS | . . | . . | . . | . . | . . | . . | . . | 3 A | | H. | At 5 ^h 50 ^m JAPETUS is barely visible in $\phi = 170^\circ$ about. Only visible by glimpses. The seeing very bad. At 6 ^h 30 ^m JAPETUS easily and distinctly seen; the seeing better. |
| | JAPETUS | 160 | 6 50 57 | 62.825 .710 .769 | 65.506 .520 .590 | 6 45 48 | 141.2 141.6 141.6 142.6 | . . | 3 A | 2 | H. | At 7 ^h 0 ^m JAPETUS steadily seen; estimated to be of 14th magnitude. Chron. corr., + 2 ^m .8. |
| | Mean | . . | 6 56 | 62.768 | 65.539 | 6 49 | 141.8 | | | | | |
| 4 | 65 Piscium | 120 | . . | 63.666 .667 | 64.578 .581 | . . 0 ^h .3 s. t. | 171.2 171.3 170.8 172.2 | . . | 3 A | 2 | H. | |
| | Mean | . . | . . | 63.667 | 64.580 | . . | 171.4 | | | | | |
| 5 | TITAN | 110 | 5 21 26 | 55.024 54.970 | 73.313 .304 | 5 16 19 | 358.5 358.3 358.6 358.4 | . . | 3 A | 2 | H. | Short wire. |
| | Mean | . . | 5 24 | 54.997 | 73.308 | 5 18 | 358.45 | | | | | |
| | JAPETUS | 90 | 5 33 37 | 47.851 .880 .831 .840 | 64.138 .140 .140 .139 | 5 28 31 | 18.0 17.8 17.7 17.8 | . . | 3 A | 2 | H. | JAPETUS fainter than RHEA and a little fainter, say $\frac{1}{4}$ magnitude, than DIONE. Chron. corr., + 0 ^m .1. Temperature = 32°0. Parallel = 18°85. |
| | Mean | . . | 5 35 | 47.851 | 64.139 | 5 30 | 17.82 | | | | | |
| | Pleiades | . . | h. m. 3 3 s. t. | Atlas. 45.160 .162 | Pleione. 75.412 | . . | . . | . . | 6 A | | Hn. | Setting, 198°9; temperature, 29°0 F.; bright field. Then removed Mic. I and put in Mic. II. Focus of Mic. I at 1 ^m .90 of scale on its tube. Measures of $\Delta\delta$. |
| | | | 3 10 s. t. 12 s. t. | 45.052 .059 | 75.338 .311 | | | | | | | |
| | | | 3 17 s. t. | | .154 .194 | | | | | | | |
| | | | 3 22 | 44.976 .973 | .162 .196 | | | | | | | |
| | | | | 44.976 .959 | | | | | | | | |
| | | | | .074 .062 | | | | | | | | |
| | | | 3 34 s. t. | 44.827 .772 | | | | | | | | |
| | | | | | 74.988 | | | | | | | |
| | G. C. 1191 | . . | . . | . . | . . | . . | . . | . . | 2 A | | Hn. | Variable nebula; sky too bright to see it. Parallel, 15°2. |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|-----------------|----------------------|---------------------------|-----------------------|-------------------------------|-------------------------------|-----------------------|------------------------------|----------|------------|--------|-----------|---|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Dec. 7 | SATURN | ° | h. m. | r. | r. | h. m. | ° | ° | 3 A | 3 | H. | At 22 ^h 40 ^m , s. t., I noticed a very white spot on the ball of SATURN just below the ring. The spot was toward the following side of the ball, about $\frac{1}{4}$ of the distance from the center of ball to the edge. At 23 ^h 26 ^m , the spot was in center of ball. The seeing became very bad. At 0 ^h 10 ^m , s. t., the white spot on the preceding side of center of ball, about $\frac{1}{4}$ from center to edge, but seeing very poor. When first seen this spot was round and well defined, and some 2" or 3" in diameter. Spot at center at 6 ^h 18 ^m , m. t. |
| 13 | SATURN | ° | ° | ° | ° | ° | ° | ° | 3 A | 3 | H. | The white spot seen on December 7 is visible to-night. It is not so round and well defined as on the 7th, but has become elongated. It was first seen at 5 ^h 20 ^m , m. t., on the following side of the center of the disk. Through thin clouds the spot was well seen. The spot was watched from 5 ^h 20 ^m , m. t., till 6 ^h 0 ^m . At 5 ^h 44 ^m , it was nearly up to center of disk. At 5 ^h 51 ^m , it was certainly past the center. By the best observation I can make of it with micrometer and eye estimation, the spot was at the center of disk at 5 ^h 47 ^m , m. t. The clouds cleared off at 5 ^h 30 ^m , but seeing poor. Observed for position of instrument, |
| | Satellite of NEPTUNE | 220 | 9 40 47 | 62.608 .610 | 65.773 .718 | 9 28 | 83.9 83.4 83.3 84.6 | ° | 6 A | 2 | Hn. | Chron. corr., + 0 ^m .3. Parallel = 24°.9. Removed Mic. I and then replaced it. |
| | Mean | ° | 9 44 | 62.609 | 65.746 | 9 31 | 83.8 | | | | | |
| 15 | Satellite of NEPTUNE | ° | ° | ° | ° | ° | ° | ° | 6 A | . | Hn. | Satellite is quite faint in $\beta = 40^\circ \pm$, and distance about 15". A star, 15-16 magnitude, precedes NEPTUNE, and is distant $2\frac{1}{2}$ times the distance of the satellite and about 260° more position angle. The seeing is very bad. |
| 16 | SATURN | ° | ° | ° | ° | ° | ° | ° | 3 A | I | H. | The white spot was looked for from 5 ^h 15 ^m till 5 ^h 40 ^m ; the temperature falling rapidly, and as bad images as I have ever seen. The spot was visible at times, when the image of the planet became a little steady. It was at center of disk at 5 ^h 31 ^m , m. t. The times noted were— 5 ^h 28 ^m , hardly up. 5 ^h 30 ^m , center. 5 ^h 32 ^m , center. 5 ^h 37 ^m , past center. I estimate the probable error of determining the time when the spot is at center of disk to be, on a good night, $\pm 3^m$; to-night at $\pm 5^m$. |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|----------------------|---------------------------|-----------------------|---|-------------------------------|--|--------------------------------------|----------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Dec. 19 | SATURN | ° | h. m. | r. | r. | h. m. | ° | ° | 3 A | 3 | H. | At— 4 ^h 52 ^m , spot to the right of center. 4 ^h 58 ^m , very nearly up. 5 ^h 1 ^m , at center. 5 ^h 5 ^m , at center. 5 ^h 8 ^m , at center. 5 ^h 12 ^m , past center. 5 ^h 15 ^m , past center. At center at 5 ^h 6 ^m , Wash. m. t. The spot has become more elongated and is spreading out into a bright band. The observations of Professor NEWCOMB and myself were made independently. |
| | SATURN | | | | | | | | 3 A | 3 | N. | 4 ^h 46 ^m , only a few minutes after sunset, but spot is distinctly visible, looking like a bright band stretching round the planet. The brightest portion is decidedly on the following side of the center. 4 ^h 53 ^m , I now see that while the belt seems to extend to the preceding limb of the planet, it does not extend to the following limb; still the brightest portion is on the following side of the center of the disk. 5 ^h 0 ^m , the brightest part seems in the center of the disk, but may deviate a little toward the following side, as before. The following end of the patch decidedly inside the limb. 5 ^h 5 ^m , the spot seems exactly central. 5 ^h 8 ^m , still seems central. 5 ^h 11 ^m , still central, with a suspicion of being a little on the preceding side. 5 ^h 14 ^m , seems to have passed, but not sure. Suspicion about the same as at 5 ^h 0 ^m . S. NEWCOMB. |
| | JAPETUS | 87 | 6 33 | 46.270 .380 .300 40 .325 | 94.460 .441 .450 452 | 6 28 | 116.18 116.28 116.20 116.00 | | 3 A | 3 | H. | |
| | Mean | | 6 37 | 46.319 | 94.451 | 6 30 | 116.16 | | | | | |
| | Satellite of NEPTUNE | 210 | | | | 9 6 | 85.8 84.7 86.8 12 85.8 | | 6 A | 1 | Hn. | Four 13th magnitude stars in field of 400 A. Too unsteady to measure distances to advantage and image blurred. Chron. corr., + 0 ^m .9. |
| | Mean | | | | | 9 10 | 85.8 | | | | | |
| | Pleiades | | Sid. t. 3 22 | 34.005 33.834 33.887 34.011 3 56 33.969 | | Δδ 30.128 30.299 30.246 30.122 30.164 | | | 3 A | | Hn. | Δδ <i>Atlas</i> and <i>Pleione</i> . First set <i>Atlas</i> on fixed wire. Bright wires. Micrometer I. Second set <i>Pleione</i> on fixed wire. Wt., 4. Coincidence, 64.133. Took off Micrometer I and put on Micrometer II. Parallel for long wire, 135°.3. Observed transits of <i>Orion</i> stars 628, 685, 708, 741, and 724 (G. P. BOND) for mic. revolution. Transits observed with setting 127.2. Temp. ex. ther = 20°.0 at beginning; box ther. = 29°.0. Temp. ex. ther. = 19°.5 at ending; box ther. = 27°.0. Bright field and black wires. Weight, 4. Coincidence of fixed wire and wire 5 at 64.792. From a mean of 125 transits of 5 stars over two wires we have 26°.091 as the distance between the wires. |
| | | | 4 3 | 94.380 .382 .394 .372 4 13 .392 | | 30.247 .249 .261 .239 30.259 | | | | | | |

| Date. | Object observed. | Estimated position angle. | Washington Mean Time. | Microm. I (smallest reading). | Microm. II (largest reading). | Washington Mean Time. | Position Circle. | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|--------------------------------|---------------------------|-----------------------|-------------------------------|-------------------------------|-----------------------|------------------|----------|------------|--------|-----------|--|
| | | | | | | | Ver. I. | Ver. II. | | | | |
| 1876. Dec. 20 | <i>Pleione and Atlas</i> . . . | ° | h. m. | r. | r. | h. m. | ° | ° | B | . | Hn. | <i>Pleione</i> on fixed wire = <i>Atlas</i> on wire I. Ex. temp., 20°.5; box. ther. = 23°.5 at beginning; ex. temp., 20°.0; box ther. = 25°.0 at ending. Coincidence of wire I and fixed wire = 84°.852. Took off Micrometer II and replaced Micrometer I. |
| | | | 2 50 | 115.090 | 30.238 | | | | | | | |
| | | | | .149 | .297 | | | | | | | |
| | | | | .113 | .261 | | | | | | | |
| | | | | .113 | .261 | | | | | | | |
| | | | | .132 | .250 | | | | | | | |
| | | | | .106 | .254 | | | | | | | |
| | | | | .127 | .275 | | | | | | | |
| | | | | .127 | .275 | | | | | | | |
| | | | | .149 | .297 | | | | | | | |
| | Mean | | | 115.122 | 30.270 | | | | | | | |
| 21 | JAPETUS | 87 | 5 53 | 46.270 | 94.447 | 5 42 | 137.83 | | 3 A | 2 | II. | h. m. White spot at 8 7 not yet up to center. 8 15 at center. 8 18 at center. 8 20 at center. 8 24 cert'nly past cent'r. — — At center at 8 19 The seeing fair at this altitude. The spot appears to be nearly the same as on the 19th. It may be a little more elongated on the preceding side, and perhaps this causes one to observe the spot central a little too early. Chron. corr., + 1 ^m .0. |
| | | | 56 | .247 | .444 | | 138.00 | | | | | |
| | | | | .254 | .450 | | 138.10 | | | | | |
| | | | | | | 49 | 138.18 | | | | | |
| | Mean | | 5 55 | 46.257 | 94.447 | 5 46 | 138.03 | | | | | |
| | SATURN | | | | | | | | 3 A | 3 | H. | |
| | | | | | | | | | | | | |
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| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| 27 | SATURN | | | | | | | | 3 A | 2 | H. | The seeing not very good. The spot is lengthened on the preceding side into a bright belt; on the fol- lowing side it is still cut off by the dark surface of the planet. I ob- serve the brightest part of the spot near the following end of the bright belt. The spot was at center of disk at 7 ^h 34 ^m . Chron. corr., + 1 ^m .0. Occultation ϵ <i>Pleiadum</i> = Bessel 4. P. V. signal at . . . 3 ^h 55 ^m 8 ^s .0 Corr. to Kessels cl'k . . . + 3 ^s .51 Disap. by Kessels cl'k 3 ^h 55 ^m 11 ^s .51 Disap. instantaneous; signal late; weight, 3. Immersion of m <i>Pleiadum</i> = Bessel No. 3. P. V. signal at . . . 4 ^h 14 ^m 43 ^s .5 Clock corr. to K. . . + 3 ^s .51 Immersion K. cl'k t. . . 4 ^h 14 ^m 47 ^s .01 Disappearance instantaneous; signal late; weight, 3. Reappearance of ϵ <i>Pleiadum</i> . P. V. cl'k signal at . . . 4 ^h 58 ^m 16 ^s .7 Correction + 3 ^s .5 K. cl'k t. 4 ^h 58 ^m 20 ^s .2 Observation late several seconds; say + 3 ^s . |
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| 30 | SATURN | | | | | | | | 3 A | 2 | H. | Images poor and spot faint. Spot at center at . . . 7 ^h 22 ^m Spot at center at . . . 7 ^h 24 ^m A little past center at . . . 7 ^h 29 ^m Spot at center of disk at . . . 7 ^h 24 ^m , chronometer time. Correction to chron., + 1 ^m . 2. |

| Date. | Object observed. | Saturn. | | Satellite. | | Δa | | Eye-piece. | Image. | Observer. | REMARKS. |
|-----------------|------------------|-------------|----------------------|----------------------|----------|------------|----------|------------|--------|-----------|---|
| | | Wire I. | Wire II. | Wire I. | Wire II. | Wire I. | Wire II. | | | | |
| 1876, June 5 | JAPETUS . . . | h. m. s. | s. | h. m. s. | s. | s. | s. | 3 A | 2 | H. | JAPETUS south, preceding SATURN. ρ (est.) 265° . Image bad at times. $\Delta \delta$ by twilight. Chron. corr., 0 ^m .0. |
| | | 20 39 15.20 | 18.00 | 20 38 40.48 | 43.30 | -34.72 | -34.70 | | | | |
| | | 41 2.01 | 5.66 | 40 27.28 | 31.00 | .73 | .66 | | | | |
| | | 41 4.70 | 8.43 | 43 30.00 | 33.82 | .70 | .61 | | | | |
| | | 45 41.48 | 44.31 | 45 6.92 | 10.58 | .56 | .73 | | | | |
| | | 47 1.32 | 5.15 | 46 26.65 | 30.43 | .67 | .72 | | | | |
| | | 48 42.35 | 46.14 | 48 7.75 | 11.43 | .60 | .71 | | | | |
| | | 50 13.56 | 17.34 | 49 38.80 | 42.63 | .76 | .71 | | | | |
| | | 51 38.30 | 42.07 | 51 3.52 | 7.50 | .78 | .57 | | | | |
| | | 52 54.13 | 57.94 | 52 19.48 | 23.20 | .65 | .74 | | | | |
| | | 20 54 6.15 | 9.73 | 20 53 31.55 | 35.17 | -34.60 | -34.56 | | | | |
| | | Mean | . . . | . . . | . . . | -34.677 | -34.671 | | | | |
| | | | 62 ^r .301 | 65 ^r .590 | . . . | . . . | . . . | | | | Clouds cleared away at 3½ o'clock this morning, but some haze left, and images not very good. The division of rings very well seen at 4½ hours, and was sharp and clear. The shadow of ball on ring nearly straight, but apparently a little curved, the same as last year. |
| | | | .420 | .700 | . . . | . . . | . . . | | | | |
| | | h. m. | .490 | .740 | . . . | . . . | . . . | | | | |
| | | 4 4 | .511 | .813 | . . . | . . . | . . . | | | | |
| | | | .570 | .856 | . . . | . . . | . . . | | | | |
| | | Mean | . . . | 62.458 | 65.740 | . . . | . . . | | | | |
| 6 | JAPETUS . . . | 20 23 48.11 | 52.53 | 20 23 13.25 | 17.62 | -34.86 | -34.91 | 3 A | 3 | H. | JAPETUS south, preceding SATURN. ρ (est.) 265° . Chron. corr., - 0 ^m .1. |
| | | 25 14.99 | 19.32 | 24 40.00 | 44.50 | .99 | .82 | | | | |
| | | 27 7.38 | 11.80 | 26 32.50 | 36.80 | .88 | 35.00 | | | | |
| | | 28 35.49 | 39.90 | 28 0.57 | 5.00 | .92 | 34.90 | | | | |
| | | 30 59.30 | 31 3.66 | 30 24.36 | 28.82 | .94 | .84 | | | | |
| | | 32 42.31 | 46.78 | 32 7.40 | 11.88 | .91 | .90 | | | | |
| | | 34 41.96 | 46.40 | 34 7.05 | 11.42 | .91 | .98 | | | | |
| | | 36 21.20 | 25.61 | 35 46.30 | 50.73 | .90 | .88 | | | | |
| | | 38 49.16 | 53.48 | 38 14.25 | 18.72 | .91 | .76 | | | | |
| | | 40 40.20 | 44.54 | 40 5.30 | 9.70 | .90 | .84 | | | | |
| | | 42 14.22 | 18.65 | 41 39.40 | 43.75 | .82 | .90 | | | | |
| | | 44 2.50 | 6.83 | 43 27.53 | 31.90 | .97 | .93 | | | | |
| | | 46 8.54 | 12.86 | 45 33.62 | 38.05 | -34.92 | -34.81 | | | | |
| | | Mean | . . . | . . . | . . . | -34.910 | -34.882 | | | | |
| | | | 67 ^r .233 | 70 ^r .770 | . . . | . . . | . . . | | | | |
| | | | .475 | 71.040 | . . . | . . . | . . . | | | | |
| | | h. m. | 68.380 | .901 | . . . | . . . | . . . | | | | |
| | | 3 54 | .420 | .940 | . . . | . . . | . . . | | | | |
| | | | .518 | 72.080 | . . . | . . . | . . . | | | | |
| | | Mean | . . . | 68.005 | 71.546 | . . . | . . . | | | | |
| | | | 66 ^r .790 | 70 ^r .574 | . . . | . . . | . . . | | | | |
| | | | .905 | .695 | . . . | . . . | . . . | | | | |
| | | h. m. | .930 | .739 | . . . | . . . | . . . | | | | |
| | | 4 3 | 67.044 | .761 | . . . | . . . | . . . | | | | |
| | | | .068 | .865 | . . . | . . . | . . . | | | | |
| | | Mean | . . . | 66.947 | 70.725 | . . . | . . . | | | | |
| 7 | JAPETUS . . . | 20 46 6.78 | 10.87 | 20 45 31.90 | 35.98 | -34.88 | -34.89 | 3 A | 4 | H. | JAPETUS south, preceding SATURN. ρ (est.) 270° . Chron. corr., + 0 ^m .1. |
| | | 47 54.34 | 58.28 | 47 19.40 | 23.40 | .90 | .88 | | | | |
| | | 49 23.94 | 28.01 | 48 49.00 | 53.15 | .94 | .86 | | | | |
| | | 50 54.24 | 58.23 | 50 19.30 | 23.30 | .94 | .93 | | | | |
| | | 53 19.95 | 23.94 | 52 45.00 | 49.00 | .95 | .94 | | | | |
| | | 54 36.04 | 40.08 | 54 1.00 | 5.13 | 35.04 | .95 | | | | |
| | | 56 3.91 | 7.97 | 55 29.00 | 33.00 | 34.91 | .97 | | | | |
| | | 57 52.23 | 56.28 | 57 17.38 | 21.35 | .85 | .93 | | | | |
| | | 20 59 36.84 | 40.92 | 20 59 1.93 | 5.97 | .91 | .95 | | | | |
| | | 21 1 45.90 | 49.90 | 21 1 11.00 | 15.10 | .90 | .80 | | | | |
| | | 3 30.21 | 34.19 | 2 55.25 | 59.33 | -34.96 | -34.86 | | | | |
| | | Mean | . . . | . . . | . . . | -34.925 | -34.905 | | | | |
| | | | 66 ^r .790 | 70 ^r .574 | . . . | . . . | . . . | | | | |
| | | | .905 | .695 | . . . | . . . | . . . | | | | |
| | | h. m. | .930 | .739 | . . . | . . . | . . . | | | | |
| | | 4 3 | 67.044 | .761 | . . . | . . . | . . . | | | | |
| | | | .068 | .865 | . . . | . . . | . . . | | | | |
| | | Mean | . . . | 66.947 | 70.725 | . . . | . . . | | | | |

| Date. | Object observed. | Saturn. | | Satellite. | | Δa | | Eye-piece. | Image. | Observer. | REMARKS. |
|-----------------|------------------|--|---|--|--|---|---|------------|--------|-----------|--|
| | | Wire I. | Wire II. | Wire I. | Wire II. | Wire I. | Wire II. | | | | |
| 1876. June 7 | SATURN . . | h. m. s. | m. s. | h. m. s. | m. s. | s. | s. | . | . | . | Very fine seeing this morning. TITAN, RHEA, DIONE, and TE-THYS on the following side of the planet, and ENCELADUS preceding. ENCELADUS seen in the twilight until 4 ^h 10 ^m . The principal division of the ring well seen at 4 ^h 5 ^m to 4 ^h 10 ^m , also the belt below the ring on north side well seen. The division sharp. The shadow of ball on the ring very sharp and of the same form as on June 5. A very narrow shadow of the ring on the ball is seen above the ring. |
| 8 | JAPETUS . . | 20 36 3.23 37 43.86 39 34.19 41 1.06 42 37.35 44 25.06 46 56.66 48 31.08 50 27.05 52 15.34 53 55.00 20 56 3.16 | 7.91 48.49 38.83 5.74 42.08 29.65 1.38 35.70 31.71 20.08 0.65 7.84 | 20 35 28.48 37 9.00 38 59.40 40 26.30 42 2.60 43 50.20 46 21.97 47 56.30 49 52.28 51 40.60 53 21.13 55 28.42 | 33.10 13.75 4.15 31.00 7.32 55.00 26.65 0.97 56.98 45.30 25.78 33.14 | -34.75 .86 .79 .76 .75 .86 .69 .78 .77 .74 .77 -34.74 | -34.81 .74 .68 .74 .76 .65 .73 .73 .73 .78 .87 -34.70 | 3 A | 3 | II. | JAPETUS south, preceding SATURN. p (est.) 270°. Chron. corr., + 0 ^m .2. Windy. |
| | Mean | . . . | . . . | . . . | . . . | -34.772 | -34.743 | | | | |
| | | h. m. 3 56 | 67 ^r .225 .236 .286 .290 .367 | 71 ^r .200 .246 .272 .350 .411 | | | | | | | |
| | Mean | . . . | 67.281 | 71.296 | | | | | | | |
| 9 | JAPETUS . . | 20 41 25.59 43 17.55 45 4.65 46 47.55 48 38.78 50 11.45 52 5.16 54 28.46 55 52.32 20 58 23.20 21 0 23.01 1 46.86 4 20.03 | 30.31 22.34 9.40 52.26 43.51 16.21 9.98 33.26 57.06 27.92 27.78 51.65 24.78 | 20 40 51.27 42 43.30 44 30.48 46 13.26 48 4.45 49 37.25 51 31.00 53 54.22 55 18.13 57 48.97 20 59 48.78 21 1 12.60 3 45.70 | 56.10 48.00 35.20 18.00 9.23 41.97 35.75 59.00 22.85 53.73 53.55 17.38 50.52 | -34.32 .25 .17 .29 .33 .20 .16 .24 .19 .23 .23 .26 -34.33 | -34.21 .34 .20 .26 .28 .24 .23 .26 .21 .19 .23 .27 -34.26 | 3 A | 3 | II. | JAPETUS south, preceding SATURN. p (est.) 270°. Ther. = 67°. |
| | Mean | . . . | . . . | . . . | . . . | -34.246 | -34.245 | | | | |
| | | h. m. 3 59 | 62 ^r .290 .212 .306 .327 .331 | 66 ^r .469 .480 .470 .511 .489 | | | | | | | Set at 57 ^r .084. Coincidence, 64.168. |
| | Mean | . . . | 62.293 | 66.484 | | | | | | | |
| 10 | JAPETUS . . | 20 53 38.22 55 56.59 57 30.71 20 59 18.02 21 1 12.48 2 45.45 5 46.03 7 38.57 9 51.17 11 44.38 13 28.88 21 15 35.97 | 43.88 2.32 36.54 23.79 18.30 51.14 51.73 44.32 56.98 50.10 34.61 41.74 | 20 53 4.53 55 22.97 56 57.22 20 58 44.43 21 0 38.90 2 11.83 5 12.50 7 4.97 9 17.60 11 10.80 12 55.30 21 15 2.45 | 10.30 28.80 2.95 50.13 44.70 17.55 18.26 10.70 23.27 16.50 1.00 8.13 | -33.69 .62 .49 .59 .58 .62 .53 .60 .57 .58 .58 -33.52 | -33.58 .52 .59 .66 .60 .59 .47 .62 .71 .60 .61 -33.61 | 3 A | 3 | II. | JAPETUS south, preceding SATURN. p (est.) 270°. Chron. corr., + 0 ^m .2. Clock corr., - 0 ^m .5. Ther., 66°. |
| | Mean | . . . | . . . | . . . | . . . | -33.582 | -33.597 | | | | |

| Date. | Object observed. | Saturn. | | Satellite. | | Δ . | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|------------------|---|--|---|--|---|---|------------|--------|-----------|--|
| | | Wire I. | Wire II. | Wire I. | Wire II. | Wire I. | Wire II. | | | | |
| 1876. June 10 | JAPETUS . . . | . . . | 62 ^r .661 .616 h. m. 4 5 .627 .689 | 66 ^r .980 .956 .946 .992 67.020 | | | | | | | |
| | Mean | . . . | 62.629 | 66.979 | | | | | | | |
| | TITAN . . . | h. m. s. 20 53 38.22 55 56.59 57 30.71 20 59 18.02 21 1 12.48 2 45.45 5 46.03 7 38.57 9 51.17 11 44.38 13 28.88 21 15 35.97 | m. s. 43.88 2.32 36.54 23.79 18.30 51.14 51.73 44.32 56.98 50.10 34.61 41.74 | h. m. s. 20 53 50.32 56 8.77 57 42.98 20 59 30.18 21 1 24.73 2 57.54 5 58.22 7 50.70 10 3.36 11 56.50 13 41.00 15 48.20 | m. s. 56.00 14.50 48.78 35.90 30.40 3 3.30 6 3.95 56.43 9.13 12 2.27 46.78 53.86 | s. +12.10 .18 .27 .16 .25 .09 .19 .13 .19 .12 .12 +12.23 | s. +12.12 .18 .24 .11 .10 .16 .22 .11 .15 .17 .17 +12.12 | 3 A | 3 | H. | TITAN south, following SATURN. p (est.) 90° . Chron. corr., + 0 ^m .2. Clock corr., - 0 ^m .5. |
| | Mean | . . . | . . . | . . . | . . . | +12.169 | +12.154 | | | | |
| | | | 62 ^r .650 .685 h. m. 4 15 .720 .733 | 64 ^r .674 .652 .628 .670 .721 | | | | | | | |
| | Mean | . . . | 62.685 | 64.669 | | | | | | | |
| July 15 | JAPETUS . . . | 22 10 44.82 12 41.01 15 5.44 17 17.82 19 58.50 22 21.42 24 28.96 28 0.56 30 10.93 32 24.15 34 23.00 37 31.73 | 51.30 47.54 11.90 24.26 20 4.96 27.83 35.36 6.98 17.30 30.63 29.36 38 23 | 22 11 21.48 13 17.74 15 42.18 17 54.46 20 35.20 22 58.00 25 5.70 28 37.40 30 47.58 33 0.78 34 59.63 38 8.37 | 28.00 24.20 48.60 18 0.90 41.62 23 4.43 12.00 43.76 54.00 7.25 6.18 14.85 | +36.66 .73 .74 .64 .70 .58 .74 .84 .65 .63 .63 +36.64 | +36.70 .66 .70 .64 .66 .60 .64 .78 .70 .62 .82 +36.62 | 3 A | 2 | H. | JAPETUS north, following SATURN. p (est.) 85° . Chron. corr., + 0 ^m .9. |
| | Mean | . . . | . . . | . . . | . . . | +36.682 | +36.678 | | | | |
| | | | 65 ^r .700 .554 h. m. 15 15 .733 .620 .636 | 69 ^r .543 .500 .559 .455 .440 | | | | | | | |
| | Mean | . . . | 65.649 | 69.499 | | | | | | | |
| 16 | JAPETUS . . . | 22 33 0.96 35 21.25 37 14.65 39 23.65 41 9.78 42 48.88 45 53.87 47 43.87 49 55.87 51 48.03 53 28.55 55 19.81 57 13.82 | 7.38 27.04 21.04 30 07 16.10 55.37 46 0.23 50.27 50 2.31 54.56 34.99 26.31 20.30 | 22 33 37.60 35 57.93 37 51.32 40 0.35 41 46.35 43 25.50 46 30.50 48 20.50 50 32.50 52 24.77 54 5.20 55 56.50 57 50.55 | 44.00 36 4.38 57.75 6.70 52.78 31.98 37.00 26.90 39.00 31.20 11.65 2.95 56.97 | +36.64 .68 .67 .70 .57 .62 .63 .63 .63 .74 .65 .69 +36.73 | +36.62 .74 .71 .63 .68 .61 .77 .63 .69 .64 .66 .64 +36.67 | 3 A | 4 | H. | JAPETUS north, following SATURN. p (est.) 85° . Chron. corr., + 0 ^m .9. Ther., 72° . |
| | Mean | . . . | . . . | . . . | . . . | +36.660 | +36.668 | | | | |
| | | | 62 ^r .320 .336 h. m. 15 26 .223 .152 .108 | 66 ^r .316 .323 .285 .160 .108 | | | | | | | |
| | Mean | . . . | 62.228 | 66.238 | | | | | | | |

| Date. | Object observed. | Saturn. | | Satellite. | | Δa | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|------------------|-------------|--------------------------------|----------------------|----------|------------|----------|------------|--------|-----------|---|
| | | Wire I. | Wire II. | Wire I. | Wire II. | Wire I. | Wire II. | | | | |
| 1876. July 18 | TITAN . . . | h. m. s. | s. | h. m. s. | m. s. | s. | s. | 3 A | 3 | H. | TITAN and SATURN on same parallel. Chron. corr., + 1 ^m .0. ϕ (est.) 270°. |
| | | 22 24 28.28 | 35.15 | 22 24 18.30 | 25.23 | — 9.98 | — 9.92 | | | | |
| | | 26 29.01 | 35.89 | 26 19.00 | 25.85 | 10.01 | 10.04 | | | | |
| | | 28 12.94 | 19.80 | 28 2.90 | 9.90 | 10.04 | 9.90 | | | | |
| | | 30 19.84 | 26.69 | 30 9.86 | 16.70 | 9.98 | 9.99 | | | | |
| | | 32 20.81 | 27.73 | 32 10.85 | 17.70 | 9.96 | 10.03 | | | | |
| | | 34 9.58 | 16.41 | 33 59.60 | 34 6.48 | 9.98 | 9.93 | | | | |
| | | 36 24.85 | 31.85 | 36 14.97 | 21.86 | 9.88 | 9.99 | | | | |
| | | 38 13.25 | 20.15 | 38 3.30 | 10.20 | 9.95 | 9.95 | | | | |
| | | 39 49.69 | 56.58 | 39 39.65 | 46.57 | — 10.04 | — 10.01 | | | | |
| | Mean. | . . . | . . | . . . | . . | — 9.980 | — 9.973 | | | | |
| 21 | JAPETUS . . . | h. m. | TITAN. 0 ^r .130 | 0 ^r .210 | | | | 3 A | 3 | H. | JAPETUS north, preceding SATURN. ϕ (est.) 85°. Chron. corr., + 1 ^m .0. |
| | | 15 11 | | | | | | | | | |
| | | 22 24 28.28 | 35.15 | 22 25 4.18 | 11.00 | +35.90 | +35.85 | | | | |
| | | 26 29.01 | 35.89 | 27 4.83 | 11.68 | .82 | .79 | | | | |
| | | 28 12.94 | 19.80 | 28 48.80 | 55.72 | .86 | .92 | | | | |
| | | 30 19.84 | 26.69 | 30 55.73 | 31 2.65 | .89 | .96 | | | | |
| | | 32 20.81 | 27.73 | 32 56.67 | 33 3.50 | .86 | .77 | | | | |
| | | 34 9.58 | 16.41 | 34 45.45 | 52.30 | .87 | .89 | | | | |
| | | 36 24.85 | 31.85 | 37 0.90 | 7.78 | 36.05 | .93 | | | | |
| | | 38 13.25 | 20.15 | 38 49.20 | 56.00 | 35.95 | .85 | | | | |
| | | 39 49.69 | 56.58 | 40 25.55 | 32.50 | +35.96 | +35.82 | | | | |
| | Mean | . . . | . . | . . . | . . | +35.896 | +35.876 | | | | |
| | TITAN . . . | h. m. | 61 ^r .069 | 65 ^r .491 | | | | 3 A | 2 | H. | TITAN north, following SATURN. ϕ (est.) 275°. Chron. corr., + 1 ^m .2. |
| | | 15 2 | .063 | .448 | | | | | | | |
| | | | .059 | .430 | | | | | | | |
| | | | .225 | .564 | | | | | | | |
| | | | .158 | .511 | | | | | | | |
| | | . . . | 61.115 | 65.489 | | | | | | | |
| | | 22 12 32.33 | 38.60 | 22 12 22.00 | 28.25 | — 10.33 | — 10.35 | | | | |
| | | 14 29.55 | 35.84 | 14 19.30 | 25.58 | .25 | .26 | | | | |
| | | 16 4.50 | 10.71 | 15 54.22 | 16 0.50 | .28 | .21 | | | | |
| | | 17 41.96 | 48.26 | 17 31.78 | 37.95 | .18 | .31 | | | | |
| | | 19 12.73 | 18.89 | 19 2.47 | 8.67 | .26 | .22 | | | | |
| | | 20 42.36 | 48.67 | 20 32.30 | 38.46 | .06 | .23 | | | | |
| | | 22 33.81 | 40.00 | 22 23.50 | 29.82 | .31 | .18 | | | | |
| | | 24 11.94 | 18.27 | 24 1.89 | 7.93 | .14 | .34 | | | | |
| | | 26 5.08 | 11.26 | 25 54.80 | 26 1.13 | .28 | .13 | | | | |
| | | 27 46.00 | 52.29 | 27 35.83 | 42.05 | .17 | .24 | | | | |
| | | 29 17.50 | 23.70 | 29 7.25 | 13.50 | .25 | .20 | | | | |
| | | 31 4.60 | 10.82 | 30 54.43 | 31 0.66 | — 10.17 | — 10.16 | | | | |
| | Mean | . . . | . . | . . . | . . | — 10.223 | — 10.236 | | | | |
| | JAPETUS . . . | h. m. | TITAN. 59 ^r .025 | 61 ^r .661 | | | | 3 A | 2 | H. | JAPETUS north, following SATURN. ϕ (est.) 85°. Chron. corr., + 1 ^m .2. |
| | | 14 42 | .020 | .700 | | | | | | | |
| | | | .066 | .696 | | | | | | | |
| | | | .165 | .842 | | | | | | | |
| | | | .200 | .810 | | | | | | | |
| | | . . | 59.095 | 61.742 | | | | | | | |
| | | 22 12 32.33 | 38.60 | 22 13 5.45 | 11.60 | +33.12 | +33.00 | | | | |
| | | 14 29.55 | 35.84 | 15 2.63 | 8.85 | .08 | .01 | | | | |
| | | 16 4.50 | 10.71 | 16 37.60 | 43.82 | .10 | .11 | | | | |
| | | 17 41.96 | 48.26 | 18 15.05 | 21.30 | .09 | .04 | | | | |
| | | 19 12.73 | 18.89 | 19 45.66 | 51.98 | 32.93 | .09 | | | | |
| | | 20 42.36 | 48.67 | 21 15.52 | 21.85 | 33.16 | .18 | | | | |
| | | 22 33.81 | 40.00 | 23 6.92 | 13.22 | .11 | .22 | | | | |
| | | 24 11.94 | 18.27 | 24 45.05 | 51.25 | .11 | 32.98 | | | | |
| | | 26 5.08 | 11.26 | 26 38.17 | 44.32 | .09 | .06 | | | | |
| | | 27 46.00 | 52.29 | 28 19.12 | 25.38 | .12 | .09 | | | | |
| | | 29 17.50 | 23.70 | 29 50.47 | 56.68 | 32.97 | 32.98 | | | | |
| | | 22 31 4.60 | 10.82 | 22 31 37.70 | 43.92 | +33.10 | +33.10 | | | | |
| | Mean | . . . | . . | . . . | . . | +33.082 | +33.072 | | | | |

| Date. | Object observed. | Saturn. | | Satellite. | | Δa | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|------------------|-------------|------------------------------|------------------------------|----------|------------|----------|------------|--------|-----------|--|
| | | Wire I. | Wire II. | Wire I. | Wire II. | Wire I. | Wire II. | | | | |
| 1876. July 21 | JAPETUS . . . | | 57 ^r .087 .088 | 61 ^r .712 .753 | | | | | | | |
| | h. m. | | .139 | .770 | | | | | | | |
| | 14 53 | | 56.992 .900 | .623 .506 | | | | | | | |
| | Mean | | 57.041 | 61.673 | | | | | | | |
| 24 | JAPETUS . . . | h. m. s. | m. s. | h. m. s. | m. s. | s. | s. | 3 A | 2 | H. | JAPETUS north, following SATURN. ρ (est.) 80°. Chron. corr., +1 ^m .4. Ther., 60°.2. |
| | | 22 27 33.69 | 41.46 | 22 28 1.95 | 9.73 | +28.26 | +28.27 | | | | |
| | | 28 39.56 | 47.32 | 29 7.86 | 15.63 | .30 | .31 | | | | |
| | | 30 7.70 | 15.46 | 30 35.97 | 43.73 | .27 | .27 | | | | |
| | | 31 28.91 | 36.66 | 31 57.05 | 32 4.96 | .14 | .30 | | | | |
| | | 32 42.96 | 50.71 | 33 11.24 | 18.92 | .28 | .21 | | | | |
| | | 34 6.04 | 13.84 | 34 34.33 | 42.00 | .29 | .16 | | | | |
| | | 35 30.01 | 37.72 | 35 58.25 | 36 5.92 | .24 | .20 | | | | |
| | | 36 56.20 | 37 3.99 | 37 24.33 | 32.27 | .13 | .28 | | | | |
| | | 38 16.18 | 24.03 | 38 44.45 | 52.20 | .27 | .17 | | | | |
| | | 39 56.37 | 40 4.25 | 40 24.65 | 32.46 | .28 | .21 | | | | |
| | | 41 31.51 | 39.28 | 41 59.70 | 42 7.53 | .19 | .25 | | | | |
| | | 22 43 0.26 | 8.02 | 43 28.50 | 36.28 | +28.24 | +28.26 | | | | |
| | Mean | | | | | +28.241 | +28.241 | | | | |
| | | | 61 ^r .290 .201 | 65 ^r .957 .915 | | | | | | | |
| | h. m. | | .217 | .886 | | | | | | | |
| | 14 43 | | 61.012 60.961 | .661 .688 | | | | | | | |
| | Mean | | 61.136 | 65.823 | | | | | | | |
| 26 | TITAN . . . | 22 45 39.61 | 46.56 | 22 45 50.75 | 57.72 | +11.14 | +11.16 | 3 A | 2 | H. | TITAN south, following SATURN. ρ (est.) 95°. Chron. corr., -0 ^m .5. |
| | | 46 59.35 | 47 6.36 | 47 10.48 | 17.54 | .13 | .18 | | | | |
| | | 48 27.65 | 34.72 | 48 38.90 | 45.85 | .25 | .13 | | | | |
| | | 49 50.44 | 57.50 | 50 1.70 | 8.68 | .26 | .18 | | | | |
| | | 51 16.47 | 23.57 | 51 27.75 | 34.75 | .28 | .18 | | | | |
| | | 52 47.55 | 54.53 | 52 58.73 | 53 5.75 | .18 | .22 | | | | |
| | | 54 18.63 | 25.58 | 54 29.73 | 36.80 | .10 | .22 | | | | |
| | | 55 45.20 | 52.29 | 55 56.48 | 56 3.46 | .28 | .17 | | | | |
| | | 57 8.03 | 15.12 | 57 19.30 | 26.35 | +11.27 | +11.23 | | | | |
| | Mean | | | | | +11.210 | +11.186 | | | | |
| | | h. m. | 67 ^r .811 .798 | 68 ^r .162 .122 | | | | | | | |
| | 14 46 | | .710 | .104 | | | | | | | |
| | Mean | | 67.773 | 68.129 | | | | | | | |
| | JAPETUS . . . | 22 45 39.61 | 46.56 | 22 46 3.70 | 10.80 | +24.09 | +24.24 | 3 A | 2 | H. | JAPETUS north, following SATURN. ρ (est.) 85°. Chron. corr., -0 ^m .5. Hazy. |
| | | 46 59.35 | 47 6.36 | 47 23.53 | 30.54 | .18 | .18 | | | | |
| | | 48 27.65 | 34.72 | 48 51.90 | 58.83 | .25 | .11 | | | | |
| | | 49 50.44 | 57.50 | 50 14.58 | 21.67 | .14 | .17 | | | | |
| | | 51 16.47 | 23.57 | 51 40.68 | 47.72 | .21 | .15 | | | | |
| | | 52 47.55 | 54.53 | 53 11.84 | 18.65 | .29 | .12 | | | | |
| | | 54 18.63 | 25.58 | 54 42.70 | 49.78 | .07 | .20 | | | | |
| | | 55 45.20 | 52.29 | 56 9.27 | 16.47 | .07 | .18 | | | | |
| | | 57 8.03 | 15.12 | 57 32.25 | 39.28 | +24.22 | +24.16 | | | | |
| | Mean | | | | | +24.169 | +24.168 | | | | |
| | | h. m. | 63 ^r .111 .075 | 67 ^r .733 .677 | | | | | | | |
| | 14 52 | | .078 | .657 | | | | | | | |
| | Mean | | 63.088 | 67.689 | | | | | | | |
| 27 | TITAN . . . | 23 1 19.70 | 27.04 | 23 1 32.66 | 40.00 | +12.96 | +12.96 | 3 A | 3 | H. | TITAN south, following SATURN. ρ (est.) 90°. Chron. corr., -0 ^m .5. Wire moved after first transit. |
| | | 2 50.44 | 57.29 | 3 3.40 | 10.33 | 12.96 | 13.04 | | | | |
| | | 4 0.50 | 7.44 | 4 13.48 | 20.36 | 12.98 | 12.92 | | | | |
| | | 5 6.12 | 13.01 | 5 19.05 | 26.10 | 12.93 | 13.09 | | | | |
| | | 6 15.21 | 22.16 | 6 28.22 | 35.05 | 13.01 | 12.89 | | | | |
| | | 7 30.75 | 37.68 | 7 43.68 | 50.63 | 12.93 | 12.95 | | | | |
| | | 8 54.98 | 9 1.87 | 9 7.90 | 14.80 | 12.92 | 12.93 | | | | |
| | | 10 7.20 | 14.10 | 10 20.20 | 27.15 | 13.00 | 13.05 | | | | |
| | | 11 8.29 | 15.20 | 11 21.23 | 28.20 | 12.94 | 13.00 | | | | |
| | | 12 21.36 | 28.34 | 12 34.40 | 41.28 | 13.04 | 12.94 | | | | |
| | | 13 27.93 | 34.89 | 13 40.95 | 47.85 | +13.02 | 12.96 | | | | |
| | Mean | | | | | +12.972 | +12.975 | | | | |

| Date. | Object observed. | Saturn. | | Satellite. | | Δa | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|------------------|----------------|--------------------------------------|--------------------------------------|----------|------------|----------|------------|--------|-----------|------------------------------------|
| | | Wire I. | Wire II. | Wire I. | Wire II. | Wire I. | Wire II. | | | | |
| 1876. July 27 | JAPETUS . . | h. m. 14 56 | 66 ^r .268 .225 .183 | 67 ^r .719 .678 .637 | | | | | | | |
| | | Mean . . . | 66.225 | 67.678 | | | | | | | |
| | | h. m. s. | m. s. | h. m. s. | m. s. | s. | s. | | | | |
| | | 23 1 19.70 | 27.04 | 23 1 41.40 | 48.93 | +21.70 | +21.89 | 3 A | 3 | H. | JAPETUS north, following SATURN. |
| | | 2 50.44 | 57.29 | 3 12.26 | 19.16 | .82 | .87 | | | | p (est.) 80°. |
| | | 4 0.50 | 7.44 | 4 22.30 | 29.25 | .80 | .81 | | | | Chron. corr., — 0 ^m .5. |
| | | 5 6.12 | 13.01 | 5 28.00 | 34.80 | .88 | .79 | | | | |
| | | 6 15.21 | 22.16 | 6 37.00 | 43.93 | .79 | .77 | | | | |
| | | 7 30.75 | 37.68 | 7 52.55 | 59.45 | .80 | .77 | | | | |
| | | 8 54.98 | 9 1.87 | 9 16.73 | 23.56 | .75 | .60 | | | | |
| Aug. 21 | JAPETUS . . | 10 7.20 | 14.10 | 10 29.00 | 35.88 | .80 | .78 | | | | |
| | | 11 8.29 | 15.20 | 11 30.00 | 37.00 | .71 | .80 | | | | |
| | | 12 21.36 | 28.34 | 12 43.20 | 50.10 | .84 | .76 | | | | |
| | | 13 27.93 | 34.89 | 13 49.75 | 56.62 | +21.82 | +21.73 | | | | |
| | | Mean . . . | . . . | . . . | . . . | +21.792 | +21.787 | | | | |
| | | h. m. | 61 ^r .761 .761 .660 | 66 ^r .164 .182 .008 | | | | | | | |
| | | 15 2 | 61.727 | 66.118 | | | | | | | |
| | | Mean . . . | . . . | . . . | . . . | . . . | . . . | | | | |
| | | h. m. s. | m. s. | h. m. s. | m. s. | s. | s. | | | | |
| | | 22 10 43.35 | 50.69 | 22 10 6.15 | 13.50 | —37.20 | —37.19 | 3 A | 2 | H. | JAPETUS south, preceding SATURN. |
| | JAPETUS . . | 12 31.16 | 38.56 | 11 53.85 | 12 1.20 | .31 | .36 | | | | p (est.) 270°. |
| | | 14 3.97 | 11.31 | 13 26.67 | 34.00 | .30 | .31 | | | | Chron. corr., + 1 ^m .0. |
| | | 15 53.01 | 16 0.35 | 15 15.70 | 23.15 | .31 | .20 | | | | |
| | | 17 45.72 | 53.04 | 17 8.43 | 15.77 | .29 | .27 | | | | |
| | | 19 7.32 | 14.71 | 18 29.97 | 37.47 | .35 | .24 | | | | |
| | | 20 48.48 | 55.85 | 20 11.20 | 18.53 | .28 | .32 | | | | |
| | | 22 28.12 | 35.41 | 21 50.80 | 58.15 | .32 | .26 | | | | |
| | | 25 1.14 | 8.50 | 24 23.78 | 31.23 | .36 | .27 | | | | |
| | | 26 24.35 | 31.68 | 25 47.00 | 34.42 | —37.35 | —37.26 | | | | |
| | | Mean . . . | . . . | . . . | . . . | —37.307 | —37.268 | | | | |
| | TITAN . . | h. m. | 66 ^r .184 .140 .120 | 68 ^r .894 .980 .840 | | | | | | | |
| | | 12 43 | 66.148 | 68.905 | | | | | | | |
| | | Mean . . . | . . . | . . . | . . . | . . . | . . . | | | | |
| | | h. m. s. | m. s. | h. m. s. | m. s. | s. | s. | | | | |
| | | 22 10 43.35 | 50.69 | 22 10 31.00 | 38.40 | —12.35 | —12.29 | 3 A | 2 | H. | TITAN north, preceding SATURN. |
| | | 12 31.16 | 38.56 | 12 18.83 | 26.30 | .33 | .26 | | | | p (est.) 280°. |
| | | 14 3.97 | 11.31 | 13 51.58 | 58.97 | .39 | .34 | | | | Chron. corr., + 1 ^m .0. |
| | | 15 53.01 | 16 0.35 | 15 40.70 | 48.05 | .31 | .30 | | | | |
| | | 17 45.72 | 53.04 | 17 33.48 | 40.77 | .24 | .27 | | | | |
| | | 19 7.32 | 14.71 | 18 55.00 | 19 2.40 | .32 | .31 | | | | |
| | TITAN . . | 20 48.48 | 55.85 | 20 36.18 | 43.47 | .30 | .38 | | | | |
| | | 22 28.12 | 35.41 | 22 15.76 | 23.05 | .36 | .36 | | | | |
| | | 25 1.14 | 8.50 | 24 48.85 | 56.28 | .29 | .22 | | | | |
| | | 22 26 24.35 | 31.68 | 22 26 12.00 | 19.33 | —12.35 | —12.35 | | | | |
| | | Mean . . . | . . . | . . . | . . . | —12.324 | —12.308 | | | | |
| | | h. m. | 63 ^r .757 .680 .680 | 66 ^r .089 .022 .014 | | | | | | | |
| | | 12 49 | 63.706 | 66.042 | | | | | | | |
| | | Mean . . . | . . . | . . . | . . . | . . . | . . . | | | | |
| | | h. m. s. | m. s. | h. m. s. | m. s. | s. | s. | | | | |
| | | 22 10 43.35 | 50.69 | 22 10 31.00 | 38.40 | —12.35 | —12.29 | 3 A | 2 | H. | TITAN north, preceding SATURN. |

| Date. | Object observed. | Saturn. | | Satellite. | | Δa | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|------------------|--|---|---|--|---|---|------------|--------|-----------|---|
| | | Wire I. | Wire II. | Wire I. | Wire II. | Wire I. | Wire II. | | | | |
| 1876. Aug. 22 | JAPETUS . . . | h. m. s. 21 18 37.70 20 2.09 21 24.75 22 38.68 23 59.35 26 51.92 28 18.52 30 23.51 32 2.08 33 9.98 34 53.70 36 20.36 37 50.38 | m. s. 45.25 9.59 32.18 46.16 24 6.85 50.32 25.96 31.04 9.56 17.41 35 1.16 27.98 57.91 | h. m. s. 21 17 59.80 19 24.25 20 46.80 22 0.75 23 21.53 26 13.94 27 40.64 29 45.70 31 24.20 32 32.00 34 15.80 35 42.58 37 12.60 | m. s. 18 7.30 31.57 54.30 8.27 29.00 21.40 48.00 53.10 31.70 39.57 23.20 50.00 19.98 | s. -37.90 .84 .95 .93 .82 .98 .88 .81 .88 .98 .90 .78 -37.78 | s. -37.95 38.02 37.88 .89 .85 .92 .96 .94 .86 .84 .96 .98 | 3 A | 2 | II. | JAPETUS south, preceding SATURN. p (est.) 267° . Chron. corr., $+1^m.0$. |
| | Mean | . . . | . . . | . . . | . . . | -37.879 | -37.922 | | | | |
| | | h. m. 11 39 | 59 ^r .235 .192 .283 .244 | 62 ^r .196 .142 .238 .221 | | | | | | | |
| | Mean | . . . | 59.238 | 62.199 | | | | | | | |
| | TITAN . . . | 21 18 37.70 20 2.09 21 24.75 22 38.68 23 59.35 26 51.92 28 18.52 30 23.51 32 2.08 33 9.98 34 53.70 36 20.36 21 37 50.38 | 45.25 9.59 32.18 46.16 24 6.85 59.32 25.96 31.04 9.56 17.41 35 1.16 27.98 57.91 | 21 18 27.47 19 51.73 21 14.55 22 28.40 23 49.13 26 41.60 28 8.23 30 13.33 31 51.85 32 59.77 34 43.40 36 10.20 37 40.25 | 34.95 59.18 21.88 35.87 56.65 49.05 15.64 20.87 59.25 7.10 50.77 17.58 47.68 | -10.23 .36 .20 .28 .22 .32 .29 .18 .23 .21 .30 .16 -10.13 | -10.30 .41 .30 .29 .20 .27 .32 .17 .31 .31 .39 .40 | 3 A | 2 | H. | TITAN north, preceding SATURN. p (est.) 280° . Chron. corr., $+1^m.0$. |
| | Mean | . . . | . . . | . . . | . . . | -10.239 | -10.300 | | | | |
| | | h. m. 11 46 | 56 ^r .290 .369 .360 .307 | 59 ^r .308 .310 .354 .282 | | | | | | | |
| | Mean | . . . | 56.332 | 59.314 | | | | | | | |
| 24 | JAPETUS . . . | 22 48 51.56 50 18.62 51 51.73 53 21.58 54 56.76 55 25.68 57 51.06 22 59 24.83 23 0 55.07 2 28.68 4 1.48 6 32.26 8 32.85 23 10 10.58 | 49 0.88 27.97 52 1.08 30.91 55 6.00 35.00 58 0.35 34.06 1 4.39 38.05 10.82 41.50 42.17 19.86 | 22 48 13.15 49 40.22 51 13.35 52 43.23 54 18.30 55 47.20 57 12.58 22 58 46.40 23 0 16.72 1 50.30 3 23.00 5 53.78 7 54.40 9 32.20 | 22.46 49.48 22.65 52.48 27.53 56.53 21.92 55.60 25.90 59.60 32.35 6 3.03 8 3.72 41.45 | -38.41 .40 .38 .35 .46 .48 .48 .43 .35 .38 .48 .48 -38.38 -38.41 | -38.42 .49 .43 .43 .47 .47 .43 .46 .49 .45 .47 .47 -38.41 | 3 A | 4 | H. | JAPETUS south, preceding SATURN. p (est.) 267° . Chron. corr., $-0^m.9$. Ther., $73^{\circ}.2$. |
| | Mean | . . . | . . . | . . . | . . . | -38.422 | -38.453 | | | | |
| | | h. m. 13 22 | 62 ^r .780 .750 .589 .554 .510 | 66 ^r .060 .003 65.932 .822 .844 | | | | | | | |
| | Mean | . . . | 62.637 | 65.932 | | | | | | | |

| Date. | Object observed. | Saturn. | | Satellite. | | Δa | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|------------------|-------------|----------------------|----------------------|----------|------------|----------|------------|--------|-----------|--|
| | | Wire I. | Wire II. | Wire I. | Wire II. | Wire I. | Wire II. | | | | |
| 1876. Aug. 26 | JAPETUS . . . | h. m. s. | m. s. | h. m. s. | m. s. | s. | s. | 3 A | 1 | H. | JAPETUS south, preceding SATURN. p (est.) 267° . |
| | | 21 13 48.73 | 53.78 | 21 13 10.82 | 15.85 | -37.91 | -37.93 | | | | |
| | | 15 44.99 | 49.96 | 15 6.90 | 12.00 | 38.09 | 37.96 | | | | |
| | | 17 33.41 | 38.44 | 16 55.36 | 17 0.38 | 38.05 | 38.06 | | | | |
| | | 19 17.27 | 22.29 | 18 39.30 | 44.20 | 37.97 | 38.09 | | | | |
| | | 21 25.33 | 30.35 | 20 47.35 | 52.38 | 37.98 | 37.97 | | | | |
| | | 22 59.41 | 23 4.48 | 22 21.45 | 26.47 | 37.96 | 38.01 | | | | |
| | | 24 42.04 | 47.09 | 24 4.00 | 9.00 | 38.04 | 38.09 | | | | |
| | | 26 19.15 | 24.11 | 25 41.00 | 46.00 | 38.15 | 38.11 | | | | |
| | | 28 25.28 | 30.30 | 27 47.22 | 52.25 | 38.06 | 38.05 | | | | |
| | | 29 46.53 | 51.54 | 29 8.50 | 13.60 | 38.03 | 37.94 | | | | |
| | | 31 33.36 | 38.35 | 30 55.42 | 31 0.40 | -37.94 | -37.95 | | | | |
| | Mean | . . . | . . | . . . | . . | -38.016 | -38.014 | | | | |
| | TITAN . . . | h. m. | 66 ^r .747 | 70 ^r .350 | | | | 3 A | 1 | H. | p (est.) 80° . Chron. corr., - 0 ^m .8. Images extremely bad during transits. |
| | | 11 21 | 67.955 | 71.480 | | | | | | | |
| | | | .919 | .400 | | | | | | | |
| | | | .890 | .488 | | | | | | | |
| | | Mean | 67.348 | 70.918 | | | | | | | |
| | | 21 13 48.73 | 53.78 | 21 13 56.93 | 14 1.95 | + 8.20 | + 8.17 | | | | |
| | | 15 44.99 | 49.96 | 15 53.05 | 58.00 | .06 | .04 | | | | |
| | | 17 33.41 | 38.44 | 17 41.60 | 46.60 | .19 | .16 | | | | |
| | | 19 17.27 | 22.29 | 19 25.44 | 30.38 | .17 | .09 | | | | |
| | | 21 25.33 | 30.35 | 21 33.48 | 38.56 | .15 | .21 | | | | |
| | | 22 59.41 | 23 4.48 | 23 7.60 | 12.63 | .19 | .15 | | | | |
| | | 24 42.04 | 47.09 | 24 50.18 | 55.23 | .14 | .14 | | | | |
| | | 26 19.15 | 24.11 | 26 27.25 | 32.30 | .10 | .19 | | | | |
| | | 28 25.28 | 30.30 | 28 33.43 | 38.48 | .15 | .18 | | | | |
| | | 29 46.53 | 51.54 | 29 54.68 | 59.70 | .15 | .16 | | | | |
| | | 31 33.36 | 38.35 | 31 41.50 | 46.56 | + 8.14 | + 8.21 | | | | |
| | Mean | . . . | . . | . . . | . . | + 8.149 | + 8.155 | | | | |
| | | | 67 ^r .002 | 68 ^r .027 | | | | 3 A | 2 | H. | JAPETUS south, preceding SATURN. p (est.) 267° . Chron. corr., - 0 ^m .8. |
| | | h. m. | .094 | .036 | | | | | | | |
| | | 11 35 | .061 | .071 | | | | | | | |
| | | | .063 | .105 | | | | | | | |
| | | | .030 | .030 | | | | | | | |
| | | Mean | 67.050 | 68.054 | | | | | | | |
| | | 21 22 27.33 | 36.31 | 21 21 50.00 | 58.96 | -37.33 | -37.35 | | | | |
| | | 24 4.30 | 13.32 | 23 26.95 | 35.83 | .35 | .49 | | | | |
| | | 26 13.35 | 22.35 | 25 35.85 | 44.95 | .50 | .40 | | | | |
| | | 28 21.54 | 30.56 | 27 44.12 | 53.00 | .42 | .56 | | | | |
| | | 31 34.85 | 43.75 | 30 57.43 | 31 6.37 | .42 | .38 | | | | |
| | | 33 48.54 | 57.50 | 33 11.13 | 20.00 | .41 | .50 | | | | |
| | | 35 40.30 | 49.26 | 35 2.87 | 11.90 | .43 | .36 | | | | |
| | | 37 24.35 | 33.32 | 36 46.90 | 55.90 | .45 | .42 | | | | |
| | | 39 3.19 | 12.10 | 38 25.82 | 34.65 | .37 | .45 | | | | |
| | | 40 56.78 | 41 5.81 | 40 19.40 | 28.47 | -37.38 | -37.34 | | | | |
| | Mean | . . . | . . | . . . | . . | -37.406 | -37.425 | | | | |
| | | | 61 ^r .649 | 65 ^r .380 | | | | 3 A | 2 | H. | JAPETUS south, preceding SATURN. p (est.) 267° . Chron. corr., - 0 ^m .8. |
| | | h. m. | .742 | .394 | | | | | | | |
| | | 11 25 | .770 | .414 | | | | | | | |
| | | | .753 | .440 | | | | | | | |
| | | | .848 | .470 | | | | | | | |
| | | Mean | 61.756 | 65.420 | | | | | | | |

| Date. | Object observed. | Saturn. | | Satellite. | | Δa | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|------------------|-------------|----------------------|----------------------|----------|------------|----------|------------|--------|-----------|--|
| | | Wire I. | Wire II. | Wire I. | Wire II. | Wire I. | Wire II. | | | | |
| 1876. Aug. 27 | TITAN . . . | h. m. s. | m. s. | h. m. s. | m. s. | s. | s. | 3 A | 2 | H. | TITAN south, following SATURN. p (est.) 90° . Chron. corr., — $0^m.8$. |
| | | 21 22 27.33 | 36.31 | 21 22 38.98 | 47.92 | +11.65 | +11.61 | | | | |
| | | 24 4.30 | 13.32 | 24 15.82 | 24.84 | .52 | .52 | | | | |
| | | 26 13.35 | 22.35 | 26 24.90 | 33.90 | .55 | .55 | | | | |
| | | 28 21.54 | 30.56 | 28 33.20 | 42.00 | .66 | .44 | | | | |
| | | 31 34.85 | 43.75 | 31 46.40 | 55.30 | .55 | .55 | | | | |
| | | 33 48.54 | 57.50 | 34 0.00 | 9.12 | .66 | .62 | | | | |
| | | 35 40.30 | 49.26 | 35 51.90 | 36 0.95 | .60 | .69 | | | | |
| | | 37 24.35 | 33.32 | 36 36.00 | 45.00 | .65 | .68 | | | | |
| | | 39 3.19 | 12.10 | 39 14.78 | 23.73 | .59 | .63 | | | | |
| | | 40 56 78 | 41 5.81 | 41 8.40 | 17.40 | +11.62 | +11.59 | | | | |
| | Mean | . . . | . . . | . . . | . . . | +11.585 | +11.588 | | | | |
| | | h. m. | 61 ^r .803 | 62 ^r .080 | | | | | | | |
| | | 11 35 | .822 | .110 | | | | | | | |
| | | | .798 | .110 | | | | | | | |
| | | | .855 | .165 | | | | | | | |
| | | | .860 | .170 | | | | | | | |
| | Mean | . . . | 61.828 | 62.127 | | | | | | | |
| 28 | TITAN . . . | 21 28 5.16 | 15.14 | 21 28 18.40 | 28.40 | +13.24 | +13.26 | 3 A | 3 | H. | p (est.) 93° . Chron. corr., — $0^m.7$. |
| | | 29 56.73 | 30 6.71 | 30 10.00 | 20.00 | .27 | .29 | | | | |
| | | 31 31.34 | 41.37 | 31 44.75 | 54.68 | .41 | .31 | | | | |
| | | 33 13.14 | 23.11 | 33 26.40 | 36.43 | .26 | .32 | | | | |
| | | 34 56.59 | 35 6.53 | 35 9.82 | 19.83 | .23 | .30 | | | | |
| | | 36 44.13 | 54.06 | 36 57.37 | 37 7.40 | .24 | .34 | | | | |
| | | 38 39.82 | 49.79 | 38 53.00 | 39 3.00 | .18 | .21 | | | | |
| | | 41 44.97 | 54.94 | 41 58.30 | 42 8.28 | .23 | .34 | | | | |
| | | 45 4.72 | 14.65 | 45 18.00 | 27.90 | .28 | .25 | | | | |
| | | 46 49.97 | 59.95 | 47 3.26 | 13.15 | .29 | .20 | | | | |
| | | 48 43.38 | 53.29 | 48 56.65 | 49 6.60 | .27 | .31 | | | | |
| | | 50 21.41 | 31.36 | 50 34.70 | 44.62 | .29 | .23 | | | | |
| | | 51 50.35 | 52 0.23 | 52 3.60 | 13.58 | .25 | .35 | | | | |
| | | 53 28.57 | 38.54 | 53 41.88 | 51.74 | +13.31 | +13.20 | | | | |
| | Mean | . . . | . . . | . . . | . . . | +13.265 | +13.281 | | | | |
| | | h. m. | 58 ^r .964 | 60 ^r .487 | | | | | | | |
| | | 11 43 | 59.000 | .459 | | | | | | | |
| | | | 58.990 | .412 | | | | | | | |
| | | | .961 | .429 | | | | | | | |
| | | | .932 | .495 | | | | | | | |
| | Mean | . . . | 58.969 | 60.456 | | | | | | | |
| | JAPETUS . . . | 21 28 5.16 | 15.14 | 21 27 28.55 | 38.47 | —36.61 | —36.67 | 3 A | 3 | H. | JAPETUS south, preceding SATURN. p (est.) 267° . Chron. corr., — $0^m.7$. Ther., $67^\circ.0$. |
| | | 29 56.73 | 30 6.71 | 29 20.20 | 30.00 | .53 | .71 | | | | |
| | | 31 31.34 | 41.37 | 30 54.70 | 4.75 | .64 | .62 | | | | |
| | | 33 13.14 | 23.11 | 32 36.57 | 46.50 | .57 | .61 | | | | |
| | | 34 56.59 | 35 6.53 | 34 19.96 | 29.95 | .65 | .58 | | | | |
| | | 36 44.13 | 54.06 | 36 7.52 | 17.56 | .61 | .50 | | | | |
| | | 38 39.82 | 49.79 | 38 3.20 | 13.15 | .62 | .64 | | | | |
| | | 41 44.97 | 54.94 | 41 8.40 | 18 38 | .57 | .56 | | | | |
| | | 43 45.50 | 55.40 | 43 8.90 | 18.80 | .60 | .60 | | | | |
| | | 45 4.72 | 14.65 | 41 28.10 | 38.00 | .62 | .65 | | | | |
| | | 46 49.97 | 59.95 | 46 13.30 | 23.30 | .67 | .65 | | | | |
| | | 48 43.38 | 53.29 | 48 6.78 | 16.80 | .60 | .49 | | | | |
| | | 50 21.41 | 31.36 | 49 44.78 | 54.72 | .63 | .64 | | | | |
| | | 51 50.35 | 52 0.23 | 51 13.70 | 23.66 | .65 | .57 | | | | |
| | | 53 28.57 | 38.54 | 52 52.00 | 53 1.97 | —36.57 | —36.57 | | | | |
| | Mean | . . . | . . . | . . . | . . . | —36.615 | —36.604 | | | | |
| | | h. m. | 58 ^r .890 | 62 ^r .524 | | | | | | | |
| | | 11 33 | .890 | .592 | | | | | | | |
| | | | .960 | .630 | | | | | | | |
| | | | .976 | .664 | | | | | | | |
| | | | 59.040 | .740 | | | | | | | |
| | Mean | . . . | 58.951 | 62.630 | | | | | | | |

| Date. | Object observed. | Saturn. | | Satellite. | | Δa | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|------------------|-------------|----------------------|----------------------|----------|------------|----------|------------|--------|-----------|---|
| | | Wire I. | Wire II. | Wire I. | Wire II. | Wire I. | Wire II. | | | | |
| 1876. Aug. 29 | TITAN . . . | h. m. s. | m. s. | h. m. s. | m. s. | s. | s. | 3 A | 3 | H. | TITAN south, following SATURN. ϕ (est.) 95° . Chron. corr., $-0^m.7$. Cloudy. |
| | | 21 24 50.60 | 25 0.87 | 21 25 3.62 | 13.95 | +13.02 | +13.08 | | | | |
| | | 26 37.47 | 47.71 | 26 50.60 | 27 0.75 | .13 | .04 | | | | |
| | | 28 14.68 | 24.97 | 28 27.80 | 38.00 | .12 | .03 | | | | |
| | | 29 55.87 | 30 5.73 | 30 8.50 | 18.70 | .13 | 12.97 | | | | |
| | | 31 27.32 | 37.62 | 31 40.40 | 50.68 | .08 | 13.06 | | | | |
| | | 33 22.41 | 32.65 | 33 35.54 | 45.72 | .13 | .07 | | | | |
| | | 34 59.96 | 35 10.20 | 35 12.90 | 23.24 | 12.94 | .04 | | | | |
| | | 37 4.13 | 14.34 | 37 17.25 | 27.48 | 13.12 | .14 | | | | |
| | | 40 44.67 | 54.92 | 40 57.70 | 41 7.88 | .03 | 12.96 | | | | |
| | | 42 12.64 | 22.90 | 42 25.70 | 36.00 | +13.06 | +13.10 | | | | |
| | | Mean | . . . | . . . | . . . | +13.076 | +13.049 | | | | |
| | | h. m. | 65 ^r .320 | 67 ^r .924 | | | | | | | |
| | | 11 53 | .360 | .958 | | | | | | | |
| | | | .430 | .947 | | | | | | | |
| | Mean | . . . | 65.370 | 67.943 | | | | | | | |
| | JAPETUS . . . | 21 24 50.60 | 25 0.87 | 21 24 15.00 | 25.32 | -35.60 | -35.55 | 3 A | 3 | H. | JAPETUS south, preceding SATURN. ϕ (est.) 266° . Chron. corr., $-0^m.7$. Cloudy. Ther., $73^\circ.0$. |
| | | 26 37.47 | 47.71 | 26 1.92 | 12.13 | .55 | .58 | | | | |
| | | 28 14.68 | 24.97 | 27 39.10 | 49.35 | .58 | .62 | | | | |
| | | 29 55.87 | 30 5.73 | 29 19.90 | 30.15 | .47 | .58 | | | | |
| | | 31 27.32 | 37.62 | 30 51.70 | 31 2.00 | .62 | .62 | | | | |
| | | 33 22.41 | 32.65 | 32 46.82 | 57.20 | .59 | .45 | | | | |
| | | 34 59.96 | 35 10.20 | 34 24.30 | 34.64 | .66 | .56 | | | | |
| | | 37 4.13 | 14.34 | 36 28.60 | 38.80 | .53 | .54 | | | | |
| | | 40 44.67 | 54.92 | 40 9.13 | 19.35 | .54 | .57 | | | | |
| | | 42 12.64 | 22.90 | 41 37.00 | 47.33 | -35.64 | -35.57 | | | | |
| | | Mean | . . . | . . . | . . . | -35.578 | -35.564 | | | | |
| | | h. m. | 65 ^r .480 | 69 ^r .210 | | | | | | | |
| | | 11 48 | .409 | .167 | | | | | | | |
| | | | .320 | .020 | | | | | | | |
| | Mean | . . . | 65.403 | 69.132 | | | | | | | |
| 31 | JAPETUS . . . | 21 23 0.31 | 9.81 | 21 22 27.58 | 37.00 | -32.73 | -32.81 | 3 A | 4 | H. | JAPETUS south, preceding SATURN. ϕ (est.) 266° . Chron. corr., $-0^m.6$. Ther., $76^\circ.2$. |
| | | 24 28.35 | 37.85 | 23 55.50 | 24 5.00 | .85 | .85 | | | | |
| | | 25 48.45 | 57.90 | 25 15.60 | 25.03 | .85 | .87 | | | | |
| | | 27 14.46 | 23.89 | 26 41.63 | 51.13 | .83 | .76 | | | | |
| | | 29 7.37 | 16.84 | 28 34.60 | 44.00 | .77 | .81 | | | | |
| | | 30 58.68 | 31 8.15 | 30 25.90 | 35.38 | .78 | .77 | | | | |
| | | 32 28.29 | 37.70 | 31 55.50 | 32 4.95 | .79 | .75 | | | | |
| | | 34 10.86 | 20.30 | 33 38.05 | 47.43 | .81 | .87 | | | | |
| | | 35 59.74 | 36 9.22 | 35 26.95 | 36.40 | -32.79 | -32.82 | | | | |
| | | Mean | . . . | . . . | . . . | -32.800 | -32.816 | | | | |
| | | h. m. | 65 ^r .812 | 69 ^r .538 | | | | | | | |
| | | 11 1 | .834 | .572 | | | | | | | |
| | | | .846 | .590 | | | | | | | |
| | | | .855 | .610 | | | | | | | |
| | Mean | . . . | 65.837 | 69.578 | | | | | | | |

| Date. | Object observed. | Saturn. | | Satellite. | | Δ^a | | Eye-piece. | Image. | Observer. | REMARKS. |
|-------------------|------------------|-------------|----------------------|----------------------|----------|------------|----------|------------|--------|-----------|---|
| | | Wire I. | Wire II. | Wire I. | Wire II. | Wire I. | Wire II. | | | | |
| 1876. Sept. 20 | JAPETUS . . . | h. m. s. | m. s. | h. m. s. | m. s. | s. | s. | 3 A | 3 | H. | JAPETUS north, following SATURN. ρ (est.) 90° . Chron corr., + $0^m.9$. |
| | | 20 54 13.72 | 22.08 | 20 54 35.22 | 43.60 | +21.50 | +21.52 | | | | |
| | | 55 41.58 | 49.92 | 56 2.93 | 11.48 | .35 | .56 | | | | |
| | | 57 16.34 | 24.68 | 57 37.80 | 46.18 | .46 | .50 | | | | |
| | | 20 58 42.21 | 50.61 | 20 59 3.69 | 12.13 | .48 | .52 | | | | |
| | | 21 0 22.68 | 31.12 | 21 0 44.22 | 52.62 | .54 | .50 | | | | |
| | | 3 17.01 | 25.35 | 3 38.54 | 46.90 | .53 | .55 | | | | |
| | | 4 46.58 | 54.95 | 5 8.13 | 16.42 | .55 | .47 | | | | |
| | | 7 56.44 | 8 4.84 | 8 18.00 | 26.44 | .56 | .60 | | | | |
| | | 9 35.28 | 43.64 | 9 56.84 | 10 5.20 | +21.56 | +21.56 | | | | |
| | | Mean | . . . | . . . | . . . | +21.503 | +21.531 | | | | |
| | | h. m. | 58 ^r .971 | 59 ^r .488 | | | | | | | |
| | | 9 24 | 59.060 | .503 | | | | | | | |
| | | Mean | . . . | . . . | | | | | | | |
| | | | 59.030 | 59.523 | | | | | | | |
| | TITAN . . . | 20 54 13.72 | 22.08 | 20 54 3.10 | 11.50 | -10.62 | -10.58 | 3 A | 3 | H. | TITAN south, preceding SATURN. ρ (est.) 270° . Chron. corr., + $0^m.9$. Ther., $66^\circ.0$. |
| | | 55 41.58 | 49.92 | 55 30.90 | 39.27 | .68 | .65 | | | | |
| | | 57 16.34 | 24.68 | 57 5.65 | 14.00 | .69 | .68 | | | | |
| | | 20 58 42.21 | 50.61 | 20 58 31.54 | 39.95 | .67 | .66 | | | | |
| | | 21 0 22.68 | 31.12 | 21 0 12.05 | 20.42 | .63 | .70 | | | | |
| | | 3 17.01 | 25.35 | 3 6.38 | 14.68 | .63 | .67 | | | | |
| | | 4 46.58 | 54.95 | 4 35.92 | 44.25 | .66 | .70 | | | | |
| | | 7 56.44 | 8 4.84 | 7 45.70 | 54.20 | .74 | .64 | | | | |
| | | 9 35.28 | 43.64 | 9 24.63 | 32.92 | -10.65 | -10.72 | | | | |
| | | Mean | . . . | . . . | . . . | -10.663 | -10.667 | | | | |
| | | h. m. | 59 ^r .278 | 59 ^r .301 | | | | | | | |
| | | 9 17 | .360 | .379 | | | | | | | |
| | | Mean | . . . | . . . | | | | | | | |
| | | | 59.335 | 59.360 | | | | | | | |
| Oct. 2 | JAPETUS . . . | 21 52 30.79 | 41.20 | 21 53 8.00 | 18.34 | +37.21 | +37.14 | 3 A | 3 | H. | JAPETUS north, following SATURN. ρ (est.) 87° . Chron. eorr., + $1^m.2$. Moonlight and JAPETUS faint. |
| | | 54 16.95 | 27.33 | 54 54.23 | 55 4.60 | .28 | .27 | | | | |
| | | 55 59.69 | 56 10.17 | 56 36.87 | 47.38 | .18 | .21 | | | | |
| | | 57 40.93 | 51.36 | 58 18.18 | 28.57 | .25 | .21 | | | | |
| | | 21 59 19.28 | 29.65 | 21 59 56.53 | 6.86 | .25 | .21 | | | | |
| | | 22 1 0.90 | 11.22 | 22 1 38.20 | 48.55 | .30 | .33 | | | | |
| | | 4 0.86 | 11.30 | 4 38.20 | 48.40 | .34 | .10 | | | | |
| | | 6 28.10 | 38.46 | 7 5.40 | 15.53 | .30 | .07 | | | | |
| | | 8 34.06 | 44.40 | 9 11.30 | 21.65 | +37.24 | +37.25 | | | | |
| | | Mean | . . . | . . . | . . . | +37.261 | +37.199 | | | | |
| | | h. m. | 63 ^r .239 | 66 ^r .044 | | | | | | | |
| | | 9 35 | .286 | .077 | | | | | | | |
| | | Mean | . . . | . . . | | | | | | | |
| | | | 63.181 | 65.918 | | | | | | | |

| Date. | Object observed. | Saturn. | | Satellite. | | Δa | | Eye-piece. | Image. | Observer. | REMARKS. |
|-----------------|------------------|--|--|---|--|--|--|------------|--------|-----------|--|
| | | Wire I. | Wire II. | Wire I. | Wire II. | Wire I. | Wire II. | | | | |
| 1876. Oct. 9 | JAPETUS . . . | h. m. s. 21 11 25.01 12 56.10 14 49.36 16 52.19 20 30.59 22 13.72 24 6.20 25 55.35 27 23.04 29 17.56 | m. s. 30.70 1.88 55.19 57.95 36.32 19.53 11.73 1.15 28.81 23.26 | h. m. s. 21 11 55.70 13 26.86 15 20.20 17 23.00 21 1.35 22 44.53 24 36.78 26 26.20 27 53.78 29 48.30 | m. s. 12 1.48 32.72 25.83 28.78 7.12 50.26 42.60 31.90 59.54 54.00 | s. +30.69 .76 .84 .81 .76 .81 .58 .85 .74 +30.74 | s. +30.78 .84 .64 .83 .80 .73 .87 .75 .73 +30.74 | 3 A | 2 | H. | JAPETUS north, following SATURN. p (est.) 88° . Chron. corr., $-0^m.4$. |
| | Mean | . . . | . . . | . . . | . . . | +30.758 | +30.771 | | | | |
| | | h. m. 8 31 | 59 ^r .100 .056 .031 .059 | 61 ^r .921 .925 .880 .918 | | | | | | | |
| | Mean | . . . | 59.062 | 61.911 | | | | | | | |
| | TITAN . . . | 21 11 25.01 12 56.10 14 49.36 16 52.19 18 53.65 20 30.59 22 13.72 24 6.20 25 55.35 27 23.04 29 17.56 | 30.70 1.88 55.19 57.95 59.38 36.32 19.53 11.73 1.15 28.81 23.26 | 21 11 15.42 12 46.48 14 39.86 16 42.62 18 44.00 20 21.00 22 4.20 23 56.50 25 45.83 27 13.50 29 8.00 | 21.13 52.27 45.63 48.40 49.80 26.84 10.00 2.30 51.60 19.26 13.73 | - 9.59 .62 .50 .57 .65 .59 .52 .70 .52 .54 - 9.56 | - 9.57 .61 .56 .55 .58 .48 .53 .43 .55 .55 - 9.53 | 3 A | 3 | H. | TITAN north, preceding SATURN. p (est.) 280° . Chron. corr., $-0^m.4$. |
| | Mean | . . . | . . . | . . . | . . . | - 9.578 | - 9.540 | | | | |
| | | h. m. 8 22 | 58 ^r .601 .628 .668 .679 | 61 ^r .852 .797 .897 .951 | | | | | | | |
| | Mean | . . . | 58.644 | 61.874 | | | | | | | |
| 11 | JAPETUS . . . | 21 53 53.25 55 7.29 57 58.34 21 59 30.96 22 1 13.58 3 11.12 5 39.49 7 19.08 8 54.92 10 49.93 12 30.29 14 3.54 | 54 2.91 16.90 7.92 40.49 23.10 20.74 49.11 28.67 4.57 59.52 39.91 13.15 | 21 54 20.37 55 34.35 58 25.46 21 59 58.00 22 1 40.60 3 38.00 6 6.68 7 46.18 9 22.00 11 17.00 12 57.40 14 30.55 | 29.96 43.90 35.15 7.67 50.13 47.83 16.27 55.68 31.62 26.53 6.95 40.24 | +27.12 .06 .12 .04 .02 26.88 27.19 .10 .08 .07 .11 +27.01 | +27.05 .00 .23 .18 .03 .09 .16 .01 .05 .01 .04 +27.09 | 3 A | 3 | H. | JAPETUS north, following SATURN. p (est.) 87° . Chron. corr., $-0^m.3$. Ther., $42^\circ.0$. |
| | Mean | . . . | . . . | . . . | . . . | +27.067 | +27.078 | | | | |
| | | h. m. 9 0 | 62 ^r .961 .934 .916 .760 | 65 ^r .734 .738 .692 .481 | | | | | | | |
| | Mean | . . . | 62.893 | 65.661 | | | | | | | |

| Date. | Object observed. | Saturn. | | Satellite. | | $\Delta \alpha$ | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|------------------|-------------|----------------------|----------------------|----------|-----------------|----------|------------|--------|-----------|---|
| | | Wire I. | Wire II. | Wire I. | Wire II. | Wire I. | Wire II. | | | | |
| 1876. Oct. 16 | TITAN . . . | h. m. s. | m. s. | h. m. s. | m. s. | s. | s. | 3 A | 4 | H. | TITAN south, following SATURN. p (est.) 95° . Chron. corr., 0 ^m .0. |
| | | 22 19 15.86 | 25.28 | 22 19 28.20 | 37.60 | +12.34 | +12.32 | | | | |
| | | 20 41.52 | 50.88 | 20 53.85 | 21 3.27 | .33 | .39 | | | | |
| | | 21 52.81 | 22 2.20 | 22 5.20 | 14.60 | .39 | .40 | | | | |
| | | 23 29.78 | 39.20 | 23 42.13 | 51.52 | .35 | .32 | | | | |
| | | 24 43.46 | 52.83 | 24 55.68 | 25 5.20 | .22 | .37 | | | | |
| | | 25 53.63 | 26 3.04 | 26 6.00 | 15.50 | .37 | .46 | | | | |
| | | 28 33.77 | 43.09 | 28 46.00 | 55.47 | .23 | .38 | | | | |
| | | 30 34.40 | 43.91 | 30 46.76 | 56.20 | .36 | .29 | | | | |
| | | 32 37.90 | 47.27 | 32 50.20 | 59.57 | .30 | .30 | | | | |
| | | 34 17.68 | 27.09 | 34 30.00 | 39.40 | +12.32 | +12.31 | | | | |
| | | Mean | . . . | . . . | . . . | +12.321 | +12.354 | | | | |
| | | | 62 ^r .528 | 65 ^r .214 | | | | | | | |
| | | h. m. | .430 | .162 | | | | | | | |
| | | 9 1 | .380 | .139 | | | | | | | |
| | | | .400 | .138 | | | | | | | |
| | | Mean | . . . | 62.435 | 65.163 | | | | | | |
| 18 | JAPETUS . . . | 22 19 15.86 | 25.28 | 22 19 31.13 | 40.55 | +15.27 | +15.27 | 3 A | 4 | H. | JAPETUS north, following SATURN. p (est.) 85° . Chron. corr., 0 ^m .0. |
| | | 20 41.52 | 50.88 | 20 56.80 | 21 6.10 | .28 | .22 | | | | |
| | | 21 52.81 | 22 2.20 | 22 8.05 | 17.40 | .24 | .20 | | | | |
| | | 23 29.78 | 39.20 | 23 45.13 | 54.45 | .35 | .25 | | | | |
| | | 24 43.46 | 52.83 | 24 58.68 | 25 8.05 | .22 | .22 | | | | |
| | | 25 53.63 | 26 3.04 | 26 8.95 | 18.35 | .32 | .31 | | | | |
| | | 28 33.77 | 43.09 | 28 48.90 | 58.30 | .13 | .21 | | | | |
| | | 30 34.40 | 43.91 | 30 49.70 | 59.10 | .30 | .19 | | | | |
| | | 32 37.90 | 47.27 | 32 53.12 | 33 2.56 | .22 | .29 | | | | |
| | | 34 17.68 | 27.09 | 34 32.88 | 42.32 | +15.20 | +15.23 | | | | |
| | | Mean | . . . | . . . | . . . | +15.253 | +15.239 | | | | |
| | | | 60 ^r .390 | 62 ^r .432 | | | | | | | |
| | | h. m. | .399 | .436 | | | | | | | |
| | | 9 9 | .410 | .498 | | | | | | | |
| | | | .469 | .560 | | | | | | | |
| | | Mean | . . . | 60.417 | 62.482 | | | | | | |
| 18 | JAPETUS . . . | 22 52 43.49 | 49.52 | 22 52 53.22 | 59.23 | +9.73 | +9.71 | 3 A | 3 | H. | JAPETUS north, following SATURN. p (est.) 85° . Chron. corr., 0 ^m .0. |
| | | 54 3.65 | 9.79 | 54 13.44 | 19.55 | .79 | .76 | | | | |
| | | 55 34.18 | 40.23 | 55 43.84 | 50.00 | .66 | .77 | | | | |
| | | 56 52.09 | 58.20 | 57 1.84 | 7.83 | .75 | .63 | | | | |
| | | 58 2.97 | 8.99 | 58 12.63 | 18.77 | .66 | .78 | | | | |
| | | 22 59 14.35 | 20.51 | 22 59 24.20 | 30.20 | .85 | .69 | | | | |
| | | 23 0 33.71 | 39.86 | 23 0 43.48 | 49.57 | .77 | .71 | | | | |
| | | 1 50.88 | 56.96 | 2 0 5.53 | 6.62 | .65 | .66 | | | | |
| | | 3 20.65 | 26.79 | 3 30.50 | 36.54 | .85 | .75 | | | | |
| | | 4 45.90 | 51.94 | 4 55.60 | 5 1.70 | +9.70 | +9.86 | | | | |
| | | Mean | . . . | . . . | . . . | +9.741 | +9.732 | | | | |
| | | | 60 ^r .388 | 62 ^r .186 | | | | | | | |
| | | h. m. | .370 | .061 | | | | | | | |
| | | 9 21 | .282 | .010 | | | | | | | |
| | | | .242 | 61.946 | | | | | | | |
| | | . . . | 60.320 | 62.051 | | | | | | | |

| Date. | Object observed. | Saturn. | | Satellite. | | Δa | | Eye-piece. | Image. | Observer. | REMARKS. | | | | | |
|------------------|------------------|-------------|----------------------|----------------------|-------------|------------|----------|------------|--------|-----------|--|---|-----|---|----|---|
| | | Wire I. | Wire II. | Wire I. | Wire II. | Wire I. | Wire II. | | | | | | | | | |
| 1876. Oct. 24 | JAPETUS . . . | h. m. s. | m. s. | h. m. s. | m. s. | s. | s. | 3 A | 2 | H. | p (est.) 275° . Clouds. No declination measured. | | | | | |
| | | 22 15 51.53 | 54.51 | 22 15 44.35 | 47.38 | - 7.18 | - 7.13 | | | | | | | | | |
| | | 17 2.22 | 5.03 | 16 55.17 | 57.85 | .05 | .18 | | | | | | | | | |
| | | 18 18.62 | 21.52 | 18 11.55 | 14.40 | .07 | .12 | | | | | | | | | |
| | | 19 50.95 | 53.72 | 19 43.87 | 46.70 | .08 | .02 | | | | | | | | | |
| | | 21 23.58 | 26.38 | 21 16.45 | 19.30 | .13 | .08 | | | | | | | | | |
| | | 23 22.86 | 25.74 | 23 15.86 | 18.70 | .00 | .04 | | | | | | | | | |
| | | 24 36.56 | 39.27 | 24 29.40 | 32.18 | .16 | .09 | | | | | | | | | |
| | | 26 0.08 | 3.01 | 25 53.05 | 55.78 | .03 | .23 | | | | | | | | | |
| | | 27 24.60 | 27.44 | 27 17.55 | 20.36 | - 7.05 | - 7.08 | | | | | | | | | |
| | Mean | . . . | . . . | . . . | . . . | - 7.083 | - 7.108 | | | | | | | | | |
| | TITAN . . . | 22 15 51.53 | 54.51 | 22 15 39.90 | 42.94 | -11.63 | -11.57 | 3 A | 3 | H. | p (est.) 278° . Chron. corr., $+0^m.4$. Clouds. No declination measured. | | | | | |
| | | 17 2.22 | 5.03 | 16 50.65 | 53.53 | .57 | .50 | | | | | | | | | |
| | | 18 18.62 | 21.52 | 18 7.00 | 9.92 | .62 | .60 | | | | | | | | | |
| | | 19 50.95 | 53.72 | 19 39.30 | 42.20 | .65 | .52 | | | | | | | | | |
| | | 21 23.58 | 26.38 | 21 11.97 | 14.90 | .61 | .48 | | | | | | | | | |
| | | 23 22.86 | 25.74 | 23 11.30 | 14.12 | .56 | .62 | | | | | | | | | |
| | | 24 36.56 | 39.27 | 24 24.90 | 27.73 | .66 | .54 | | | | | | | | | |
| | | 26 0.08 | 3.01 | 25 48.56 | 51.38 | .52 | .63 | | | | | | | | | |
| | | 27 24.60 | 27.44 | 27 13.10 | 15.84 | -11.50 | -11.60 | | | | | | | | | |
| Mean | | . . . | . . . | . . . | . . . | -11.591 | -11.562 | | | | | | | | | |
| 31 | JAPETUS . . . | 22 46 49.89 | 47 3.00 | 22 46 25.60 | 38.75 | -24.29 | -24.25 | 3 A | 4 | H. | p (est.) 270° . Ther., $53^\circ.0$. | | | | | |
| | | 48 21.08 | 33.04 | 47 56.73 | 48 8.80 | .35 | .24 | | | | | | | | | |
| | | 50 18.83 | 29.04 | 49 54.60 | 50 4.90 | .23 | .14 | | | | | | | | | |
| | | 54 10.65 | 21.08 | 53 46.38 | 56.70 | .27 | .38 | | | | | | | | | |
| | | 56 23.24 | 33.59 | 55 58.90 | 56 9.25 | .34 | .34 | | | | | | | | | |
| | | 58 3.95 | 14.28 | 57 39.69 | 49.90 | .26 | .38 | | | | | | | | | |
| | | 22 59 58.11 | 0 8.35 | 22 59 33.73 | 44.13 | .38 | .22 | | | | | | | | | |
| | | 23 2 59.31 | 3 9.65 | 23 2 34.98 | 45.32 | .33 | .33 | | | | | | | | | |
| | | 4 57.63 | 5 7.97 | 4 33.35 | 43.60 | .28 | .37 | | | | | | | | | |
| | | 6 44.81 | 55.18 | 6 20.53 | 30.88 | -24.28 | -24.30 | | | | | | | | | |
| | Mean | . . . | . . . | . . . | . . . | -24.301 | -24.295 | | | | | | | | | |
| | TITAN . . . | h. m. | 58 ^r .361 | 59 ^r .170 | | | | | 3 A | 4 | H. | p (est.) 90° . Chron. corr., $+0^m.8$. | | | | |
| | | 8 32 | .180 | .002 | | | | | | | | | | | | |
| | | | .101 | 58.917 | | | | | | | | | | | | |
| | | | .118 | .978 | | | | | | | | | | | | |
| | | Mean | . . . | 58.190 | 59.017 | | | | | | | | | | | |
| | | TITAN . . . | 22 50 18.83 | 29.04 | 22 50 31.43 | 41.82 | +12.60 | +12.78 | | | | | 3 A | 4 | H. | p (est.) 90° . Chron. corr., $+0^m.8$. |
| | | | 54 10.65 | 21.08 | 54 23.28 | 33.62 | .63 | .54 | | | | | | | | |
| | | | 56 23.24 | 33.59 | 56 35.80 | 46.20 | .56 | .61 | | | | | | | | |
| | | | 58 3.95 | 14.28 | 22 58 16.55 | 26.90 | .60 | .62 | | | | | | | | |
| 22 59 58.11 | | | 0 8.35 | 23 0 10.65 | 21.00 | .54 | .65 | | | | | | | | | |
| 23 2 59.31 | 3 9.65 | | 3 11.92 | 22.28 | .61 | .63 | | | | | | | | | | |
| 4 57.63 | 5 7.97 | | 5 10.28 | 20.60 | .65 | .63 | | | | | | | | | | |
| 6 44.81 | 55.18 | | 6 57.40 | 7 7.84 | +12.59 | +12.66 | | | | | | | | | | |
| Mean | . . . | | . . . | . . . | . . . | +12.598 | +12.640 | | | | | | | | | |
| Mean | h. m. | | 57 ^r .992 | 59 ^r .719 | | | | | | | | | | | | |
| | 8 38 | .684 | .684 | | | | | | | | | | | | | |
| | 57.921 | .583 | | | | | | | | | | | | | | |
| | .944 | .609 | | | | | | | | | | | | | | |
| Mean | . . . | 57.967 | 59.649 | | | | | | | | | | | | | |

| Date. | Object observed. | Saturn. | | Satellite. | | Δa | | Eye-piece. | Image. | Observer. | REMARKS. |
|-----------------|------------------|-------------|----------------------|----------------------|----------|------------|----------|------------|--------|-----------|--|
| | | Wire I. | Wire II. | Wire I. | Wire II. | Wire I. | Wire II. | | | | |
| 1876. Nov. 1 | TITAN . . . | h. m. s. | m. s. | h. m. s. | m. s. | s. | s. | | | | TITAN south, following SATURN. p (est.) 95° . |
| | | 21 37 8.76 | 17.76 | 21 37 20.75 | 29.80 | +11.99 | +12.04 | 3 A | 3 | H. | |
| | | 38 37.53 | 46.60 | 38 49.58 | 58.63 | 12.05 | .03 | | | | |
| | | 40 44.73 | 53.80 | 40 56.80 | 41 5.82 | 12.07 | .02 | | | | |
| | | 42 44.65 | 53.66 | 42 56.57 | 43 5.66 | 11.92 | .00 | | | | |
| | | 44 31.52 | 40.60 | 44 43.53 | 52.63 | 12.01 | .03 | | | | |
| | | 47 28.90 | 37.99 | 47 40.93 | 50.00 | 12.03 | .01 | | | | |
| | | 49 50.39 | 59.40 | 50 2.45 | 11.48 | 12.06 | .08 | | | | |
| | | 51 56.52 | 52 5.57 | 52 8.53 | 17.54 | 12.01 | 11.97 | | | | |
| | | 53 47.50 | 56.49 | 53 59.43 | 54 8.54 | 11.93 | 12.05 | | | | |
| | | 55 4.24 | 13.29 | 55 16.30 | 25.30 | +12.06 | +12.01 | | | | |
| | | Mean | . . . | . . . | . . . | +12.013 | +12.024 | | | | |
| | | h. m. | 70 ^r .000 | 72 ^r .685 | | | | | | | |
| | | 7 38 | 69.986 | .648 | | | | | | | |
| | | | .984 | .676 | | | | | | | |
| | | | 70.042 | .710 | | | | | | | |
| | | Mean | . . . | 70.003 | 72.680 | | | | | | |
| 7 | JAPETUS . . . | 21 37 8.76 | 17.76 | 21 36 42.57 | 51.64 | -26.19 | -26.12 | 3 A | 3 | H. | JAPETUS south, preceding SATURN. p (est.) 270° . Chron. corr., -0 ^m .8. |
| | | 38 37.53 | 46.60 | 38 11.40 | 20.44 | .13 | .16 | | | | |
| | | 40 44.73 | 53.80 | 40 18.55 | 27.62 | .18 | .18 | | | | |
| | | 42 44.65 | 53.66 | 42 18.47 | 27.48 | .18 | .18 | | | | |
| | | 44 31.52 | 40.60 | 44 5.33 | 14.40 | .19 | .20 | | | | |
| | | 47 28.90 | 37.99 | 47 2.75 | 11.80 | .15 | .19 | | | | |
| | | 49 50.39 | 59.40 | 49 24.20 | 33.25 | .19 | .15 | | | | |
| | | 51 56.52 | 52 5.57 | 51 30.37 | 39.42 | .15 | .15 | | | | |
| | | 53 47.50 | 56.49 | 53 21.30 | 30.35 | .20 | .14 | | | | |
| | | 55 4.24 | 13.29 | 54 38.00 | 47.10 | -26.24 | -26.19 | | | | |
| | | Mean | . . . | . . . | . . . | -26.180 | -26.166 | | | | |
| | | h. m. | 70 ^r .114 | 71 ^r .151 | | | | | | | |
| | | 7 31 | .166 | .202 | | | | | | | |
| | | | .130 | .139 | | | | | | | |
| | | | .100 | .113 | | | | | | | |
| | | Mean | . . . | 70.128 | 71.151 | | | | | | |
| 8 | JAPETUS . . . | 22 19 19.18 | 29.87 | 22 18 44.93 | 55.63 | -34.25 | -34.24 | 3 A | 2 | H. | JAPETUS south, preceding SATURN. p (est.) 268° . Chron. corr., -2 ^m .0. Images very unsteady. |
| | | 24 10.22 | 19.25 | 23 35.96 | 44.88 | .26 | .37 | | | | |
| | | 25 51.99 | 26 0.97 | 25 17.78 | 26.63 | .21 | .34 | | | | |
| | | 27 45.81 | 54.68 | 27 11.48 | 20.36 | .33 | .32 | | | | |
| | | 29 25.38 | 34.26 | 28 51.00 | 29 0.00 | .38 | .26 | | | | |
| | | 31 32.14 | 41.06 | 30 57.80 | 31 6.70 | .34 | .36 | | | | |
| | | 33 53.39 | 34 2.21 | 33 19.10 | 28.00 | .29 | .21 | | | | |
| | | 35 47.65 | 56.63 | 35 13.44 | 22.30 | .21 | .33 | | | | |
| | | 37 19.25 | 28.25 | 36 45.00 | 53.92 | -34.25 | -34.33 | | | | |
| | | Mean | . . . | . . . | . . . | -34.280 | -34.307 | | | | |
| | | h. m. | 59 ^r .865 | 61 ^r .832 | | | | | | | |
| | | 7 38 | .770 | .756 | | | | | | | |
| | | | .654 | .709 | | | | | | | |
| | | | .613 | .600 | | | | | | | |
| | | Mean | . . . | 59.725 | 61.724 | | | | | | |
| 8 | TITAN . . . | 22 29 58.94 | 30 4.88 | 22 29 47.15 | 53.10 | -11.79 | -11.78 | 3 A | 2 | H. | p (est.) 275° . Chron. corr., +2 ^m .0. |
| | | 31 42.90 | 48.83 | 31 31.13 | . . . | .77 | . . . | | | | |
| | | 33 23.58 | 29.56 | 33 11.80 | 17.76 | .78 | .80 | | | | |
| | | 35 11.06 | 16.91 | 35 59.28 | 36 5.23 | .78 | .68 | | | | |
| | | 37 13.89 | 19.82 | 37 2.26 | 8.10 | .63 | .72 | | | | |
| | | 39 7.02 | 13.02 | 38 55.25 | 39 1.20 | .77 | .82 | | | | |
| | | 41 0.50 | 6.40 | 40 48.72 | 54.62 | -11.78 | -11.78 | | | | |
| | | Mean | . . . | . . . | . . . | -11.757 | -11.763 | | | | |
| | | h. m. | 58 ^r .054 | 59 ^r .430 | | | | | | | |
| | | 7 45 | 57.847 | .292 | | | | | | | |
| | | | .822 | .243 | | | | | | | |
| | | Mean | . . . | 57.908 | 59.322 | | | | | | |

| Date. | Object observed. | Saturn. | | Satellite. | | Δ^a | | Eye-piece. | Image. | Observer. | REMARKS. |
|-----------------|------------------|-------------|----------------------|----------------------|----------|------------|----------|------------|--------|-----------|--|
| | | Wire I. | Wire II. | Wire I. | Wire II. | Wire I. | Wire II. | | | | |
| 1876. Nov. 8 | JAPETUS . . | h. m. s. | m. s. | h. m. s. | m. s. | s. | s. | 3 A | 2 | H. | p (est.) 268°. |
| | | 22 29 58.94 | 30 4.88 | 22 29 24.10 | 30.00 | -34.84 | -34.88 | | | | |
| | | 31 42.90 | 48.83 | 31 7.95 | 13.93 | 34.95 | 35.02 | | | | |
| | | 33 23.58 | 29.56 | 32 48.55 | 54.63 | 35.03 | 34.93 | | | | |
| | | 35 11.06 | 16.91 | 34 36.00 | 42.00 | 35.66 | 34.91 | | | | |
| | | 37 13.89 | 19 82 | 36 38.90 | 44.88 | 34.99 | 34.94 | | | | |
| | | 39 7.02 | 13.02 | 38 32.00 | 37.98 | 35.42 | 35.04 | | | | |
| | | 41 0.50 | 6.40 | 40 25.50 | 31.46 | -35.00 | -34.94 | | | | |
| | | Mean | . . . | . . . | . . . | -34.984 | -34.937 | | | | |
| | | h. m. | 59 ^r .726 | 61 ^r .805 | | | | | | | |
| 12 | JAPETUS . . | 7 37 | .490 | .528 | | | | 3 A | 4 | H. | p (est.) 267°. Ther. 49°.0. Chron. corr., + 1 ^m .6. |
| | | Mean | . . | 59.578 | 61.631 | | | | | | |
| | | 20 47 49.81 | 58.92 | 20 47 14.27 | 23.40 | -35.54 | -35.52 | | | | |
| | | 49 28.45 | 37.66 | 48 53.00 | 49 2.15 | .45 | .51 | | | | |
| | | 51 22.03 | 31.16 | 50 46.55 | 55.74 | .48 | .42 | | | | |
| | | 53 5.62 | 14.75 | 52 30.00 | 39.34 | .62 | .41 | | | | |
| | | 54 31.97 | 41.06 | 53 56.45 | 54 5.00 | .52 | .46 | | | | |
| | | 56 7.90 | 16.98 | 55 32.34 | 41.43 | .56 | .50 | | | | |
| | | 20 59 36.00 | 45.03 | 20 59 0.35 | 9.53 | .65 | .50 | | | | |
| | | 21 1 36.73 | 45.86 | 21 1 1.15 | 10.40 | .53 | .46 | | | | |
| 22 | JAPETUS . . | 3 4.30 | 13.44 | 2 28.80 | 37.96 | .50 | .48 | 3 A | 3 | H. | p (est.) 267°. Chron. corr., - 4 ^m .2. |
| | | 4 47.49 | 56.63 | 4 11.88 | 21.10 | -35.61 | -35.53 | | | | |
| | | Mean | . . . | . . . | . . . | -35.551 | -35.479 | | | | |
| | | h. m. | 65 ^r .710 | 68 ^r .129 | | | | | | | |
| | | 5 46 | .776 | .165 | | | | | | | |
| | | | .780 | .196 | | | | | | | |
| | | | .800 | .256 | | | | | | | |
| | | Mean | . . | 67.767 | 68.187 | | | | | | |
| | | 22 47 47.22 | 58.91 | 22 47 24.70 | 36.40 | -22.52 | -22.51 | | | | |
| | | 49 13.82 | 25.48 | 48 51.20 | 49 3.00 | .62 | .48 | | | | |
| 22 | JAPETUS . . | 51 58.24 | 52 9.95 | 51 35.66 | 47.46 | .58 | .49 | 3 A | 3 | H. | p (est.) 267°. Chron. corr., - 4 ^m .2. |
| | | 53 35.36 | 47.06 | 53 12.76 | 24.58 | .60 | .45 | | | | |
| | | 55 45.00 | 56.73 | 55 22.42 | 34.24 | .58 | .49 | | | | |
| | | 22 58 51.37 | 59 3.07 | 22 58 28.82 | 40.57 | .55 | .50 | | | | |
| | | 23 1 0.66 | 12.40 | 23 0 38.20 | 49.96 | .46 | .44 | | | | |
| | | 3 11.10 | 22.84 | 2 48.52 | 3 0.30 | .58 | .54 | | | | |
| | | 4 53.29 | 5 4.04 | 4 30.80 | 42.48 | .49 | .56 | | | | |
| | | 6 54.81 | 7 7.62 | 6 32.38 | 43.98 | -22.43 | -22.64 | | | | |
| | | Mean | . . . | . . . | . . . | 66.541 | 68.513 | | | | |
| | | h. m. | 66 ^r .434 | 68 ^r .827 | | | | | | | |
| 22 | JAPETUS . . | 7 15 | .450 | .782 | | | | 3 A | 3 | H. | p (est.) 267°. Chron. corr., - 4 ^m .2. |
| | | | .403 | .709 | | | | | | | |
| | | | .095 | .450 | | | | | | | |
| | | Mean | . . | 66.345 | 68.692 | | | | | | |

| Date. | Object observed. | Saturn. | | Satellite. | | Δa | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|------------------|-------------|----------------------|----------------------|----------|------------|----------|------------|--------|-----------|---|
| | | Wire I. | Wire II. | Wire I. | Wire II. | Wire I. | Wire II. | | | | |
| 1876. Nov. 24 | JAPETUS . . . | h. m. s. | m. s. | h. m. s. | m. s. | s. | s. | 3 A | 2 | H. | p (est.) 266° . |
| | | 23 55 15.34 | 19.54 | 23 54 57.42 | 55 1.68 | -17.92 | -17.86 | | | | |
| | | 56 35.16 | 39.24 | 56 17.26 | 21.45 | .90 | .79 | | | | |
| | | 23 57 54.36 | 58.46 | 57 36.52 | 40.68 | .84 | .78 | | | | |
| | | 0 0 14.19 | 18.31 | 22 59 56.30 | 0 0.52 | .89 | .79 | | | | |
| | | 1 38.84 | 42.95 | 0 1 20.94 | 25.10 | .90 | .85 | | | | |
| | | 3 6.17 | 10.28 | 2 48.30 | 52.23 | .87 | .75 | | | | |
| | | 4 31.15 | 35.35 | 4 13.25 | 17.50 | .90 | .85 | | | | |
| | | 5 57.99 | 6 2.09 | 5 40.00 | 44.23 | .90 | .86 | | | | |
| | | 7 32.26 | 36.36 | 7 14.35 | 18.50 | .91 | .86 | | | | |
| | Mean | 8 43.40 | 47.57 | 8 25.50 | 29.60 | .90 | .97 | | | | |
| | | 10 4.85 | 9.05 | 9 47.00 | 51.20 | -17.85 | -17.85 | | | | |
| | | . | . | . | . | -17 889 | -17.837 | | | | |
| | | h. m. | 66 ^r .523 | 68 ^r .526 | | | | | | | |
| | | 8 1 | .446 | .670 | | | | | | | |
| | | | .481 | .615 | | | | | | | |
| | | Mean | 66.483 | 68.604 | | | | | | | |
| | | . | . | . | . | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | TITAN . . . | 23 55 15.34 | 19.54 | 23 55 3.90 | 8.00 | -11.44 | -11.54 | 3 A | 2 | H. | p (est.) 275° . Chron. corr., $+2^m.4$. |
| | | 56 35.16 | 39.24 | 56 23.64 | 27.80 | .50 | .44 | | | | |
| | | 23 57 54.36 | 58.46 | 57 42.90 | 47.00 | .46 | .46 | | | | |
| | | 0 0 14.19 | 18.31 | 0 0 2.68 | 6.95 | .51 | .36 | | | | |
| | | 1 38.84 | 42.95 | 1 27.35 | 31.50 | .49 | .45 | | | | |
| | | 3 6.17 | 10.28 | 2 54.66 | 58.80 | .51 | .48 | | | | |
| | | 4 31.15 | 35.35 | 4 19.64 | 23.85 | .51 | .50 | | | | |
| | | 5 57.99 | 6 2.09 | 5 46.50 | 50.63 | .40 | .46 | | | | |
| | | 7 32.26 | 36.36 | 7 20.73 | 24.88 | .53 | .48 | | | | |
| | | 8 43.40 | 47.57 | 8 31.92 | 36 12 | .48 | .45 | | | | |
| | Mean | 10 4.85 | 9.05 | 9 53.40 | 57.53 | -11.45 | -11.52 | | | | |
| | | . | . | . | . | -11.480 | -11.467 | | | | |
| | | h. m. | 64 ^r .945 | 66 ^r .296 | | | | | | | |
| | | 8 6 | .820 | .261 | | | | | | | |
| | | | .806 | .244 | | | | | | | |
| | | Mean | 64.857 | 66.267 | | | | | | | |
| | | . | . | . | . | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| Dec. 7 | JAPETUS . . . | 22 56 3.64 | 9.78 | 22 56 19.75 | 25.87 | +16.11 | +16.09 | 3 A | 2 | H. | JAPETUS north, following SATURN. p (est.) 90° . Chron. corr., $0^m.0$. Very unsteady images. |
| | | 57 14.32 | 20.40 | 57 30.40 | 36.47 | .08 | .07 | | | | |
| | | 22 58 44.58 | 50.77 | 22 59 0.62 | 6.80 | .04 | .03 | | | | |
| | | 23 0 6.73 | 12.83 | 23 0 22.80 | 28.98 | .07 | .15 | | | | |
| | | 2 4.70 | 10.90 | 2 20 87 | 27.00 | .17 | .10 | | | | |
| | | 4 3.55 | 9.59 | 4 19.62 | 25.72 | .07 | .13 | | | | |
| | | 6 9.39 | 15.59 | 6 25.50 | 31.65 | .11 | .06 | | | | |
| | | 7 43.27 | 49.40 | 7 59.40 | 8 5.37 | .13 | 15.97 | | | | |
| | | 9 21.27 | 27.40 | 9 37.40 | 43.56 | .13 | 16.16 | | | | |
| | | 11 20.93 | 29.08 | 11 37.00 | 43.15 | +16.07 | .07 | | | | |
| | Mean | . | . | . | . | +16.098 | +16.083 | | | | |
| | | h. m. | 47 ^r .102 | 57 ^r .207 | | | | | | | |
| | | 6 13 | .028 | .068 | | | | | | | |
| | | | 56.898 | 56.971 | | | | | | | |
| | | | .929 | 57.034 | | | | | | | |
| | | Mean | 56.989 | 57.070 | | | | | | | |
| | | . | . | . | . | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

| Date. | Object observed. | Saturn. | | Satellite. | | Δa | | Eye-piece. | Image. | Observer. | REMARKS. |
|------------------|------------------|---|---|--|---|---|--|------------|--------|-----------|---|
| | | Wire I. | Wire II. | Wire I. | Wire II. | Wire I. | Wire II. | | | | |
| 1876. Dec. 12 | JAPETUS . . | h. m. s. 23 10 24.61 11 43.99 13 28.10 14 52.50 19 33.13 21 17.37 22 50.14 24 34.50 25 57.53 27 42.02 | m. s. 30.63 50.02 34.18 58.61 39.15 23.35 56.20 40.62 3.63 48.08 | h. m. s. 23 10 50.80 12 9.98 13 54.27 15 18.62 19 59.26 21 43.38 23 16.30 25 0.67 26 23.73 28 8.10 | m. s. 56.74 16.18 0.30 24.60 5.40 49.60 22.35 6.60 29.78 14.20 | s. +26.19 25.99 26.17 .12 .13 .01 .16 .17 .20 +26.08 | s. +26.11 .16 .12 25.99 26.25 .25 .15 25.98 .15 +26.12 | 3 A | 2 | H. | JAPETUS north, following SATURN. ρ (est.) 90° . Chron. corr., + $0^m.25$. Images very unsteady and blurred. |
| | Mean | . . . | . . . | . . . | . . . | +26.122 | +26.128 | | | | |
| | | h. m. 6 11 | 60 ^r .070 59.875 .770 .811 | 61 ^r .284 .088 60.961 .969 | | | | | | | |
| | Mean | . . . | 59.882 | 61.075 | | | | | | | |
| 15 | JAPETUS . . | 23 53 24.95 54 46.20 56 41.78 23 59 4.32 0 0 44.63 2 29.55 4 25.08 5 52.70 7 54.75 9 24.52 | 30.50 51.67 47.21 9.80 50.11 35.05 30.58 58.04 0.24 29 97 | 23 53 55.22 55 16.40 57 12.00 23 59 34.55 0 1 14.92 2 59.75 4 55.30 6 22.87 8 25.00 9 54.62 | 54 0.60 21.75 17.58 40.00 20.27 3 5.17 5 0.73 28.26 30.43 10 0.00 | +30.27 .20 .22 .23 .29 .20 .22 .17 .25 +30.10 | +30.10 .08 .17 .20 .16 .12 .15 .22 .19 +30.03 | 3 A | 2 | H. | JAPETUS north, following SATURN. ρ (est.) 87° . Chron. corr., + $0^m.4$. |
| | Mean | . . . | . . . | . . . | . . . | +30.215 | +30.142 | | | | |
| | | h. m. 6 39 | 66 ^r .634 .506 .219 .150 | 68 ^r .430 .127 .000 67.869 | | | | | | | |
| | Mean | . . . | 66.377 | 68.106 | | | | | | | |
| 19 | TITAN . . . | 23 29 54.72 31 34.74 33 19.02 34 59.09 36 40.94 38 22.84 39 53.56 43 31.60 45 32.63 47 26.87 49 35.62 | 30 1.62 31 41.60 25.94 5.95 47.66 29.72 40 0.43 38.43 39.45 33.65 42.43 | 23 30 5.90 31 33 35 10.20 36 52.00 38 33.98 40 4.62 43 42.52 45 43.67 47 37.93 49 46.60 | 12.73 52.67 37.00 17.00 58.83 40.80 11.50 49.40 50.60 44.80 53.52 | +11.18 11.11 .06 .14 .06 10.92 11.04 11.06 +10.98 | +11.11 .07 .06 .05 .17 .08 .07 10.97 11.15 .15 +11.09 | 3 A | 3 | H. | TITAN south, following SATURN. ρ (est.) 95° . |
| | Mean | . . . | . . . | . . . | . . . | +11.076 | | | | | |
| | | h. m. 6 5 | 65 ^r .153 64.927 65.904 65.968 | 67 ^r .570 .430 68.528 .498 | | | | | | | |
| | Mean | . . . | 65.488 | 68.007 | | | | | | | |
| | JAPETUS . . | 23 29 54.72 31 34.74 33 19.02 34 59.09 36 40.94 38 22.84 39 53.56 43 31.60 45 32.63 47 26.87 49 35.62 | 30 1.62 31 41.60 25.94 5.95 47.66 29.72 40 0.43 38.43 39.45 33.65 42.43 | 23 30 27.50 32 7.40 33 51.68 35 31.77 37 13.60 38 55.53 40 26.22 44 4.20 46 5.32 47 59.46 50 8.28 | 34.33 14.30 58.58 38.57 20.45 39 2.40 33.10 11.15 12.25 48 6.32 15.18 | +32.78 .66 .66 .68 .66 .69 .66 .60 .69 .59 +32.66 | +32.71 .70 .64 .62 .79 .68 .67 .72 .80 .67 +32.75 | 3 A | 3 | H. | JAPETUS north, following SATURN. ρ (est.) 87° . Chron. corr., + $0^m.9$. |
| | Mean | . . . | . . . | . . . | . . . | +32.666 | +32.705 | | | | |
| | | h. m. 6 17 | 63 ^r .327 .102 .140 62.927 | 65 ^r .720 .574 .461 .340 | | | | | | | |
| | Mean | . . . | 63.124 | 65.524 | | | | | | | |

RESULTS OF OBSERVATIONS OF THE SATELLITE OF NEPTUNE.

| Date. | Washington Mean Time. | Position Angle. | Number of measures. | Weight. | Washington Mean Time. | Distance. | Number of measures. | Weight. | Observer. | REMARKS. |
|----------|--------------------------|--------------------|------------------------|---------|--------------------------|-----------|------------------------|---------|-----------|--|
| 1876. | h. m. | ° | | | h. m. | " | | | | |
| Jan. 3 | 7 42 | 64.1 | 5 | 2 | 7 54 | 9.72 | 3 | 2 | H. | Windy, and images very unsteady. |
| 4 | 7 11 | 36.8 | 5 | 3 | 7 42 | 16.70 | 4 | 3 | H. | |
| 7 | 7 35 | 214.1 | 5 | 4 | 7 45 | 16.39 | 5 | 4 | H. | |
| 10 | 6 38 | 33.8 | 5 | 1½ | 6 52 | 17.11 | 5 | 1½ | H. | |
| 13 | 6 42 | 214.3 | 5 | 2 | 7 12 | 16.35 | 5 | 2 | H. | |
| 24 | 7 10 | 223.7 | 5 | 3 | 7 24 | 14.28 | 5 | 3 | H. | |
| 25 | 6 52 | 207.4 | 5 | 3 | 7 4 | 14.80 | 5 | 3 | H. | |
| 28 | 6 23 | 28.6 | 5 | 2 | 6 43 | 14.67 | 2 | 2 | H. | Satellite faint. The telescope very unsteady, so that this observation is uncertain. |
| 31 | 6 41 | 205.0 | 5 | 4 | 6 50 | 13.73 | 5 | 4 | H. | |
| Sept. 28 | 11 37 | 193.7 | 5 | 3 | 11 59 | 11.03 | 5 | 4 | Hn. | All these observations taken under unfavorable conditions, and they should be given only ¼ weight. |
| 28 | 12 18 | 192.6 | 2 | 3 | . . | . . | . . | . . | Hn. | |
| Oct. 3 | 10 5 | 219.4 | 4 | 1 | . . | . . | . . | . . | Hn. | |
| 7 | 11 9 | 4.7 | 3 | 1 | . . | . . | . . | . . | Hn. | |
| 11 | 10 29 | 61.0 | 4 | 1 | 11 8 | 11.96 | 3 | 1 | Hn. | |
| 12 | 10 45 | 36.0 | 4 | 3 | 11 14 | 17.15 | 4 | 3 | Hn. | |
| 13 | 10 23 | 356.0 | 5 | 4 | 10 48 | 7.82 | 5 | 4 | Hn. | |
| 18 | 9 56 | 33.6 | 5 | 4 | 10 18 | 16.72 | 5 | 4 | Hn. | |
| 27 | 9 31 | 210.8 | 5 | . . | 9 56 | 15.72 | 5 | . . | Hn. | |
| 31 | 9 44 | 311.2 | 4 | 5 | 9 44 | 5.(est.) | . . | . . | Hn. | |
| Nov. 1 | 9 42 | 227.6 | 3 | 3 | 9 54 | 16.10 | 3 | 3 | Hn. | Single distance. Observations with black wires in strong moonlight. |
| 7 | 11 50 | 222.6 | 4 | 2 | 12 10 | 16.60 | 4 | 2 | Hn. | |
| 22 | 9 23 | 38.2 | 5 | 1 | . . | . . | . . | . . | Hn. | |
| Dec. 13 | 9 31 | 211.1 | 4 | 2 | 9 44 | 15.61 | 2 | 2 | Hn. | Very unsteady. |
| 19 | 9 10 | 207.5 | 4 | 1 | . . | . . | . . | . . | Hn. | |

RESULTS OF OBSERVATIONS OF THE SATELLITES OF URANUS.

OBERON.

| Date. | Washington Mean Time. | Position Angle. | Number of measures. | Weight. | Washington Mean Time. | Distance. | Number of measures. | Weight. | Observer. | REMARKS. |
|--------|--------------------------|--------------------|------------------------|---------|--------------------------|-----------|------------------------|---------|-----------|---|
| 1876. | h. m. | ° | | | h. m. | " | | | | |
| Jan. 6 | 12 17 | 339.6 | 3 | 4 | 12 37 | 33.95 | 2 | 4 | Hn. | Single distance. |
| 14 | 11 48 | 110.6 | 4 | 1 | 12 2 | 23.3 | 1 | 1 | Hn. | |
| 20 | 12 33 | 320.9 | 4 | 2 | 12 47 | 26.92 | 4 | 2 | Hn. | |
| 25 | 11 4 | 181.4 | 4 | 2 | 11 24 | 44.12 | 4 | 2 | Hn. | |
| 26 | 11 5 | 163.5 | 4 | 4 | 11 19 | 35.53 | 4 | 4 | Hn. | |
| Feb. 2 | 10 43 | 337.8 | 4 | 4 | 11 12 | 32.79 | 4 | 4 | Hn. | Single distances. |
| 16 | 10 53 | 320.9 | 2 | 1 | . . | . . | . . | . . | Hn. | |
| 17 | 10 58 | 271.5 | 3 | 3 | 11 41 | 22.29 | 3½ | 3 | Hn. | |
| 18 | 11 6 | 227.8 | 4 | 4 | 11 25 | 30.18 | 4 | 4 | Hn. | |
| Mar. 4 | 10 52 | 198.3 | 4 | 4 | 11 18 | 44.25 | 4 | 3 | Hn. | Single distances. Faint. |
| 9 | 8 54 | 57.4 | 4 | 3 | 9 6 | 27.28 | 4 | 3 | H. | |
| 13 | 8 44 | 346.8 | 4 | 3 | 8 55 | 38.24 | 4 | 2 | H. | |
| 14 | 9 44 | 318.2 | 4 | 2 | 9 52 | 27.30 | 3 | 2 | H. | |
| 22 | 9 18 | 77.9 | 4 | 3 | 9 26 | 23.36 | 2 | 3 | H. | |
| 23 | 8 58 | 41.5 | 4 | 3 | 9 8 | 32.68 | 4 | 3 | H. | |
| 31 | 8 13 | 198.0 | 4 | 2 | 8 24 | 43.48 | 4 | 2 | H. | |
| Apr. 6 | 7 51 | 30.4 | 4 | 3 | 7 59 | 37.32 | 4 | 3 | H. | NOTE.—In Professor Holden's observation of these satellites, March 3, for — degrees from URANUS, read 50 degrees from URANUS. |
| 8 | 7 39 | 1.5 | 4 | 2 | 7 49 | 44.27 | 4 | 2 | H. | |
| 15 | 8 3 | 177.1 | 4 | 3 | 8 13 | 42.80 | 4 | 3 | H. | |

TITANIA.

| | | | | | | | | | | |
|--------|-------|-------|---|---|-------|-------|----|-----|-----|---------------------------|
| Jan. 6 | 12 18 | 23.5 | 3 | 4 | 12 52 | 31.72 | 1 | 2 | Hn. | Single distances. |
| 14 | 11 32 | 48.2 | 5 | 2 | 12 7 | 27.18 | 4 | 2 | Hn. | |
| 20 | 12 24 | 186.2 | 4 | 2 | 13 8 | 34.22 | 4 | 2 | Hn. | |
| 25 | 11 8 | 351.7 | 4 | 2 | 11 40 | 31.09 | 4 | 2 | Hn. | |
| 26 | 11 35 | 309.6 | 4 | 5 | 11 40 | 17.18 | 1 | . . | Hn. | Single distances. Clouds. |
| 31 | 11 19 | 76.3 | 4 | 5 | 11 36 | 16.32 | 2½ | 3 | Hn. | |

RESULTS OF OBSERVATIONS OF THE SATELLITES OF URANUS—Continued.

TITANIA—Continued.

| Date. | Washington Mean Time. | Position Angle. | Number of measures. | Weight. | Washington Mean Time. | Distance. | Number of measures. | Weight. | Observer. | REMARKS. |
|--------|--------------------------|--------------------|------------------------|---------|--------------------------|-----------|------------------------|---------|-----------|-------------------|
| 1876. | h. m. | ° | | | h. m. | " | | | | |
| Feb. 2 | 10 42 | 6.8 | 4 | 4 | 11 12 | 34.40 | 4 | 4 | Hn. | |
| 12 | 11 19 | 332.6 | 4 | 3 | 11 27 | 23.27 | 1½ | 3 | Hn. | |
| 16 | 10 49 | 166.1 | 2 | 1 | . . | . . | . . | . . | Hn. | |
| 17 | 11 0 | 112.9 | 3 | 3 | 11 19 | 16.15 | 3 | 3 | Hn. | |
| 18 | 11 2 | 44.1 | 4 | 4 | 11 25 | 23.57 | 3 | 4 | Hn. | Single distances. |
| Mar. 4 | 10 49 | 176.7 | 4 | 4 | 11 17 | 31.57 | 4 | 3 | Hn. | Single distances. |
| 9 | 8 33 | 339.7 | 4 | 3 | 8 43 | 26.45 | 4 | 3 | H. | Faint. |
| 13 | 9 6 | 169.5 | 4 | 2 | 9 16 | 29.76 | 4 | 2 | H. | |
| 14 | 9 30 | 125.9 | 4 | 2 | 9 38 | 18.02 | 2 | 2 | H. | |
| 21 | 8 9 | 187.3 | 4 | 2 | 8 22 | 33.95 | 4 | 2 | H. | |
| 22 | 9 34 | 160.7 | 4 | 3 | 9 46 | 26.47 | 4 | 3 | H. | |
| 23 | 8 39 | 105.9 | 4 | 3 | 8 48 | 16.84 | 4 | 3 | H. | |
| 31 | 7 48 | 152.3 | 4 | 2 | 8 2 | 23.52 | 4 | 2 | H. | |
| Apr. 6 | 8 8 | 225.0 | 4 | 2 | 8 18 | 23.35 | 4 | 2 | H. | |
| 8 | 7 59 | 173.7 | 4 | 2 | 8 9 | 30.97 | 4 | 2 | H. | |
| 15 | 8 24 | 212.2 | 4 | 3 | 8 35 | 27.54 | 4 | 3 | H. | |

UMBRIEL.

| | | | | | | | | | | |
|---------|-------|-------|---|---|-------|-------|-----|-----|-----|--|
| Jan. 20 | 12 13 | 179.3 | 2 | 3 | . . | . . | . . | . . | Hn. | |
| Feb. 16 | 10 14 | 357.5 | 4 | 2 | 10 34 | 20.15 | 4 | 2 | Hn. | |
| 17 | 10 20 | 242.9 | 1 | 1 | . . | . . | . . | . . | Hn. | |
| 18 | 10 49 | 179.2 | 4 | 4 | 10 35 | 20.40 | 2 | 4 | Hn. | |
| 22 | 9 37 | 184.7 | 4 | 1 | . . | . . | . . | . . | Hn. | |
| Mar. 3 | 10 38 | 23.0 | 4 | 3 | 10 56 | 19.71 | 2 | 3 | Hn. | |
| 14 | 8 57 | 176.3 | 4 | 2 | 9 5 | 19.43 | 2 | 2 | H. | |
| 22 | 8 48 | 188.9 | 4 | 3 | 9 2 | 21.10 | 2 | 3 | H. | |

ARIEL.

| | | | | | | | | | | |
|---------|-------|-------|---|---|-------|-------|-----|-----|-----|------------------|
| Jan. 31 | 10 47 | 29.0 | 4 | 4 | 11 7 | 12.32 | 4½ | 4 | Hn. | |
| Feb. 17 | 10 9 | 162.7 | 4 | 3 | 10 40 | 10.64 | 2½ | 3 | Hn. | |
| 18 | 10 8 | 2.5 | 4 | 4 | 10 22 | 15.15 | 4 | 4 | Hn. | |
| 18 | 10 52 | 0.0 | 1 | 4 | . . | . . | . . | . . | Hn. | |
| Mar. 3 | 10 24 | 172.7 | 4 | 3 | 11 13 | 12.87 | 2 | 3 | Hn. | |
| 4 | 10 34 | 10.8 | 5 | 4 | . . | . . | . . | . . | Hn. | |
| 9 | 9 22 | 17.7 | 4 | 2 | 9 32 | 14.49 | 2 | 2 | H. | Very faint. |
| 13 | 8 13 | 182.5 | 4 | 2 | 8 30 | 14.81 | 2 | 2 | H. | |
| 14 | 8 47 | 23.4 | 4 | 2 | 9 15 | 13.72 | 2 | 2 | H. | |
| 22 | 8 54 | 347.6 | 4 | 2 | 9 10 | 12.50 | 2 | 2 | H. | Extremely faint, |
| 23 | 8 17 | 189.8 | 4 | 3 | 8 28 | 14.92 | 2 | 3 | H. | |

RESULTS OF OBSERVATIONS OF THE SATELLITES OF SATURN.

MIMAS.

| Date. | Washington Mean Time. | Position angle. | Number of measures. | Weight. | Washington Mean Time. | Distance. | Number of measures. | Weight. | Observer. | REMARKS. |
|---------|--------------------------|--------------------|------------------------|---------|--------------------------|-----------|------------------------|---------|-----------|--------------------------------|
| 1876. | h. m. | ° | | | h. m. | " | | | | |
| July 27 | 15 8.5 | 93.6 | 1 | 2 | . . | . . | . . | . . | H. | Clouds, |
| Aug. 5 | 14 0.0 | 275.3 | 3 | 2 | 14 5.5 | 28.38 | 2 | 2 | H. | Scarcely visible. |
| 14 | 12 14.1 | 93.8 | 4 | 2 | 12 21.1 | 28.88 | 2 | 2 | H. | |
| 14 | . . | . . | . . | . . | 13 20.6 | 27.29 | 2 | 3 | H. | |
| 31 | 10 20.4 | 93.0 | 4 | 2 | 10 26.4 | 28.53 | 2 | 2 | H. | Very faint ; strong moonlight. |

RESULTS OF OBSERVATIONS OF THE SATELLITES OF SATURN—Continued.

MIMAS—Continued.

| Date. | Washington Mean Time. | Position Angle. | Number of measure. | Weight. | Washington Mean Time. | Distance. | Number of measure. | Weight. | Observer. | REMARKS. |
|---------|--------------------------|--------------------|-----------------------|---------|--------------------------|-----------|-----------------------|---------|-----------|----------------------------|
| 1876. | h. m. | ° | | | h. m. | | | | | |
| Oct. 12 | 8 12.3 | 272.0 | 4 | 3 | . . . | . . . | 2 | 3 | H. | Very faint. |
| 12 | 9 4.3 | 273.9 | 3 | 3 | 9 43.8 | 28.12 | 2 | 3 | H. | |
| 13 | 8 8.3 | 274.9 | 4 | 5 | 8 13.8 | 28.39 | 2 | 5 | H. | Excessively faint ; foggy. |
| 21 | 8 29.8 | 95.6 | 3 | 1 | . . . | . . . | 2 | 4 | H. | |
| 31 | 6 59.3 | 279.4 | 4 | 4 | 7 3.8 | 25.68 | 2 | 4 | H. | |
| Nov. 23 | 6 58.3 | 94.6 | 3 | 2 | 7 6.8 | 26.41 | 1 | 2 | H. | Moon 3 degrees distant. |
| 24 | 6 36.9 | 95.7 | 2 | 2 | . . . | . . . | . . . | . . . | H. | Extremely faint. |

ENCELADUS.

| | | | | | | | | | | |
|----------|---------|-------|---|---|---------|-------|---|---|----|------------------------|
| July 16 | 14 36.0 | 99.1 | 4 | 3 | 14 42.5 | 26.06 | 2 | 3 | H. | Probably a fixed star. |
| Aug. 5 | 13 48.5 | 273.3 | 4 | 3 | 13 54.0 | 36.32 | 2 | 3 | H. | |
| 14 | 12 59.6 | 95.8 | 4 | 3 | 13 10.6 | 37.12 | 2 | 3 | H. | Cloudy. |
| 31 | 12 42.9 | 270.2 | 4 | 3 | 12 47.4 | 30.28 | 1 | 3 | H. | |
| Oct. 13 | 8 20.3 | 286.9 | 4 | 4 | 8 24.3 | 21.69 | 2 | 4 | H. | Faint. |
| 27 | 8 17.6 | 86.4 | 4 | 2 | 8 22.1 | 24.11 | 2 | 2 | H. | |
| Sept. 25 | 9 16.3 | 276.4 | 3 | 2 | 9 22.0 | 35.96 | 1 | 2 | | Clouds. |

TETHYS.

| | | | | | | | | | | |
|---------|---------|--------|---|---|--------|-------|---|---|----|--|
| Aug. 5 | 12 52.0 | 106.32 | 4 | 4 | 13 0.0 | 25.49 | 2 | 4 | H. | |
| Oct. 13 | 8 40.3 | 284.70 | 4 | 4 | 8 44.3 | 32.50 | 2 | 4 | H. | |
| 27 | 7 48.6 | 96.13 | 4 | 3 | 7 53.6 | 43.41 | 2 | 3 | H. | |

DIONE.

| | | | | | | | | | | |
|---------|---------|--------|---|---|---------|-------|---|---|----|--|
| Aug. 5 | 13 28.0 | 269.58 | 4 | 3 | 13 43.0 | 45.73 | 2 | 3 | H. | |
| 9 | 13 23.3 | 85.40 | 4 | 3 | 13 29.8 | 33.31 | 2 | 3 | H. | |
| Oct. 13 | 8 34.3 | 277.80 | 4 | 4 | 8 36.8 | 56.90 | 2 | 4 | H. | |
| 18 | 8 43.0 | 265.27 | 4 | 4 | 8 47.5 | 37.53 | 2 | 4 | H. | |
| 27 | 8 6.6 | 286.60 | 4 | 3 | 8 11.1 | 37.17 | 2 | 3 | H. | |

RHEA.

| | | | | | | | | | | |
|---------|---------|--------|---|---|---------|-------|---|---|----|--|
| Aug. 5 | 12 34.0 | 98.08 | 4 | 4 | 12 43.0 | 78.90 | 2 | 4 | H. | |
| 9 | 13 9.8 | 92.62 | 4 | 3 | 13 16.3 | 77.02 | 2 | 3 | H. | |
| Oct. 12 | 9 53.3 | 101.47 | 3 | 3 | 10 0.8 | 69.21 | 2 | 3 | H. | |
| 13 | 8 27.8 | 247.22 | 4 | 4 | 8 31.3 | 25.83 | 2 | 4 | H. | |
| 18 | 8 33.5 | 269.50 | 4 | 4 | 8 39.0 | 66.15 | 2 | 4 | H. | |
| 27 | 7 58.6 | 268.53 | 4 | 3 | 8 2.6 | 61.41 | 2 | 3 | H. | |

TITAN.

| | | | | | | | | | | |
|---------|---------|--------|---|---|---------|--------|---|---|----|--|
| July 18 | 15 45.5 | 270.53 | 3 | 3 | 15 50.0 | 149.83 | 3 | 3 | H. | |
| 26 | 15 16.0 | 91.18 | 3 | 3 | 15 22.0 | 166.37 | 3 | 3 | H. | |

RESULTS OF OBSERVATIONS OF THE SATELLITES OF SATURN—Continued.

TITAN—Continued.

| Date. | Washington Mean Time. | Position Angle. | Number of measures. | Weight. | Washington Mean Time. | Distance. | Number of measures. | Weight. | Observer. | REMARKS. |
|----------|--------------------------|--------------------|------------------------|---------|--------------------------|-----------|------------------------|---------|-----------|----------|
| 1876. | h. m. | ° | | | h. m. | " | | | | |
| Aug. 5 | 14 15.5 | 276.82 | 4 | 3 | 14 23.5 | 183.00 | 4 | 3 | H. | |
| 9 | 12 35.8 | 69.28 | 4 | 3 | 12 43.3 | 53.19 | 4 | 3 | H. | |
| 14 | 12 43.1 | 100.45 | 4 | 3 | 12 52.6 | 165.14 | 4 | 3 | H. | |
| 20 | 11 35.5 | 273.80 | 4 | 2 | 11 50.0 | 184.31 | 4 | 2 | H. | |
| 21 | 13 10.0 | 277.86 | 4 | 2 | 13 30.5 | 182.75 | 3 | 2 | H. | |
| 22 | 12 8.5 | 280.99 | 4 | 3 | 12 16.0 | 153.02 | 3 | 3 | H. | |
| 27 | 12 9.7 | 91.01 | 4 | 2 | 12 16.7 | 172.49 | 4 | 2 | H. | |
| 28 | 13 22.8 | 94.49 | 4 | 3 | 12 28.3 | 196.59 | 4 | 3 | H. | |
| 29 | 12 0.8 | 97.46 | 4 | 3 | 12 5.8 | 193.05 | 4 | 3 | H. | |
| Sept. 28 | 8 44.0 | 90.99 | 4 | 2 | 8 51.5 | 171.12 | 4 | 2 | H. | |
| 29 | 8 56.5 | 94.79 | 4 | 3 | 9 2.0 | 192.95 | 4 | 3 | H. | |
| Oct. 3 | 8 36.9 | 136.17 | 4 | 2 | 8 43.4 | 44.65 | 2 | 2 | H. | |
| 9 | 8 41.6 | 282.95 | 4 | 3 | 8 47.1 | 142.92 | 4 | 3 | H. | |
| 11 | 9 46.2 | 350.20 | 4 | 3 | 9 51.7 | 30.56 | 2 | 3 | H. | |
| 12 | 8 18.8 | 70.55 | 4 | 3 | 8 57.3 | 68.28 | 2 | 3 | H. | |
| 13 | 8 49.8 | 85.67 | 4 | 4 | 8 53.8 | 127.44 | 4 | 4 | H. | |
| 16 | 8 16.5 | 98.23 | 4 | 3 | 8 22.0 | 182.92 | 4 | 3 | H. | |
| 18 | 8 18.0 | 111.11 | 4 | 4 | 8 24.5 | 99.51 | 2 | 4 | H. | |
| 27 | 8 27.1 | 351.35 | 4 | 3 | 8 32.1 | 29.70 | 2 | 3 | H. | |
| 31 | 7 18.8 | 95.00 | 4 | 4 | 7 24.3 | 185.08 | 4 | 4 | H. | |
| Nov. 1 | 7 47.8 | 98.57 | 4 | 4 | 7 53.3 | 177.70 | 4 | 4 | H. | |
| 12 | 6 17.6 | 347.52 | 4 | 3 | 6 24.1 | 29.88 | 4 | 3 | H. | |
| 24 | 6 57.4 | 274.96 | 4 | 2 | 7 4.9 | 169.11 | 4 | 2 | H. | |
| Dec. 5 | 5 17.6 | 110.40 | 4 | 3 | 5 23.6 | 91.07 | 2 | 3 | H. | |

HYPERION.

| | | | | | | | | | | |
|----------|---------|--------|---|---|---------|--------|---|---|----|-----------------------------|
| July 24 | 15 21.4 | 93.53 | 3 | 2 | 15 26.9 | 228.84 | 3 | 2 | H. | |
| Aug. 14 | 12 28.1 | 92.92 | 3 | 2 | 12 34.6 | 229.97 | 4 | 2 | H. | |
| 15 | 12 29.6 | 95.32 | 4 | 2 | 12 37.1 | 230.58 | 4 | 2 | H. | |
| 24 | 12 7.6 | 274.62 | 4 | 4 | 12 14.1 | 230.42 | 4 | 4 | H. | |
| Sept. 26 | 8 36.0 | 94.63 | 4 | 2 | 8 42.5 | 229.98 | 4 | 2 | H. | |
| 27 | 8 17.0 | 97.09 | 4 | 2 | 8 27.0 | 217.22 | 3 | 2 | H. | Extremely faint. |
| 28 | 8 28.5 | 100.55 | 4 | 2 | 8 37.5 | 184.67 | 2 | 2 | H. | Extremely faint; moonlight. |
| Oct. 13 | 9 29.3 | 74.14 | 4 | 3 | 9 33.8 | 104.56 | 3 | 3 | H. | |
| 16 | 7 51.0 | 91.30 | 4 | 3 | 7 56.5 | 213.34 | 4 | 3 | H. | |
| 18 | 7 51.0 | 97.19 | 4 | 4 | 7 57.0 | 213.06 | 4 | 4 | H. | |
| Nov. 8 | 6 19.0 | 96.15 | 4 | 2 | 6 27.5 | 209.36 | 4 | 2 | H. | |

JAPETUS.

| | | | | | | | | | | |
|---------|---------|--------|---|---|---------|--------|---|---|----|--|
| July 15 | 15 30.1 | 86.07 | 4 | 2 | 15 41.4 | 541.43 | 4 | 2 | H. | |
| 16 | 15 41.4 | 86.01 | 3 | 3 | 15 50.9 | 540.40 | 3 | 3 | H. | |
| 18 | 15 20.5 | 85.47 | 3 | 3 | 15 29.0 | 529.26 | 3 | 3 | H. | |
| 21 | 15 7.2 | 84.61 | 4 | 2 | 15 15.2 | 487.14 | 4 | 2 | H. | |
| 24 | 14 58.9 | 83.70 | 3 | 2 | 15 6.9 | 416.52 | 3 | 2 | H. | |
| 26 | 15 3.5 | 82.83 | 3 | 3 | 15 10.5 | 356.03 | 3 | 3 | H. | |
| Aug. 5 | 13 8.5 | 296.22 | 4 | 3 | 13 20.5 | 51.65 | 2 | 3 | H. | |
| 9 | 12 53.8 | 272.68 | 4 | 2 | 13 1.8 | 216.35 | 4 | 2 | H. | |
| 14 | 13 30.6 | 268.80 | 4 | 3 | 13 43.6 | 398.49 | 4 | 3 | H. | |
| 20 | 12 2.0 | 267.45 | 4 | 2 | 12 12.5 | 537.30 | 4 | 2 | H. | |
| 21 | 13 4.5 | 267.15 | 4 | 2 | 13 24.0 | 551.34 | 3 | 2 | H. | |
| 22 | 12 0.0 | 267.09 | 3 | 3 | 12 22.5 | 560.46 | 3 | 3 | H. | |
| 26 | 11 46.2 | 266.46 | 4 | 2 | 12 0.2 | 561.42 | 4 | 2 | H. | |
| 27 | 11 48.7 | 266.25 | 4 | 2 | 11 57.2 | 552.30 | 4 | 2 | H. | |
| 28 | 11 56.8 | 266.12 | 4 | 3 | 12 8.3 | 540.59 | 4 | 3 | H. | |
| 31 | 11 17.4 | 265.72 | 4 | 2 | 12 27.4 | 482.63 | 4 | 2 | H. | |

RESULTS OF OBSERVATIONS OF THE SATELLITES OF SATURN—Continued.

JAPETUS—Continued.

| Date. | Washington Mean Time. | Position Angle. | Number of measures. | Weight. | Washington Mean Time. | Distance. | Number of measures. | Weight. | Observer. | REMARKS. |
|----------|--------------------------|--------------------|------------------------|---------|--------------------------|-----------|------------------------|---------|-----------|------------------|
| 1876. | h. m. | ° | | | h. m. | " | | | | |
| Sept. 26 | 8 56.5 | 87.87 | 4 | 2 | 9 5.5 | 488.99 | 4 | 2 | H. | |
| 28 | 9 1.0 | 87.65 | 4 | 2 | 9 25.0 | 520.98 | 4 | 2 | H. | |
| 29 | 9 13.0 | 87.45 | 4 | 2 | 9 22.5 | 531.75 | 4 | 2 | H. | |
| Oct. 2 | 8 28.0 | 87.28 | 4 | 3 | 8 39.5 | 543.79 | 4 | 3 | H. | |
| 3 | 8 50.9 | 87.06 | 4 | 2 | 9 0.9 | 540.76 | 4 | 2 | H. | |
| 9 | 8 59.6 | 86.69 | 2 | 2 | 9 9.1 | 448.80 | 2 | 2 | H. | |
| 11 | 9 11.2 | 86.24 | 4 | 3 | 9 21.7 | 394.71 | 3 | 3 | H. | |
| 13 | 8 59.8 | 85.68 | 4 | 4 | 9 3.8 | 332.02 | 4 | 4 | H. | |
| 16 | 7 39.0 | 84.40 | 4 | 2 | 7 45.0 | 224.27 | 4 | 2 | H. | |
| 18 | 8 2.5 | 83.00 | 4 | 4 | 8 7.0 | 144.35 | 4 | 4 | H. | |
| 21 | 7 33.8 | 59.55 | 4 | 3 | 7 39.3 | 22.99 | 3 | 3 | H. | s may be 26".74. |
| 24 | 7 38.3 | 273.05 | 4 | 3 | 7 46.8 | 104.86 | 2 | 3 | H. | |
| 27 | 8 38.6 | 270.05 | 4 | 3 | 8 44.1 | 223.01 | 4 | 3 | H. | |
| 31 | 7 32.3 | 268.71 | 4 | 4 | 7 41.3 | 356.87 | 4 | 4 | H. | |
| Nov. 1 | 7 59.3 | 268.40 | 4 | 3 | 8 8.3 | 385.45 | 4 | 3 | H. | |
| 10 | 6 11.5 | 267.52 | 4 | 2 | 6 30.0 | 523.32 | 2 | 2 | H. | |
| 12 | 5 55.6 | 267.30 | 4 | 3 | 6 5.6 | 521.56 | 2 | 3 | H. | |
| 22 | 6 15.3 | 266.06 | 4 | 3 | 6 23.8 | 332.59 | 4 | 3 | H. | |
| 24 | 6 43.9 | 265.39 | 4 | 2 | 6 50.4 | 265.48 | 4 | 2 | H. | |
| 29 | 6 0.6 | 259.06 | 4 | 1 | 6 9.1 | 75.73 | 4 | 1 | H. | |
| Dec. 1 | 6 49.3 | 147.10 | 4 | 2 | 6 56.3 | 13.78 | 3 | 2 | H. | |
| 5 | 5 29.6 | 91.03 | 4 | 2 | 5 35.1 | 162.04 | 4 | 2 | H. | |
| 19 | 6 29.8 | 87.09 | 4 | 3 | 6 37.4 | 478.83 | 4 | 3 | H. | |
| 21 | 5 46.6 | 86.87 | 4 | 2 | 5 55.5 | 479.40 | 3 | 2 | H. | |

TITAN.

| Date. | Washington Mean Time. | Δa | Number of measures. | Weight. | Washington Mean Time. | $\Delta \delta$ | Number of measures. | Weight. | Observer. | REMARKS. |
|----------|--------------------------|------------|------------------------|---------|--------------------------|-----------------|------------------------|---------|-----------|----------|
| 1876. | h. m. | s. | | | h. m. | " | | | | |
| June 10 | 15 44.1 | + 12.162 | 24 | 3 | 16 14.9 | - 19.74 | 5 | 3 | H. | |
| July 18 | 14 42.3 | - 9.976 | 18 | 2 | 15 11.5 | + 0.40 | 2 | 3 | H. | |
| 21 | 14 19.9 | - 10.230 | 24 | 2 | 14 42.2 | + 26.33 | 5 | 2 | H. | |
| 26 | 14 29.8 | + 11.198 | 18 | 2 | 14 45.5 | - 3.54 | 3 | 2 | H. | |
| 27 | 14 41.9 | + 12.974 | 22 | 3 | 14 56.0 | - 14.45 | 3 | 3 | H. | |
| Aug. 21 | 12 14.4 | - 12.316 | 20 | 2 | 12 49.5 | + 23.24 | 3 | 2 | H. | |
| 22 | 11 20.3 | - 10.270 | 26 | 2 | 11 46.5 | + 29.66 | 4 | 2 | H. | |
| 26 | 10 59.6 | + 8.152 | 22 | 1 | 11 34.7 | + 9.99 | 5 | 1 | H. | |
| 27 | 11 4.8 | + 11.586 | 20 | 2 | 11 35.2 | - 2.98 | 5 | 2 | H. | |
| 28 | 11 9.6 | + 13.273 | 29 | 3 | 11 42.8 | - 14.79 | 5 | 3 | H. | |
| 29 | 10 57.9 | + 13.062 | 20 | 3 | 11 53.3 | - 25.60 | 3 | 3 | H. | |
| Sept. 20 | 8 59.5 | - 10.665 | 18 | 3 | 9 17.4 | - 0.25 | 3 | 3 | H. | |
| Oct. 9 | 8 3.7 | - 9.559 | 22 | 3 | 8 21.6 | + 32.13 | 4 | 3 | H. | |
| 16 | 8 42.4 | + 12.335 | 20 | 4 | 9 1.0 | - 27.14 | 4 | 4 | H. | |
| 24 | 8 5.9 | - 11.576 | 18 | 3 | . | . | . | . | H. | Clouds. |
| 31 | 8 16.3 | + 12.619 | 16 | 4 | 8 38.3 | - 16.73 | 4 | 4 | H. | |
| Nov. 1 | 6 59.6 | + 12.008 | 20 | 3 | 7 38.3 | - 26.63 | 4 | 3 | H. | |
| 8 | 7 20.7 | - 11.760 | 13 | 2 | 7 44.5 | + 14.06 | 3 | 2 | H. | |
| 24 | 7 45.0 | - 11.474 | 22 | 2 | 8 5.9 | + 14.03 | 3 | 2 | H. | |
| Dec. 19 | 5 43.7 | + 11.076 | 20 | 3 | 6 5.4 | - 25.06 | 4 | 3 | H. | |

RESULTS OF OBSERVATIONS OF THE SATELLITES OF SATURN—Continued.

JAPETUS.

| Date. | Washington Mean Time. | $\Delta \alpha$. | Number of measures. | Weight. | Washington Mean Time. | $\Delta \delta$ | Number of measures. | Weight. | Observer. | REMARKS. |
|----------|--------------------------|-------------------|------------------------|---------|--------------------------|-----------------|------------------------|---------|-----------|--|
| 1876. | h. m. | s. | | | h. m. | " | | | | |
| June 5 | 15 46.0 | — 34.674 | 20 | 2 | 16 3.6 | — 32.65 | 5 | 2 | H. | Windy. |
| 6 | 15 29.5 | — 34.895 | 26 | 3 | 15 54.3 | — 35.23 | 5 | 3 | H. | |
| 7 | 15 45.3 | — 34.915 | 22 | 4 | 16 3.1 | — 37.59 | 5 | 4 | H. | |
| 8 | 15 32.5 | — 34.758 | 24 | 3 | 15 56.5 | — 39.94 | 5 | 3 | H. | |
| 9 | 15 35.3 | — 34.246 | 26 | 3 | 15 59.2 | — 41.69 | 5 | 3 | H. | |
| 10 | 15 43.3 | — 33.589 | 24 | 3 | 16 5.5 | — 43.27 | 5 | 3 | H. | |
| July 15 | 14 45.4 | + 36.680 | 24 | 2 | 15 14.9 | + 38.30 | 5 | 2 | H. | |
| 16 | 15 3.0 | + 36.664 | 26 | 4 | 15 25.9 | + 39.89 | 5 | 4 | H. | |
| 18 | 14 43.0 | + 35.886 | 19 | 3 | 15 2.0 | + 43.51 | 5 | 3 | H. | |
| 21 | 14 20.6 | + 33.077 | 24 | 2 | 14 53.2 | + 46.08 | 5 | 2 | H. | |
| 24 | 14 21.9 | + 28.241 | 24 | 2 | 14 42.9 | + 46.63 | 5 | 2 | H. | |
| 26 | 14 30.2 | + 24.169 | 18 | 2 | 14 52.0 | + 45.77 | 3 | 2 | H. | |
| 27 | 14 42.3 | + 21.790 | 22 | 3 | 15 1.5 | + 43.68 | 3 | 3 | H. | |
| Aug. 21 | 12 14.0 | — 37.288 | 20 | 2 | 12 43.5 | — 27.43 | 3 | 2 | H. | Clouds. |
| 22 | 11 19.8 | — 37.900 | 26 | 4 | 11 39.5 | — 29.46 | 4 | 2 | H. | |
| 24 | 12 42.5 | — 38.437 | 28 | 4 | 13 22.1 | — 32.78 | 5 | 4 | H. | |
| 25 | 11 35.5 | — 38.302 | 5 | 1 | . | . | . | . | H. | |
| 26 | 10 58.8 | — 38.015 | 22 | 1 | 11 20.7 | — 35.52 | 5 | 1 | H. | |
| 27 | 11 4.0 | — 37.415 | 20 | 2 | 11 25.2 | — 36.45 | 5 | 2 | H. | |
| 28 | 11 9.2 | — 36.606 | 30 | 3 | 11 32.8 | — 36.60 | 5 | 3 | H. | |
| 29 | 10 57.1 | — 35.571 | 20 | 3 | 11 48.3 | — 37.10 | 3 | 3 | H. | |
| 31 | 10 45.7 | — 32.808 | 18 | 4 | 11 1.4 | — 37.22 | 4 | 4 | H. | |
| Sept. 20 | 9 0.0 | + 21.517 | 18 | 3 | 9 23.9 | + 4.91 | 3 | 2 | H. | Foggy; faint at declination measures. |
| Oct. 2 | 9 11.6 | + 37.230 | 18 | 3 | 9 34.7 | + 27.23 | 4 | 3 | H. | Moonlight, and satellite faint. Haze, and satellite faint at times. |
| 9 | 8 4.5 | + 30.765 | 20 | 2 | 8 30.6 | + 28.34 | 4 | 2 | H. | |
| 11 | 8 40.4 | + 27.073 | 24 | 3 | 9 0.2 | + 27.54 | 4 | 3 | H. | |
| 16 | 8 42.5 | + 15.246 | 20 | 4 | 9 9.5 | + 20.54 | 4 | 4 | H. | |
| 18 | 9 6.9 | + 9.736 | 20 | 4 | 9 21.0 | + 17.22 | 4 | 4 | H. | |
| 24 | 8 5.9 | — 7.095 | 18 | 2 | . | . | . | . | H. | |
| 31 | 8 13.3 | — 24.298 | 20 | 4 | 8 32.3 | — 8.23 | 4 | 4 | H. | Clouds. |
| Nov. 1 | 6 59.0 | — 26.173 | 20 | 3 | 7 39.8 | — 10.18 | 4 | 3 | H. | |
| 7 | 7 18.4 | — 34.293 | 18 | 2 | 7 38.0 | — 19.89 | 4 | 2 | H. | |
| 8 | 7 20.3 | — 34.960 | 14 | 2 | 7 37.0 | — 20.42 | 3 | 2 | H. | |
| 12 | 5 25.8 | — 35.515 | 20 | 4 | 5 45.6 | — 24.07 | 4 | 4 | H. | |
| 22 | 6 47.5 | — 22.527 | 20 | 3 | 7 14.8 | — 23.35 | 4 | 3 | H. | |
| 24 | 7 44.9 | — 17.863 | 22 | 2 | 8 0.9 | — 21.10 | 3 | 2 | H. | |
| Dec. 7 | 5 54.9 | + 16.090 | 20 | 2 | 6 13.5 | + 0.81 | 4 | 2 | H. | |
| 12 | 5 51.8 | + 26.125 | 20 | 2 | 6 11.2 | + 11.87 | 4 | 2 | H. | |
| 15 | 6 22.2 | + 30.174 | 20 | 2 | 6 39.4 | + 17.20 | 4 | 2 | H. | |
| 19 | 5 44.3 | + 32.686 | 22 | 3 | 6 17.1 | + 23.88 | 4 | 3 | H. | |

RESULTS OF OBSERVATIONS OF DOUBLE STARS.

| Date | Name of Star. | Approx. R. A. | Approx. N. P. D. | Position Angle. | Number of measures. | Distance. | Number of measures. | Observer. | Weight. | REMARKS. |
|---------|-----------------------------------|------------------|---------------------|--------------------|---------------------------|-----------|---------------------------|-----------|---------|---|
| 1876. | | h. m. | ° ' | ° | | " | | | | |
| Nov. 22 | 65 <i>Piscium</i> | 0 43.0 | 63 0 | 295.3* | 4 | 4.56 | 2 | H. | 2 | * p = reading — 180°. |
| Dec. 4 | 65 <i>Piscium</i> | . . . | . . | 117.5 | 4 | 4.55 | 2 | H. | 2 | |
| Jan. 3 | 36 <i>Andromedæ</i> | 0 48.3 | 67 3 | 356.4 | 4 | 1.24 | 4 | H. | 3 | |
| 4 | | | | 355.7 | 4 | 1.46 | 3 | H. | 3 | |
| 7 | | | | 357.0 | 4 | 1.12 | 4 | H. | 2 | |
| 21 | Σ 86 | 0 58.7 | 96 7 | 161.1 | 4 | . . | . . | H. | 2 | |
| 24 | | | | 159.5 | 4 | 13.12 | 4 | H. | 2 | |
| 25 | | | | 159.4 | 4 | 12.92 | 4 | H. | 4 | |
| 26 | Σ 113 | 1 13.7 | 91 11 | 351.9 | 4 | 1.24 | 4 | H. | 3 | |
| 31 | | | | 351.0 | 4 | 1.26 | 4 | H. | 3 | |
| 3 | Σ 138 $\frac{A+B}{2}$ and C . . . | 1 30.0 | 83 0 | 63.4 | 4 | 22.00 | 2 | H. | 2 | C is 15th mag. |
| 3 | A and B | | | 32.1 | 4 | 1.38 | 4 | H. | 3 | |
| Feb. 5 | A and B | . . . | . . | 34.2 | 4 | 1.27 | 4 | H. | 2 | |
| 5 | Σ 155 | 1 37.9 | 81 6 | 326.9 | 4 | 4.71 | 4 | H. | 3 | |
| 8 | | | | 328.3 | 4 | 4.79 | 4 | H. | 3 | |
| 10 | Σ 202 = <i>α Piscium</i> . . . | 1 55.8 | 87 49 | 322.1 | 4 | 3.15 | 4 | H. | 3 | |
| 12 | | | | 322.4 | 4 | 3.10 | 4 | H. | 3 | |
| Jan. 3 | 107 <i>Arietis</i> (Br.) . . . | 2 36.7 | 64 55 | 15.1 | 4 | 3.21 | 4 | H. | 3 | |
| 7 | | | | 16.2 | 4 | 3.05 | 4 | H. | 3 | |
| 11 | γ <i>Ceti</i> | 2 37.0 | 87 15 | 287.8 | 4 | 3.09 | 4 | H. | 3 | |
| 12 | | | | 286.4 | 4 | 3.06 | 4 | H. | 3 | |
| 14 | L. 5133 (Br.) | 2 40.3 | 60 50 | 315.5 | 4 | 15.88 | 4 | H. | 2 | |
| 25 | Σ 305 | 2 40.7 | 71 8 | 321.1 | 4 | 2.87 | 4 | H. | 3 | |
| 26 | | | | 320.3 | 4 | 2.66 | 4 | H. | 3 | |
| 31 | | | | 321.6 | 4 | 2.83 | 4 | H. | 3 | |
| Jan. 24 | ε <i>Arietis</i> | 2 52.3 | 69 9 | 200.8 | 4 | 1.52 | 4 | H. | 2 | Quadruple distances. |
| 25 | | | | 200.6 | 4 | 1.18 | 4 | H. | 3 | Double distance. |
| 26 | | | | 201.8 | 4 | 1.14 | 4 | H. | 2 | Double distance. |
| Feb. 17 | | . . . | . . | 204.6 | 4 | 1.20 | 4 | H. | 2 | Double distance. Image blurred. |
| Jan. 3 | W. 564 | 3 32 0 | 98 5 | 332.4 | 4 | 1.73 | 2 | H. | 2 | |
| 11 | | | | 334.1 | 4 | 1.37 | 2 | H. | 2 | |
| 12 | | | | 332.1 | 4 | 1.89 | 4 | H. | 3 | |
| 12 | L. 7655 (Br.) | 4 1.3 | 70 40 | 278.2 | 4 | 5.86 | 4 | H. | 3 | |
| 13 | | | | 279.3 | 4 | 6.02 | 3 | H. | 2 | |
| Feb. 4 | Σ 494 | 4 1.8 | 67 14 | 186.4 | 4 | 5.27 | 4 | H. | 2 | |
| 8 | | | | 185.6 | 4 | 5.29 | 4 | H. | 2 | |
| 10 | | | | 186.4 | 4 | 5.27 | 4 | H. | 3 | |
| Jan. 14 | W ² . 258 | 4 14.2 | 50 24 | 172.0 | 4 | 19.46 | 4 | H. | 2 | |
| Feb. 10 | Σ 535 | 4 16.5 | 78 55 | 338.4 | 4 | 1.71 | 4 | H. | 3 | |
| 12 | | | | 338.4 | 4 | 1.68 | 4 | H. | 3 | |
| 16 | | | | 340.8 | 4 | 1.78 | 4 | H. | 2 | |
| 17 | Σ 567 | 4 29.3 | 70 30 | 317.0 | 4 | 1.76 | 4 | H. | 3 | Mags. 8 and 9. Observed for Dr. Hastings. |
| 17 | | | | 315.4 | 4 | 1.97 | 4 | H. | 2 | |
| 18 | | | | 317.6 | 4 | 1.81 | 4 | H. | 3 | |
| Jan. 6 | Σ 589 | 4 38.5 | 84 56 | 299.0 | 4 | 4.64 | 2 | H. | 3 | |
| 7 | | | | 301.6 | 4 | 4.61 | 4 | H. | 3 | |
| Feb. 5 | | . . . | . . | 299.6 | 4 | 4.55 | 4 | H. | 2 | |
| Jan. 7 | L. 9065 (Br.) | 4 42.5 | 111 0 | 345.1 | 4 | 3.36 | 4 | H. | 3 | |
| 12 | | | | 346.3 | 4 | 3.33 | 4 | H. | 3 | |
| Feb. 12 | L. 9181 (Br.) | 4 46.8 | 95 29 | 178.2 | 4 | 1.00 | 4 | H. | 3 | Mags. 9 and 9.3. |
| 16 | | | | 178.5 | 4 | 0.98 | 4 | H. | 3 | |
| 14 | G. A. I | 4 58.0 | 41 0 | 337.8 | 4 | 5.55 | 4 | H. | 2 | Mags. 10 and 10.5. Found by G. ANDERSON. |
| Feb. 12 | Anonymous | 5 7.0 | 88 10 | 131.6 | 4 | 6.70 | 4 | H. | 3 | |
| Mar. 22 | τ <i>Orionis</i> | 5 11.8 | 97 6 | 59.6 | 4 | 35.98 | 2 | H. | 3 | A and D. |
| 22 | | | | 250.6 | 4 | 35.94 | 2 | H. | 3 | A and B. |
| 22 | | | | 50.0 | 4 | 3.62 | 2 | H. | 3 | B and C. |
| 23 | | | | 60.1 | 4 | 35.96 | 2 | H. | 3 | A and D. |
| 23 | | | | 249.6 | 4 | 36.03 | 2 | H. | 3 | A and B. |
| 23 | | | | 47.3 | 4 | 4.06 | 2 | H. | 2 | B and C (faint). |

RESULTS OF OBSERVATIONS OF DOUBLE STARS—Continued.

| Date. | Name of Star. | Approx. R. A. | Approx. N. P. D. | Position angle. | Number of measures. | Distance. | Number of measures. | Observer. | Weight. | REMARKS. |
|---------------------------|----------------------------|------------------|---------------------|--------------------|------------------------|-----------|------------------------|-----------|---------|--|
| 1876. | | h. m. | ° ' " | ° | | " | | | | |
| Feb. 12 | Σ 694 | 5 16.6 | 65 9 | 182.1 | 4 | 1.29 | 4 | H. | 3 | $\frac{A+B}{2}$ and C |
| 16 | | | | 181.9 | 4 | 1.27 | 4 | H. | 2 | |
| 17 | | | | 183.7 | 4 | 1.22 | 4 | H. | 3 | |
| 17 | | | | 338.6 | 2 | 8.66 | 2 | H. | 2 | |
| 18 | <i>η Orionis</i> | 5 18.2 | 92 31 | 83.8 | 4 | 1.11 | 4 | H. | 2 | |
| Mar. 9 | | . . . | . . | 85.7 | 4 | 1.02 | 3 | H. | 2 | Blurred images. |
| Jan. 26 | O. Arg. S. 3957 (Br.) . . | 5 21.3 | 110 49 | 231.8 | 4 | 3.78 | 3 | H. | 2 | Images blurred. |
| 31 | | | | 230.9 | 4 | 3.98 | 4 | H. | 3 | |
| Feb. 10 | | | | 231.5 | 4 | 4.07 | 4 | H. | 3 | |
| 16 | 118 <i>Tauri</i> | 5 21.9 | 64 57 | 200.2 | 4 | 5.13 | 4 | H. | 2 | |
| 18 | | | | 198.3 | 4 | 5.07 | 4 | H. | 3 | |
| Mar. 4 | | | | 196.3 | 4 | 5.09 | 4 | H. | 2 | |
| 8 | | | | 198.1 | 4 | 5.14 | 4 | H. | 3 | |
| Jan. 31 | <i>β Leporis</i> | 5 23.1 | 110 51 | 280.4 | 4 | 3.16 | 4 | H. | 3 | Companion 10.5 mag. |
| Feb. 18 | | | | 279.0 | 4 | 3.08 | 4 | H. | 3 | Motion of 7" in distance since STRUVE. |
| 5 | Σ 735 | 5 27.0 | 96 35 | 352.6 | 4 | 37.84 | 4 | H. | 2 | |
| 8 | | | | 352.9 | 4 | 37.97 | 3 | H. | 2 | |
| Feb. 18 | <i>λ Orionis</i> | 5 28.5 | 80 9 | 45.0 | 4 | 4.57 | 4 | H. | 3 | Image much blurred. |
| Mar. 4 | | | | 45.1 | 4 | 4.51 | 4 | H. | 2 | |
| 8 | | | | 41.6 | 4 | 4.92 | 4 | H. | 2 | |
| 9 | | | | 42.5 | 4 | 4.46 | 4 | H. | 3 | |
| Feb. 25 | Σ 742 | 5 29.2 | 68 5 | 256.2 | 4 | 3.58 | 2 | H. | 2 | |
| 26 | | | | 252.6 | 4 | 3.74 | 4 | H. | 3 | |
| Mar. 8 | | | | 254.0 | 4 | 3.53 | 4 | H. | 3 | |
| Mar. 4 | <i>ζ Orionis</i> | 5 34.7 | 92 0 | 157.0 | 4 | 2.78 | 4 | H. | 2 | Image much blurred. |
| 9 | | | | 156.8 | 4 | 2.70 | 3 | H. | 2 | |
| Jan. 25 | G. A. 2 | 5 47.0 | 110 0 | 18.7 | 4 | 9.01 | 4 | H. | 2 | Mags. 8 and 11. |
| Feb. 10 | | | | 20.3 | 4 | 9.20 | 4 | H. | 2 | |
| 10 | Σ 853. | 6 2.5 | 78 19 | 348.9 | 4 | 27.03 | 4 | H. | 3 | |
| 12 | | | | 348.8 | 4 | 26.97 | 4 | H. | 3 | |
| Mar. 2 | L. 11915 (Br.) | 6 8.7 | 91 41 | 92.7 | 4 | 2.18 | 4 | H. | 2 | C is 14-15 mag. B is 13-14 mag. D is 13 mag. E is 12-13 mag. |
| 3 | | | | 93.5 | 4 | 2.16 | 4 | H. | 2 | |
| 3 | G. A. 3, A and C . . . | 6 24 | 85 0 | 319.8 | 3 | 7.20 | 2 | H. | 2 | |
| 3 | A and B | | | 282.4 | 3 | 3.66 | 2 | H. | 3 | |
| 3 | A and D | | | 288.4 | 3 | 12.64 | 2 | H. | 3 | |
| 3 | A and E | | | 197.5 | 3 | 13.28 | 2 | H. | 3 | |
| Jan. 21 | Σ 932 | 6 27.5 | 75 10 | 331.5 | 4 | 2.28 | 4 | H. | 2 | |
| 26 | | | | 334.3 | 4 | 2.30 | 4 | H. | 3 | |
| Feb. 4 | | . . . | . . | 332.6 | 4 | 2.11 | 4 | H. | 2 | |
| Jan. 21 | Σ 950 | 6 33.4 | 79 59 | 210.9 | 4 | 3.02 | 4 | H. | 2 | |
| 26 | | | | 211.5 | 4 | 3.08 | 4 | H. | 3 | |
| Feb. 10 | | . . . | . . | 215.3 | 4 | 3.06 | 4 | H. | 3 | |
| Jan. 3, 12 ^h | <i>Sirius</i> | 6 39.6 | 106 33 | 54.3 | 4 | . . | . . | Hn. | 2 | Meas. without illuminat'n of wires. Measures of δ difficult. |
| 6, 11 ^h | | | | 54.5 | 6 | 12.13 | 3 | Hn. | 3 | |
| 7, 11 ^h | | | | 56.0 | 4 | 11.29 | 4 | Hn. | 3 | WATSON, observer. |
| 12, 10 ^h .5 | | | | 57.8 | 5 | 11.12 | 4 | . . | . . | |
| 20 | | | | 54.8 | 4 | . . | . . | Hn. | 3 | PETERS, observer. |
| 20, 10 ^h | | | | 54.6 | 4 | 11.45 | 4 | . . | . . | |
| Mar. 3, 8 ^h | | . . . | . . | 55.3 | 5 | 11.26 | 5 | H. | 2 | |
| 8, 7 ^h .5 | | | | 56.0 | 5 | 11.18 | 5 | H. | 2 | |
| 9, 7 ^h .5 | | | | 55.2 | 5 | 11.42 | 5 | H. | 2 | |
| 22, 8 ^h | | | | 55.0 | 4 | 12.22 | 2 | Hn. | 3 | |
| 23, 8 ^h | | | | 55.4 | 5 | 11.07 | 5 | H. | 3 | |
| 29, 8 ^h | | | | 54.6 | 4 | 11.98 | 4 | Hn. | 2.5 | |
| Apr. 6, 6 ^h .8 | | . . . | . . | 54.9 | 5 | 11.07 | 5 | H. | 3 | |
| 7, 7 ^h .0 | | | | . . | . . | 11.49 | 2 $\frac{1}{2}$ | Hn. | 1 | |
| 8, 7 ^h .1 | | | | 54.5 | 5 | 11.16 | 5 | H. | 2 | |

RESULTS OF OBSERVATIONS OF DOUBLE STARS—Continued.

| Date. | Name of Star. | Approx. R. A. | Approx. N. P. D. | Position Angle. | Number of measures. | Distance. | Number of measures. | Observer. | Weight. | REMARKS. |
|------------------|-------------------------------------|------------------|---------------------|--------------------|---------------------------|-----------|---------------------------|-----------|---------|--|
| 1876. Feb. 10 | 38 <i>Geminorum</i> | h. m. 6 47.9 | 76 40 | 162.8 | 4 | 6.42 | 4 | H. | 2 | Images blurred. |
| 12 | | | | 164.3 | 4 | 6.34 | 4 | H. | 3 | |
| 16 | | | | 165.3 | 4 | 6.42 | 4 | H. | 2 | Images blurred. |
| 18 | | | | 162.8 | 4 | 6.32 | 2 | H. | 3 | |
| Mar. 2 | L. 13404 (Br.) | 6 49.9 | 87 32 | 62.4 | 4 | 1.23 | 2 | H. | 2 | |
| 3 | | | | 63.6 | 4 | 1.23 | 2 | H. | 2 | |
| Feb. 12 | Σ 1037 | 7 5.3 | 62 34 | 308.8 | 4 | 1.34 | 4 | H. | 2 | Another companion in $p = 110^\circ$, $s = 10''$. |
| 18 | | | | 314.9 | 4 | 1.18 | 4 | H. | 3 | C is 13th mag. |
| Mar. 13 | Anonymous, | 8 52.8 | 84 0 | 311.2 | 4 | 1.30 | 2 | H. | 2 | |
| 23 | | | | 300.0 | est. | 6.0 | est. | Hn. | . | 9th mag., companion very faint. |
| May 10 | <i>A Leonis</i> (G. A. 4) | 10 1.5 | 79 25 | 39.5 | 4 | . | . | H. | 2 | Companion of 15-16 mag. |
| 11 | | | | 43.8 | 4 | 7.48 | 2 | H. | 2 | Double weight to this observation; companion 15th mag. |
| Mar. 29 | <i>a Leonis</i> | 10 2.0 | 77 27 | 86.0 | 1 | . | . | H. | 3 | Mag. 15. |
| 31 | | | | 87.8 | 4 | 3.25 | 2 | H. | 2 | Mag. 15-16. |
| Apr. 21 | | . | . | 83.2 | 4 | 3.14 | 2 | H. | 3 | Companion well seen; 14th to 15th mag. |
| May 11 | Σ 1426, A and B | 10 14.2 | 82 58 | 276.3 | 4 | 0.72 | 2 | H. | 3 | |
| 11 | $\frac{A+B}{2}$ and C | . | . | 9.3 | 4 | 7.81 | 3 | H. | 3 | Companion 15th mag. |
| 13 | A and B | . | . | 277.6 | 4 | est. 0.60 | . | H. | 2 | Bad images. |
| 13 | $\frac{A+B}{2}$ and C | . | . | 10.5 | 4 | 8.03 | 3 | H. | 2 | |
| 13 | $\frac{A+B}{2}$ and D | . | . | 45.2 | 2 | 34.39 | 2 | H. | 3 | |
| May 23 | Σ 1517 | 11 6.0 | 69 5 | 100.8 | 4 | 0.53 | 2 | H. | 3 | 9 and 9.5 mags. |
| 24 | | | | 97.1 | 4 | 0.48 | 2 | H. | 3 | |
| 20 | <i>c Leonis</i> | 11 17.6 | 78 48 | 70.3 | 4 | 2.73 | 3 | H. | 3 | |
| 24 | | | | 69.4 | 4 | 2.81 | 2 | H. | 3 | |
| June 1 | Lal. 23271 | 12 20.5 | 89 30 | 236.8 | 4 | 0.99 | 2 | H. | 2 | Mags. 8 and 11. Discovered by A. G. |
| 6 | | | | 232.0 | 4 | 0.78 | 2 | H. | 2 | CLARK. |
| 8 | | | | 232.0 | 4 | 0.77 | 2 | H. | 3 | |
| May 11 | Σ 1647 | 12 24.5 | 79 37 | 214.1 | 4 | 1.33 | 2 | H. | 2 | |
| 21 | | | | 215.8 | 4 | 1.19 | 2 | H. | 2 | |
| 27 | | | | 220.3 | 4 | 1.28 | 2 | H. | 3 | |
| 29 | γ <i>Virginis</i> | 12 36.6 | 90 55 | 160.0 | 4 | 5.17 | 2 | H. | 2 | |
| 31 | | | | 159.9 | 5 | 5.24 | 3 | H. | 2 | |
| June 1 | | . | . | 160.8 | 4 | 5.08 | 3 | H. | 2 | |
| 2 | | | | 159.8 | 4 | 5.12 | 3 | H. | 2 | |
| May 26 | 46 <i>Virginis</i> | 12 54.4 | 92 43 | 159.4 | 4 | 1.15 | 2 | H. | 3 | Mags. 6 and 11. |
| 27 | | | | 157.7 | 4 | 1.56 | 2 | H. | 3 | |
| 31 | | | | 159.8 | 4 | 1.26 | 2 | H. | 3 | |
| 18 | 42 <i>Comæ Ber.</i> | 13 4.2 | 71 50 | 190.2 | 4 | 0.38 | 2 | H. | 3 | Plainly separated. Power, 800 A. |
| 26 | | | | 194.3 | 4 | 0.42 | 2 | H. | 2 | |
| 27 | | | | 193.9 | 4 | 0.40 | 2 | H. | 2 | |
| 31 | | | | 195.2 | 4 | 0.42 | 2 | H. | 3 | |
| June 1 | Σ 1768 | 13 32.1 | 53 5 | . | . | . | . | . | . | Images blurred, and not certain that the stars are divided. |
| May 24 | Σ 1813 | 14 7.4 | 84 2 | 193.5 | 4 | 4.95 | 2 | H. | 3 | |
| 26 | | | | 192.8 | 4 | 4.88 | 3 | H. | 3 | |
| 26 | Σ 1819 | 14 9.3 | 86 18 | 201.7 | 4 | 1.25 | 2 | H. | 3 | |
| 27 | | | | 199.3 | 4 | 1.37 | 2 | H. | 3 | |
| 31 | | | | 199.4 | 4 | 1.15 | 2 | H. | 3 | |
| June 1 | ζ <i>Bootis</i> | 14 35.4 | 75 45 | 303.1 | 4 | 0.73 | 2 | H. | 3 | |
| 8 | | | | 305.2 | 4 | 0.75 | 2 | H. | 3 | |
| 9 | | | | 303.4 | 4 | 0.70 | 2 | H. | 3 | |

RESULTS OF OBSERVATIONS OF DOUBLE STARS—Continued.

| Date. | Name of Star. | Approx. R. A. | Approx. N. P. D. | Position Angle. | Number of measures. | Distance. | Number of measures. | Observer. | Weight. | REMARKS. |
|---|--|------------------------------|------------------------|---|---|---|--|--|--|---|
| 1876. June 14 20 23 | Σ 1867 | h. m. s. 14 35.6 | ° ' " 58 11 | ° 16.8 13.5 17.2 | 4 4 4 | " 1.39 1.15 1.20 | 2 2 2 | H. H. H. | 3 2 4 | |
| 1 8 9 | ϵ Bootis | 14 39.9 | 62 25 | 328.6 330.4 327.2 | 4 4 4 | 2.94 2.90 3.09 | 3 3 3 | H. H. H. | 3 3 2 | |
| 1 8 9 | ξ Bootis | 14 45.8 | 70 24 | 284.9 280.6 284.6 | 4 4 4 | 4.59 4.67 4.65 | 3 3 3 | H. H. H. | 3 3 2 | |
| 20 23 | Σ 1909 = 44 Bootis. . . | 14 59.9 | 41 53 | 240.4 240.6 | 4 4 | 5.03 5.02 | 3 3 | H. H. | 3 3 | |
| June 26 30 July 16 | Lal. 27579 | 15 2.9 | 87 51 | 38.0 36.6 35.6 | 4 4 4 | 3.92 . 4.01 | 2 . 2 | H. H. H. | 3 3 2 | Mags. 8 and 12. |
| June 26 July 17 June 22 | B. A. C. 5020 | 15 8.5 | 117 9 | 161.1 165.2 | 4 4 | 1.47 1.16 | 2 2 | H. H. | 3 2 | |
| June 22 | O. Arg. S. 14417 | 15 10.3 | 105 9 | 303.3 | 4 | 10.36 | 2 | H. | 3 | |
| June 1 9 10 14 | η Cor. Bor. | 15 18.3 | 59 17 | 250.4 250.3 249.7 251.7 | 4 4 4 4 | 0.76 0.86 0.71 0.75 | 2 2 2 2 | H. H. H. H. | 3 2 2 3 | |
| June 1 9 10 13 | μ_2 Bootis | 15 20.0 | 52 14 | 146.5 148.9 143.0 143.1 | 4 4 4 4 | 0.78 0.70 0.72 0.73 | 2 2 2 2 | H. H. H. H. | 3 2 3 2 | |
| May 31 | δ Serpents | 15 29.2 | 79 3 | 189.7 | 5 | 3.46 | 3 | H. | 3 | |
| June 1 8 10 13 14 | ζ Cor. Bor. | . . . | . . . | 190.0 190.3 302.5 302.5 299.9 | 4 4 4 4 4 | 3.40 3.61 6.33 6.24 6.30 | 3 3 3 3 2 | H. H. H. H. Pr. | 2 2 3 2 2 | Observer, H. S. PRITCHETT. |
| May 27 31 | ϵ Cor. Bor. | 15 52.8 | 62 46 | 347.6 353.4 | 4 5 | 2.05 2.14 | 3 2 | H. H. | 3 1½ | Discovered by A. G. CLARK May 3, 1876. Very difficult. |
| June 1 20 | ξ Scorpii, A and B. . . | 15 57.8 | 101 3 | 350.4 2.5 | 4 4 | 2.17 1.23 | 2 3 | H. H. | 3 3 | Mags. 4 and 12. |
| July 17 18 | | . . . | . . . | 5.5 3.8 | 4 4 | 1.14 1.05 | 2 2 | H. H. | 3 2 | |
| Oct. 16 17 18 19 | Σ 2034 | 16 4.2 | 6 1 | 118.6 120.3 118.3 118.6 | 4 4 4 4 | 1.25 1.30 1.34 1.14 | 2 2 2 2 | H. H. H. H. | 2 2 3 3 | 600 A. Images much blurred. 400 A. 400 A. |
| June 13 14 15 13 14 15 14 13 14 15 20 | 49 Serpents σ Cor. Bor. σ Cor. Bor., A and C . . λ Ophiuchi | 16 7.7 16 10.3 16 24.9 | 76 9 55 50 87 45 | 329.0 328.9 328.4 201.1 200.0 199.0 221.7 36.1 33.7 33.7 31.7 | 4 4 4 4 4 4 2 4 4 4 4 | 3.80 3.79 3.84 3.44 3.58 3.46 15.92 1.45 1.48 1.52 . . | 3 3 3 3 3 3 2 2 2 3 . . | H. H. H. H. H. H. H. H. H. H. H. H. | 2 2 3 2 3 3 2 2 1½ 3 2 | Cloudy. |
| July 17 15 22 | ζ Herculis | 16 36.7 | 58 11 | 32.1 144.0 142.6 | 4 4 4 | 1.64 1.29 1.33 | 2 2 2 | H. H. H. | 3 2 2 | |
| June 15 | Σ 2120 | 17 0.0 | 61 44 | 255.9 | 4 | 4.66 | 3 | H. | 3 | |
| July 17 18 22 | 36 Ophiuchi | . . . 17 8.0 | . . . 116 25 | 257.2 256.7 202.2 | 4 4 4 | 4.55 4.58 4.47 | 2 2 2 | H. H. H. | 3 3 2 | |

RESULTS OF OBSERVATIONS OF DOUBLE STARS—Continued.

| Date. | Name of Star. | Approx. R. A. | Approx. N. P. D. | Position Angle. | Number of measures. | Distance. | Number of measures. | Observer. | Weight. | REMARKS. |
|----------|---|------------------|---------------------|--------------------|------------------------|-----------|------------------------|-----------|---------|--|
| 1876. | | h. m. | ° ' " | ° | | " | | | | |
| Aug. 14 | | . . . | . . | 204.4 | 4 | 4.59 | 3 | H. | 3 | |
| 21 | | . . . | . . | 202.9 | 4 | 4.55 | 3 | H. | 2 | |
| June 15 | Σ 2173 | 17 24.2 | 90 58 | 148.3 | 4 | 0.66 | 2 | H. | 3 | |
| July 17 | | . . . | . . | 152.6 | 4 | 0.90 | 2 | H. | 2 | |
| 18 | | . . . | . . | 146.3 | 4 | 0.76 | 2 | H. | 2 | |
| Oct. 16 | ν <i>Draconis</i> | 17 29.8 | 34 44 | 312.47 | 4 | 61.97 | 4 | H. | 3 | |
| 17 | | . . . | . . | 312.50 | 4 | 61.84 | 4 | H. | 3 | |
| 18 | | . . . | . . | 312.50 | 4 | 61.85 | 4 | H. | 3 | |
| 19 | | . . . | . . | 312.50 | 4 | 61.84 | 4 | H. | 3 | |
| July 18 | μ^1 <i>Herculis</i> | 17 42 | 62 12 | 225.6 | 4 | 0.77 | 2 | H. | 2 | |
| 22 | | . . . | . . | 224.2 | 4 | 0.68 | 2 | H. | 2 | |
| Aug. 14 | | . . . | . . | 223.2 | 4 | 0.72 | 2 | H. | 2 | |
| 16 | | . . . | . . | 220.6 | 4 | 0.71 | 2 | H. | 3 | |
| 16 | τ <i>Ophiuchi</i> | 17 56.5 | 98 11 | 250.6 | 4 | 1.71 | 2 | H. | 3 | |
| 21 | | . . . | . . | 250.5 | 4 | 1.71 | 2 | H. | 2 | |
| 22 | | . . . | . . | 252.1 | 4 | 1.73 | 3 | H. | 2 | |
| 16 | γ <i>Ophiuchi</i> | 17 59.4 | 87 27 | 80.5 | 4 | 3.57 | 3 | H. | 3 | |
| 21 | | . . . | . . | 81.0 | 4 | 3.64 | 3 | H. | 2 | |
| 22 | | . . . | . . | 81.3 | 4 | 3.47 | 3 | H. | 2 | |
| Sept. 20 | O Σ 342 = γ <i>Ophiuchi</i> | 18 1.6 | 80 27 | . . | . . | . . | . . | . . | . . | No companion visible. Images good through a slight haze. |
| 25 | | . . . | . . | . . | . . | . . | . . | . . | . . | No companion visible. Seeing fair in twilight. A distant companion in $p = 168^\circ.5$, $s = 51''.2$, and mag. 11-12. γ <i>Ophiuchi</i> also examined by NEWCOMB, August 29 and 31, and no close companion seen. |
| Oct. 16 | Σ 2326 | 18 17.5 | 8 33 | 199.2 | 4 | 15.93 | 4 | H. | 3 | |
| 17 | | . . . | . . | 199.3 | 4 | 15.97 | 4 | H. | 3 | |
| 18 | | . . . | . . | 200.0 | 4 | 15.95 | 4 | H. | 3 | |
| 19 | | . . . | . . | 200.1 | 4 | . . | . . | H. | 2 | Clouds. |
| 21 | | . . . | . . | 199.7 | 4 | 15.84 | 4 | H. | 3 | |
| 21 | O Σ 353 | 18 22.6 | 18 44 | 54.4 | 4 | 0.41 | 2 | H. | 3 | |
| 27 | | . . . | . . | 53.8 | 4 | 0.44 | 2 | H. | 3 | |
| 31 | | . . . | . . | 53.1 | 4 | 0.43 | 2 | H. | 2 | |
| Sept. 4 | Anonymous | 18 43.0 | 78 45 | 224.4 | 4 | 0.96 | 2 | H. | 2 | |
| Oct. 21 | O Σ 363 | 18 43.5 | 12 26 | 23.1 | 4 | 0.39 | 2 | H. | 3 | |
| 24 | | . . . | . . | 21.0 | 4 | 0.36 | 2 | H. | 2 | |
| 27 | | . . . | . . | 19.1 | 4 | 0.43 | 2 | H. | 3 | |
| 31 | | . . . | . . | 21.1 | 4 | 0.43 | 2 | H. | 2 | |
| Aug. 31 | Σ 2402 (?) | 18 44.0 | 79 26 | 201.3 | 4 | 0.87 | 2 | H. | 3 | |
| Sept. 4 | | . . . | . . | 204.6 | 4 | 0.91 | 2 | H. | 2 | Doubtful if this is the star of August 31. It is brighter to-night. |
| 4 | G. A. 5 | 18 44.0 | 79 20 | 94.2 | 4 | 2.32 | 2 | H. | 3 | Mags. 10 and 11. |
| Aug. 26 | β <i>Lyrae</i> | 18 45.6 | 56 47 | 148.97 | 4 | 45.87 | 4 | H. | 2 | STRUVE comp. Face n , 400 A. |
| 27 | | . . . | . . | 149.09 | 4 | 45.87 | 4 | H. | 2 | Face n , 400 A. |
| 28 | | . . . | . . | 149.29 | 4 | 45.80 | 4 | H. | 2 | Face s , 400 A. |
| 29 | | . . . | . . | 149.15 | 4 | 45.75 | 4 | H. | 3 | Face s , 400 A. |
| 31 | | . . . | . . | 149.31 | 4 | 45.86 | 4 | H. | 3 | Face n , 600 A. |
| Sept. 2 | | . . . | . . | 149.15 | 4 | 45.91 | 4 | H. | 2 | Face n , 600 A. |
| 4 | | . . . | . . | 149.33 | 4 | 45.80 | 4 | H. | 2 | Face s , 600 A. |
| 15 | | . . . | . . | 149.16 | 4 | 45.82 | 4 | H. | 2 | Face s , 600 A. |
| 29 | Σ 2571 | 19 35.3 | 12 0 | 22.7 | 4 | 11.49 | 4 | H. | 4 | |
| Oct. 3 | | . . . | . . | 21.7 | 4 | 11.35 | 4 | H. | 2 | |
| 11 | | . . . | . . | 21.9 | 4 | 11.36 | 4 | H. | 3 | |
| 12 | | . . . | . . | 21.7 | 4 | 11.44 | 4 | H. | 2 | |
| Sept. 20 | δ <i>Cygni</i> | 19 41.2 | 45 10 | 339.4 | 4 | 1.20 | 2 | H. | 2 | Images bad. |
| 25 | | . . . | . . | 334.3 | 4 | 1.50 | 2 | H. | 2 | |
| 28 | | . . . | . . | 331.3 | 4 | 1.61 | 3 | H. | 2 & 3 | |
| 29 | | . . . | . . | 333.5 | 4 | 1.73 | 4 | H. | 2 | |
| 29 | O Σ 387 | 19 44.3 | 55 0 | 115.1 | 4 | 0.50 | 2 | H. | 3 | |

RESULTS OF OBSERVATIONS OF DOUBLE STARS—Continued.

| Date. | Name of Star. | Approx. R. A. | Approx. N. P. D. | Position Angle. | Number of measures. | Distance. | Number of measures. | Observer. | Weight. | REMARKS. |
|----------|--|------------------|---------------------|--------------------|------------------------|-----------|------------------------|-----------|---------|-----------------------|
| 1876. | | h. m. | ° ' " | ° | | " | | | | |
| Oct. 3 | | . . . | . . | 110.3 | 4 | 0.50 | 2 | H. | 2 | Stars of 9th mag. |
| 13 | | . . . | . . | 106.9 | 4 | 0.45 | 2 | H. | 3 | |
| Sept. 28 | <i>ε Draconis</i> | 19 48.6 | 20 2 | 4.3 | 4 | 3.01 | 4 | H. | 3 | |
| 29 | | . . . | . . | 2.4 | 4 | 2.97 | 4 | H. | 3 | |
| Oct. 3 | | . . . | . . | 1.1 | 4 | 3.01 | 4 | H. | 2 | Images blurred. |
| 10 | | . . . | . . | 359.7 | 4 | 3.15 | 4 | H. | 2 | |
| 11 | | . . . | . . | 0.0 | 4 | 3.04 | 4 | H. | 3 | |
| Sept. 20 | <i>α² Capricorni</i> , A and B | 20 11 | 102 56 | 243.1 | 4 | . . | . . | H. | 2 | Clouds. |
| 28 | <i>κ Cephei</i> | 20 13.1 | 12 40 | 120.5 | 4 | 7.54 | 4 | H. | 3 | |
| 29 | | . . . | . . | 121.8 | 4 | 7.49 | 4 | H. | 3 | |
| Oct. 3 | | . . . | . . | 121.5 | 4 | 7.54 | 4 | H. | 2 | <i>C</i> is 15th mag. |
| 10 | | . . . | . . | 121.1 | 4 | 7.53 | 4 | H. | 2 | |
| 13 | <i>Σ 2708</i> , A and B | 20 34.1 | 51 47 | 334.0 | 4 | 21.71 | 3 | H. | 3 | |
| 24 | | . . . | . . | 333.6 | 4 | 21.79 | 3 | H. | 3 | |
| 13 | <i>Σ 2708</i> , A and C | . . . | . . | 39.3 | 3 | 14.98 | 2 | H. | 3 | |
| 13 | <i>O Σ 413</i> | 20 42.7 | 54 1 | 83.6 | 4 | 0.71 | 2 | H. | 2 | |
| 27 | | . . . | . . | 85.0 | 4 | 0.78 | 2 | H. | 2 | |
| Nov. 22 | <i>τ Cygni</i> | 21 10.0 | 52 28 | 161.9 | 4 | 1.04 | 2 | H. | 2 | 15th mag. |
| 24 | | . . . | . . | 158.5 | 4 | 1.03 | 2 | H. | 2 | |
| 24 | <i>τ¹ Cygni</i> | . . . | . . | 260.3 | 4 | 15.68 | 2 | H. | 2 | |
| Sept. 28 | <i>Σ 2796</i> | 21 18.0 | 11 56 | 43.57 | 4 | 25.13 | 4 | H. | 3 | Images very unsteady. |
| 29 | | . . . | . . | 43.52 | 4 | 25.13 | 4 | H. | 3 | |
| Oct. 3 | | . . . | . . | 43.52 | 4 | 25.21 | 4 | H. | 2 | |
| 10 | | . . . | . . | 43.15 | 4 | 25.04 | 4 | H. | 2 | |
| Sept. 29 | <i>Σ 2801</i> | 21 22.2 | 10 11 | 269.9 | 4 | 1.61 | 4 | H. | 3 | |
| Oct. 3 | | . . . | . . | 272.4 | 4 | 1.73 | 4 | H. | 2 | |
| 11 | | . . . | . . | 272.9 | 4 | 1.73 | 4 | H. | 3 | |
| 12 | | . . . | . . | 273.1 | 4 | 1.76 | 4 | H. | 2 | |
| Oct. 3 | <i>Σ 2806</i> | 21 27.0 | 19 59 | 250.7 | 4 | 13.64 | 4 | H. | 3 | |
| 11 | | . . . | . . | 250.0 | 4 | 13.47 | 4 | H. | 3 | |
| 12 | | . . . | . . | 251.1 | 4 | 13.49 | 4 | H. | 3 | |
| 13 | | . . . | . . | 250.1 | 4 | 13.66 | 4 | H. | 3 | |
| 11 | <i>Σ 2893</i> | 22 10.6 | 17 19 | 347.92 | 4 | 28.88 | 4 | H. | 3 | |
| 17 | | . . . | . . | 347.85 | 4 | 28.95 | 4 | H. | 2 | |
| 18 | | . . . | . . | 348.03 | 4 | 28.92 | 4 | H. | 3 | |
| 21 | | . . . | . . | 348.08 | 4 | 28.83 | 4 | H. | 4 | |
| 27 | <i>Σ 2924</i> | 22 29.4 | 20 43 | 267.7 | 4 | 0.85 | 2 | H. | 3 | |
| 31 | | . . . | . . | 262.5 | 4 | 0.80 | 2 | H. | 2 | |
| 27 | <i>Σ 2923</i> | 22 29.7 | 20 16 | 47.3 | 4 | 9.64 | 4 | H. | 2 | |
| 31 | | . . . | . . | 46.5 | 4 | 9.47 | 4 | H. | 3 | |
| 27 | <i>O Σ 481</i> | 22 41.8 | 12 8 | 268.0 | 4 | 2.49 | 3 | H. | 2 | |
| 31 | | . . . | . . | 269.6 | 4 | 2.31 | 3 | H. | 3 | |

OCCULTATION OF SATURN.

| Date. | | Washington Mean Time. | | REMARKS. |
|-----------------|--|------------------------|------------------------|--|
| | | Immersion. | Emersion. | |
| 1876. Aug. 6 | (1) Contact with ball | h. m. s. 10 33 21.0 | | Moonlight strong and the planet faint at Immersion. Nothing peculiar noticed in form of planet or ring. Division in ring seen close up to moon. Images much better at Emersion. |
| | (2) Contact with ring | 10 33 32.7 | | |
| | (3) Disappearance of opening on following side . . . | 10 34 5.7 | | |
| | (4) Disappearance of opening on preceding side . . . | 10 35 7.6 | | |
| | (5) Disappearance of ball | 10 35 32.8 | | |
| | (1) Middle of ring (?) | | h. m. s. 10 56 22.2 | |
| | (2) Edge of ball (?) | | 10 57 25.5 | |
| | (3) Middle of ball | | 10 58 49.1 | |
| | (4) Last edge of ball | | 11 0 13.4 | |
| | (5) Last edge of ring | | 11 1 14.3 | |
| Sept. 2 | (1) Disappearance of first edge of ball | 14 38 22.9 | | At Emersion the images were very bad, and the planet so low and position of observer so awkward that the Emersion was lost; also some mistake or misunderstanding about the angle of position given in the American Ephemeris. |
| | (2) Disappearance of middle of ball | 14 38 45.3 | | |
| | (3) Disappearance of last edge of ball | 14 39 8.2 | | |
| | (4) Disappearance of last edge of ring | 14 39 36.6 | | |

In both observations of the occultation of SATURN the observer was A. HALL; telescope, the 26-inch refractor, magnifying power, 3 A.

OCCULTATIONS OF STARS AND PLANETS BY THE MOON.

| Date. | Object. | Magnitude. | Phase. | Observer. | Chronometer Time. | Chron. Corr. | Washington Mean Time. | Weight. | Aperture. | Power. | REMARKS. |
|-----------------|----------------------------|-----------------|------------|-----------|-----------------------|--------------|-----------------------|---------|------------|--------|--|
| 1876. Jan. 1 | 70 Aquarii . . . | 6 | Emersion . | T. | h. m. s. 5 16 23.7 | + 7.5 | h. m. s. 5 16 31.2 | 2 | in. 4.0 | 41 | Observed with comet-seeker. Moon 2 ^d .7 before first quarter. |
| 10 | ϵ Geminorum . . . | 4 $\frac{1}{2}$ | Immersion | T. | 15 37 37.5 | + 26.9 | 15 38 4.4 | 2 | 26.0 | 175 | Disk of star in exterior contact with limb of moon. |
| | | | | | 15 37 38.3 | + 26.9 | 15 38 5.2 | 2 | 26.0 | 175 | Half gone. |
| | | | | | 15 37 39.0 | + 26.9 | 15 38 5.9 | 2 | 26.0 | 175 | Entirely occulted. Images, wt. 3, during entire immersion. |
| 10 | ϵ Geminorum . . . | 4 $\frac{1}{2}$ | Emersion . | T. | 16 23 38.0 | + 26.9 | 16 24 4.9 | 3 | 26.0 | 175 | Moon 0 ^d .1 after full; observed with the Great Equatorial. |
| Mar. 5 | ϵ Geminorum . . . | 4 $\frac{1}{2}$ | Immersion | T. | 9 4 59.0 | — 8.4 | 9 4 50.6 | 3 | 5.0 | 150? | Moon 2 ^d .7 after first quarter; observed with a Transit-of-Venus Equatorial. |
| 5 | ϵ Geminorum . . . | 4 $\frac{1}{2}$ | Emersion . | T. | 10 1 22.0 | — 8.2 | 10 1 13.8 | 2 | 5.0 | 150? | |
| Aug. 6 | SATURN (ball) . . . | . | Immersion | N. | 10 32 44.0 | + 31.6 | 10 33 15.6 | . | 3.25 | 175 | First contact. |
| | SATURN (ball) . . . | . | Immersion | T. | 10 34 49.0 | + 31.6 | 10 35 21.6 | . | 3.25 | 175 | Second contact. |
| 6 | SATURN (ring) . . . | . | Emersion . | T. | 10 55 48.0 | + 31.6 | 10 56 19.6 | . | 3.25 | 175 | First reappearance of sharp point of ring, apparently close to the very bright summit of a lunar peak. This first view of the extremity of the ring did <i>not gradually</i> increase. I was looking right at the point of reappearance, and the first I saw was this instantaneous, sharply defined reappearance (at 48 ^s) of what appeared to be a considerable part of the ring, having an irregular shape, and about the size of a 3-mag. star. The light of the visible part of the ring was, of course, much more dim than that of such a star is. From thence till about 56 ^s there appeared to be <i>no progress of the occultation</i> . |
| 6 | SATURN (ball) . . . | . | Emersion . | T. | 10 57 0.0 | + 31.6 | 10 57 31.6 | . | 3.25 | 175 | I noticed no hesitation nor distortion here, nor at second contact of ball. |
| 6 | SATURN (ball) . . . | . | Emersion . | T. | 10 59 44.0 | + 31.6 | 11 0 15.6 | . | 3.25 | 175 | Second contact. |
| 6 | SATURN (ring) . . . | . | Emersion . | T. | 11 0 47.5 | + 31.6 | 11 1 19.1 | . | 3.25 | 175 | Last contact of ring. I thought I saw some hesitation. All these (emersion) contacts were at the dark limb of the moon. During the progress of the moon's limb over the ball its edge was, as well as I could make out, very sharply defined. There seemed to be a sizeable lunar eminence projected on the disk of SATURN, which made a nearly central track over the planetary disk in the line of the ring. |
| Sept. 2 | SATURN (ball) . . . | . | Immersion | T. | 14 38 41.0 | — 11.6 | 14 38 29.4 | . | 3.25 | 175 | First flattening of ball. |
| | SATURN (ball) . . . | . | Immersion | T. | 14 39 20.5 | — 11.6 | 14 39 8.9 | . | 3.25 | 175 | Ball gone. |
| | SATURN (ring) . . . | . | Immersion | T. | 14 39 48.5 | — 11.6 | 14 39 36.9 | . | 3.25 | 175 | Final disappearance of extremity of ring. During immersion, seeing poor; images tremulous. |

OCCULTATIONS OF STARS AND PLANETS BY THE MOON—Continued.

| Date. | Object. | Magnitude. | Phase. | Observer. | Chronometer Time. | Chron. Corr. | Washington Mean Time. | Weight. | Aperture. | Power. | REMARKS. |
|------------------|-------------------------|------------|------------|-----------|------------------------|--------------|-----------------------|---------|-------------|--------|--|
| 1876. Sept. 2 | SATURN (ball) . . . | . | Emersion . | T. | h. m. s. 15 40 19.0 | s. — 11.6 | h. m. s. 15 40 7.4 | . | in. 3.25 | 175 | Exterior contact of ball and lunar disk. Seeing very poor. |
| Nov. 23 | 42 <i>Aquarii</i> . . . | 6 | Immersion | T. | 6 24 28.0 | — 7.0 | 6 24 21.0 | 1 | 3.25 | 40 | The star disappeared quite suddenly, but I cannot be sure that it was by occultation, as a small cloud was passing at the critical moment. I think it safe to give this observation a weight 1. Moon α^d .2 before first quarter. |
| 24 | 81 <i>Aquarii</i> . . . | 6 | Immersion | T. | 7 8 15.9 | — 215.7 | 7 4 40.2 | 5 | 3.25 | 135 | Moon α^d .8 after first quarter. |

NOTES.

Observers: N., Professor SIMON NEWCOMB.
T., Mr. D. P. TODD.

All the observations after March 5 were made with a portable (eclipse) equatorial at the residence of Professor NEWCOMB, which is—

5°.7 east
48°.3 north

of the U. S. Naval Observatory. The "Washington Mean Time" is that determined by the Transit Circle of the Observatory.
The weights are assigned on the following scale: 1, very uncertain; 2, indifferent; 3, average; 4, good; 5, excellent.

OBSERVATIONS

MADE WITH THE

9.6-INCH EQUATORIAL.

1876.

THE 9.6-INCH EQUATORIAL.

This instrument was under the direction of Prof. J. R. EASTMAN, U. S. N., assisted by the other observers on the Transit Circle, and was employed during 1876 in the observations of the phenomena of Jupiter's satellites, occultations by the moon, and in the determination of the approximate corrections to the ephemerides of many of the minor planets.

The observations of the phenomena of Jupiter's satellites and the occultations by the moon were generally recorded on the Transit Circle chronograph, and are therefore given in the uncorrected time of the KESSELS clock. The correction to the KESSELS clock has been applied and the true Washington Mean Time computed for the final result.

The ephemerides of many of the minor planets were so much in error that it became necessary to determine the approximate corrections before these objects could be observed on the Transit Circle, and, without proper charts, this entailed a large expenditure of time and labor, which can only be appreciated by those who have been engaged in similar work.

In the compilation of the observations during the year, beginning on page 407, the work is recorded according to date, together with the observer's notes made at the time.

OBSERVATIONS

WITH THE

9.6-INCH EQUATORIAL.

| Date. | Observer. | Observations. |
|---------|-----------|--|
| 1876. | | |
| Jan. 31 | F. | Emersion of ϵ Piscium at $6^h 23^m 38^s.3 = 9^h 40^m 51^s.4$, mean time. Immersion not seen on account of clouds; emersion quite uncertain. |
| 31 | P. | Observed Cyrene and found the corrections to the Ephemeris to be -11^s and $+0'.5$. |
| Feb. 16 | F. | Emersion of A^2 Scorpii at $12^h 33^m 34^s.4 = 14^h 46^m 53^s.8$, mean time. |
| | | Immersion of π Scorpii at $15^h 8^m 50^s.3 = 17^h 21^m 44^s.4$, mean time. |
| Mar. 2 | E. | Looked for planet discovered by Peters February 20. Found it, I think, but clouds prevented any definite observation. |
| 3 | E. | Found Peters's planet of February 20, determined its approximate position, and it was observed on the Transit Circle. |
| 4 | S. | Immersion of 49 Aurigæ at $5^h 28^m 9^s.1 = 6^h 35^m 50^s.3$, mean time; very good observation. |
| 5 | P. | Emersion of 49 Aurigæ at $6^h 7^m 54^s.8 = 7^h 15^m 29^s.4$, mean time; fair observation. |
| | | Immersion of ϵ Geminorum at $8^h 1^m 31^s.3 = 9^h 4^m 51^s.5$, mean time. |
| | | Emersion of ϵ Geminorum at $8^h 58^m 58^s.3 = 10^h 1^m 16^s.3$, mean time. |
| 21 | P. | Disappearance (eclipse) of Jupiter's satellite I, at $13^h 9^m 13^s.3 = 14^h 11^m 43^s.2$, mean time. |
| | | Reappearance of Jupiter's satellite III (from eclipse), at $12^h 23^m 58^s.7 = 12^h 23^m 45^s.0$, mean time. |
| | | Disappearance of Jupiter's satellite I (eclipsed), at $12^h 27^m 0^s.8 = 12^h 26^m 46^s.7$, mean time. |
| | | Disappearance of Jupiter's satellite III (occulted), last visibility on limb at $15^h 17^m 7^s.6 = 15^h 16^m 25^s.6$, mean time. |
| | | Reappearance of Jupiter's satellite I (first glimpse) at $15^h 42^m 1^s.0 = 15^h 41^m 14^s.9$, mean time. |
| 31 | P. | Reappearance of Jupiter's satellite III (first sure glimpse) at $16^h 40^m 3^s.3 = 16^h 39^m 7^s.7$, mean time. |
| April 1 | P. | Found corrections to Dr. Peters's ephemeris of Una to be -7^s and $+1'.8$. |
| | | Found Peitho and Althæa. |
| | | Corrections to the ephemeris of Peitho are -25^s and $+3'.4$. |
| | | Corrections to the ephemeris of Althæa are -76^s and $+6'.9$. |
| 6 | P. | Disappearance of Jupiter's satellite I at $11^h 45^m 18^s.8 = 10^h 42^m 19^s.1$, mean time. |
| 15 | E. | Determined the approximate place of Una. |
| 25 | S. | Cloudy for occultation of the Pleiades, but succeeded in making a fair observation of the emersion of k Pleiadum at $9^h 50^m 58^s.4 = 7^h 33^m 34^s.3$, mean time. |
| May 4 | P. | Immersion of B. A. C. 4200 at $11^h 25^m 7^s.6 = 8^h 32^m 4^s.1$, mean time. |
| | | Immersion of B. A. C. 4225 at $13^h 28^m 0^s.1 = 10^h 34^m 36^s.5$, mean time. |
| | | Immersion of f Virginis at $17^h 8^m 26^s.2 = 14^h 14^m 26^s.4$, mean time. |
| June 1 | P. | Immersion of 50 Virginis at $18^h 4^m 32^s.1 = 13^h 20^m 11^s.6$, mean time. |
| Aug. 6 | F. | Occultation of Saturn— |
| | | Immersion of 1st limb at $19^h 38^m 8^s.2 = 10^h 33^m 14^s.0$, mean time. |
| | | Immersion of 2d limb at $19^h 46^m 22^s.5 = 10^h 35^m 27^s.9$, mean time. |
| | | Emersion of preceding point of ring at $20^h 1^m 11^s.1 = 10^h 56^m 13^s.1$, mean time. |
| | | Emersion of 2d limb at $20^h 5^m 14^s.5 = 11^h 0^m 15^s.8$, mean time. |
| | | Emersion of following point of ring at $20^h 6^m 18^s.8 = 11^h 1^m 20^s.0$, mean time. |
| | | The following notes were made by Prof. W. Harkness, U. S. N.: |
| | | Observed the occultation of Saturn with my equatorial telescope of three inches aperture and 43.6 inches focus, armed with a magnifying power of 133 diameter. The immersion took place at the bright limb of the moon, and, as the planet was excessively faint, the contacts are somewhat uncertain. The emersion occurred at the dark limb of the moon, and, on that account, the observations of it are probably better than those of the immersion. |
| | | Immersion of 1st limb at $19^h 37^m 49^s.1 = 10^h 32^m 54^s.9$, mean time. |
| | | Immersion of 2d limb at $19^h 40^m 4^s.6 = 10^h 35^m 10^s.1$, mean time. |
| | | Emersion of 1st limb at $20^h 2^m 37^s.6 = 10^h 57^m 39^s.4$, mean time. |
| | | Emersion of 2d limb at $20^h 5^m 21^s.6 = 11^h 0^m 22^s.0$, mean time. |
| | | Last contact of ring at $20^h 6^m 3^s.6 = 11^h 1^m 4^s.8$, mean time. |
| 26 | E. | Found Rhodope (166) and determined its approximate position for observation with the Transit Circle. |
| Sept. 2 | F. | Occultation of Saturn; Immersion— |
| | | Disappearance of preceding edge of ring at $1^h 29^m 17^s.3 = 14^h 37^m 53^s.9$, mean time. |
| | | Disappearance of first limb at $1^h 29^m 46^s.3 = 14^h 38^m 22^s.8$, mean time. |
| | | Disappearance of second limb at $1^h 30^m 31^s.6 = 14^h 39^m 8^s.0$, mean time. |
| | | Disappearance of following edge of ring at $1^h 30^m 58^s.4 = 14^h 39^m 34^s.7$, mean time. |
| | | Emersion lost. |

| Date. | Observer. | Observations. |
|------------------|-----------|--|
| 1876. Oct. 27 | P. | Observed immersion of 64 Aquarii at $1^h 13^m 58.8 = 10^h 45^m 6^s.5$, mean time. The star was too faint to observe the emersion on the bright limb. |
| Nov. 1 | P. | Found Maia (66), and it was observed to-night on the Transit Circle. Approximate place from the Equatorial at transit time, $1^h 4^m 37^s + 8^\circ 51'.9$. Searched for Thisbe (88) but could not find it. |
| 22 | P. | Found Thisbe (88) after transit time. At $4^h.2$, sidereal time, its approximate place was $2^h 30^m 47^s.4 + 21^\circ 10'.4$, and the correction to the Ephemeris was -52^s and $-3'.5$. |
| 24 | E. | Found Vibia. At 10^h , mean time, its approximate place was $4^h 56^m 52^s + 21^\circ 41'$. |
| 24 | S. | Observed immersion of 81 Aquarii at $23^h 22^m 23^s.0 = 7^h 4^m 38^s.3$, mean time. Good observation. Observation of emersion not worth recording. |
| Dec. 5 | P. | Observed emersion of 8 Leonis at $2^h 49^m 9^s.4 = 9^h 47^m 38^s.9$, mean time. Moon close to horizon, star faint; observation may be one second late. |
| 13 | E. | Examined the "white spot" on the body of Saturn. The spot was intensely white with a whitish wing preceding and following it. From two series of transits of the limb and the spot, I made two determinations of the time when the spot was on the center of the planet, as follows, $5^h 50^m$ and $6^h 8^m$, mean time. |
| 16 | E. | Estimated the time when the spot was on the center of Saturn at $5^h 35^m$, mean time. Seeing very bad, indeed. |
| 19 | E. | Observed spot on Saturn. Estimated that the spot was at the center at $5^h 2^m$, mean time. |
| 21 | P. | Found Isis (42) at $10^h.0$, mean time. Its approximate place for transit time was $4^h 21^m 29^s + 19^\circ 26'.3$. |
| 26 | E. | Looked for Dr. Schmidt's <i>new</i> or <i>variable</i> star, but found nothing near the supposed place of unusual magnitude. Durchmusterung + 42°, 4178, or Weisse (2) 879, was in place, and of the 9th magnitude. |
| 26 | P. | Observed immersion of μ Arietis at $1^h 35^m 37^s.0 = 7^h 11^m 57^s.1$, mean time. |
| 27 | E. | Estimated the "white spot" on Saturn to be on the center of the planet at $7^h 42^m$, mean time. Definition bad. |
| | | Observed immersion of ϵ Pleiadum at $3^h 55^m 41^s.7 = 9^h 27^m 43^s.4$, mean time. |
| | | Other occultations lost by clouds. |

CORRECTIONS
TO THE
NORTH-POLAR DISTANCES OF STARS
OF THE
AMERICAN EPHEMERIS,
GIVEN BY
OBSERVATIONS WITH THE TRANSIT CIRCLE.
1876.

CORRECTIONS

TO THE

NORTH-POLAR DISTANCES OF STARS OF THE AMERICAN EPHEMERIS,

GIVEN BY

OBSERVATIONS WITH THE TRANSIT CIRCLE, 1876.

NOTE.—The north-polar distance for each star is taken directly from the American Ephemeris for 1876.0.

| α ANDROMEDÆ. | | | | γ PEGASI—Continued. | | | | β CETI. | | | | ε PISCUM. | | | | | |
|----------------------------------|----|-------------|-----|----------------------------------|----|----------|-----|----------------------------------|----|----------------------------------|-----|----------------------------------|----|-------------|-----|--|--|
| Right Ascension, | | h. m. s. | | 1876. | | " | | Right Ascension, | | h. m. s. | | Right Ascension, | | h. m. s. | | | |
| | | 0 1 59 | | Mar. 6 | | E. + 3.9 | | | | 0 37 22 | | | | 0 56 31 | | | |
| North-Polar Dist., | | 61 35 38.41 | | April 30 | | F. — 0.7 | | North-Polar Dist., | | 108 40 2.74 | | North-Polar Dist., | | 82 46 40.06 | | | |
| 1876. | | | | " | | | | 1876. | | | | " | | | | | |
| Jan. 31 | F. | + | 0.1 | 18 | E. | + | 1.4 | Jan. 30 | E. | — | 0.4 | Jan. 30 | E. | — | 0.7 | | |
| Feb. 8 | F. | + | 2.6 | 26 | E. | — | 0.0 | 31 | F. | — | 0.5 | 31 | F. | — | 0.8 | | |
| 12 | F. | + | 0.6 | 30 | E. | + | 0.2 | Feb. 17 | S. | — | 0.1 | Sept. 29 | P. | — | 0.7 | | |
| 17 | S. | — | 0.8 | Aug. 6 | F. | — | 0.7 | 18 | P. | — | 1.0 | Oct. 17 | F. | — | 0.8 | | |
| 18 | P. | — | 0.5 | Sept. 27 | F. | — | 0.1 | 19 | E. | — | 1.9 | Nov. 29 | E. | — | 1.6 | | |
| 19 | E. | + | 0.3 | 28 | S. | — | 1.3 | Mar. 9 | P. | — | 0.5 | Dec. 6 | E. | — | 0.8 | | |
| 23 | E. | + | 1.2 | 29 | P. | + | 0.7 | April 7 | F. | — | 0.3 | 7 | E. | — | 1.4 | | |
| 25 | S. | — | 0.2 | Oct. 2 | S. | — | 0.2 | 16 | S. | — | 0.8 | 15 | E. | — | 0.1 | | |
| Mar. 2 | E. | + | 1.2 | 11 | F. | + | 1.4 | 30 | E. | — | 2.2 | 19 | E. | — | 0.8 | | |
| 4 | S. | + | 0.5 | 13 | F. | — | 0.6 | Sept. 2 | F. | — | 3.4 | 23 | P. | + | 0.7 | | |
| 6 | E. | + | 1.7 | 17 | F. | + | 1.3 | 28 | S. | — | 2.0 | Mean — 0.70 | | | | | |
| 30 | F. | — | 1.2 | Nov. 7 | S. | — | 0.8 | 29 | P. | — | 1.1 | Div., Flex., etc. + 1.85 | | | | | |
| April 5 | P. | + | 0.1 | 10 | S. | + | 0.1 | Oct. 2 | S. | — | 2.0 | <i>ε</i> PISCUM (Ref.). | | | | | |
| 7 | F. | + | 0.6 | 24 | S. | — | 0.0 | 11 | F. | — | 0.6 | 1876. | | | | | |
| 9 | P. | + | 0.2 | 27 | S. | — | 0.2 | 12 | P. | — | 3.3 | Dec. 7 | E. | + | 0.6 | | |
| 10 | E. | + | 1.5 | Dec. 21 | S. | + | 1.2 | Nov. 10 | S. | — | 1.2 | Div., Flex., etc. + 0.14 | | | | | |
| 16 | S. | — | 0.9 | Mean + 0.56 | | | | 24 | S. | — | 2.2 | <i>ε</i> PISCUM (Ref.). | | | | | |
| 18 | E. | + | 0.6 | Div., Flex., etc. + 1.68 | | | | 27 | S. | + | 1.1 | 1876. | | | | | |
| 26 | E. | — | 2.9 | <i>γ</i> PEGASI (Ref.). | | | | Dec. 6 | E. | — | 1.0 | Dec. 7 | | | | | |
| 30 | E. | — | 1.3 | 1876. | | | | 19 | E. | — | 0.8 | Div., Flex., etc. + 0.14 | | | | | |
| Aug. 6 | F. | — | 1.5 | Nov. 7 | | | | 21 | S. | — | 0.8 | <i>ε</i> PISCUM (Ref.). | | | | | |
| Sept. 2 | F. | — | 0.5 | S. + 1.2 | | | | 23 | P. | — | 1.1 | POLARIS. | | | | | |
| 27 | F. | + | 0.4 | Div., Flex., etc. + 0.22 | | | | Mean — 1.19 | | | | h. m. s. | | | | | |
| 28 | S. | — | 0.7 | <i>α</i> CASSIOPEÆ. | | | | Div., Flex., etc. + 1.94 | | | | Right Ascension, | | | | | |
| 29 | P. | — | 0.2 | h. m. s. | | | | 21 CASSIOPEÆ. | | | | 1 13 21 | | | | | |
| Oct. 2 | S. | + | 0.5 | Right Ascension, | | | | h. m. s. | | | | North-Polar Dist., | | | | | |
| 3 | P. | — | 0.2 | 0 33 29 | | | | 15 41 26.51 | | | | 1 21 7.15 | | | | | |
| 11 | F. | + | 1.0 | North-Polar Dist., | | | | 1876. | | | | 1876. | | | | | |
| 12 | P. | — | 0.9 | 34 8 35.15 | | | | Feb. 18 | | | | Jan. 30 | | | | | |
| 17 | F. | — | 0.2 | 1876. | | | | Oct. 13 | | | | 31 | | | | | |
| Nov. 10 | S. | — | 2.2 | Feb. 18 | | | | 18 | | | | Feb. 12 | | | | | |
| 24 | S. | + | 0.4 | April 16 | | | | Mean — 2.20 | | | | 16 | | | | | |
| 27 | S. | — | 0.5 | Oct. 3 | | | | Div., Flex., etc. + 0.60 | | | | 17 | | | | | |
| Mean — 0.04 | | | | Nov. 10 | | | | 21 CASSIOPEÆ, S. P. | | | | 18 | | | | | |
| Div., Flex., etc. + 1.56 | | | | Dec. 23 | | | | h. m. s. | | | | 19 | | | | | |
| <i>α</i> ANDROMEDÆ (Ref.). | | | | Mean — 1.03 | | | | North-Polar Dist., | | 344 18 33.49 | | 1876. | | | | | |
| 1876. | | | | Oct. 3 | | P. — 0.2 | | 1876. | | | | | | | | | |
| Oct. 3 | | | | P. | | — 0.8 | | Oct. 13 | | | | F. — 2.3 | | | | | |
| Div., Flex., etc. + 0.65 | | | | Nov. 10 | | S. — 1.4 | | 18 | | | | S. — 2.1 | | | | | |
| <i>γ</i> PEGASI. | | | | Dec. 27 | | | | S. — 1.0 | | Mean — 2.20 | | | | 25 | | | |
| Right Ascension, | | h. m. s. | | Dec. 23 | | P. — 0.4 | | Div., Flex., etc. + 0.60 | | 21 CASSIOPEÆ, S. P. | | 26 | | | | | |
| | | 0 6 51 | | Mean — 1.03 | | | | Div., Flex., etc. + 0.64 | | h. m. s. | | Mar. 3 | | | | | |
| North-Polar Dist., | | 75 30 20.40 | | Div., Flex., etc. + 0.64 | | | | 21 CASSIOPEÆ, S. P. | | 0 37 29 | | 5 | | | | | |
| 1876. | | | | <i>α</i> CASSIOPEÆ (Ref.). | | | | North-Polar Dist., | | 344 18 33.49 | | 6 | | | | | |
| Jan. 30 | E. | + | 0.4 | 1876. | | | | 1876. | | " | | 8 | | | | | |
| Feb. 8 | F. | + | 2.4 | Oct. 3 | | | | P. | | — 0.5 | | 9 | | | | | |
| 12 | F. | + | 1.1 | Nov. 10 | | | | S. | | — 2.1 | | 10 | | | | | |
| 18 | P. | + | 0.5 | Dec. 27 | | | | S. | | — 3.0 | | 14 | | | | | |
| 19 | E. | + | 0.9 | Dec. 23 | | | | P. | | — 1.5 | | 16 | | | | | |
| 23 | E. | + | 2.1 | Mean — 1.70 | | | | Mean + 1.17 | | Div., Flex., etc. + 0.28 | | 28 | | | | | |
| | | | | Div., Flex., etc. + 1.44 | | | | Div., Flex., etc. + 0.28 | | | | 30 | | | | | |
| | | | | | | | | | | | | May 3 | | | | | |
| | | | | | | | | | | | | 4 | | | | | |
| | | | | | | | | | | | | 12 | | | | | |
| | | | | | | | | | | | | 14 | | | | | |
| | | | | | | | | | | | | 19 | | | | | |

α ARIETIS.

| Right Ascension, | h. m. s. |
|--------------------|------------|
| | 2 0 11 |
| North-Polar Dist., | ° ' " |
| | 67 7 28.78 |

| 1876. | | | | |
|---------------------------|----|---|------|--|
| Jan. 30 | E. | — | 1.3 | |
| Feb. 26 | P. | + | 0.3 | |
| Mar. 5 | P. | — | 0.4 | |
| 6 | E. | + | 2.1 | |
| 9 | P. | — | 0.0 | |
| 21 | P. | — | 1.0 | |
| 22 | E. | + | 0.6 | |
| 27 | F. | + | 1.3 | |
| April 1 | S. | — | 0.3 | |
| May 3 | P. | + | 0.6 | |
| 14 | P. | — | 1.3 | |
| 19 | P. | + | 0.4 | |
| 21 | P. | + | 0.5 | |
| 28 | S. | + | 0.4 | |
| 31 | P. | — | 1.1 | |
| June 1 | E. | — | 0.6 | |
| Sept. 28 | S. | — | 1.6 | |
| Oct. 3 | P. | — | 0.5 | |
| 11 | F. | — | 1.6 | |
| 27 | P. | — | 1.1 | |
| 31 | S. | — | 0.4 | |
| Nov. 1 | E. | + | 0.5 | |
| 5 | E. | — | 0.4 | |
| 22 | F. | — | 0.5 | |
| 24 | S. | — | 1.7 | |
| 27 | S. | — | 1.3 | |
| 28 | P. | — | 0.2 | |
| 29 | E. | — | 1.1 | |
| Dec. 5 | S. | — | 0.4 | |
| 6 | P. | — | 1.9 | |
| 7 | E. | — | 0.0 | |
| 13 | S. | — | 0.4 | |
| 15 | E. | — | 1.3 | |
| 17 | S. | — | 5.3 | |
| 19 | F. | — | 1.6 | |
| 21 | S. | + | 0.1 | |
| 23 | P. | — | 0.1 | |
| 27 | E. | — | 0.0 | |
| Mean | | — | 0.54 | |
| Div., Flex., etc. | | + | 1.63 | |

 α ARIETIS (Ref.).

| 1876. | | | | |
|---------------------------|----|---|------|--|
| Nov. 27 | S. | + | 1.3 | |
| Div., Flex., etc. | | + | 0.55 | |

 ξ^1 CETI.

| Right Ascension, | h. m. s. |
|-------------------|------------|
| | 2 6 26 |
| North-Polar Dist. | ° ' " |
| | 81 44 9.18 |

| 1876. | | | | |
|---------------------------|----|---|------|--|
| Oct. 3 | P. | — | 1.9 | |
| 27 | P. | — | 3.3 | |
| Dec. 23 | P. | — | 1.0 | |
| Mean | | — | 2.07 | |
| Div., Flex., etc. | | + | 1.86 | |

 ϵ CASSIOPEÆ.

| Right Ascension, | h. m. s. |
|--------------------|------------|
| | 2 18 52 |
| North-Polar Dist., | ° ' " |
| | 23 9 25.34 |

| 1876. | | | | |
|---------------------------|----|---|------|--|
| Oct. 3 | P. | — | 2.1 | |
| Dec. 5 | S. | + | 0.2 | |
| 6 | P. | — | 2.5 | |
| 17 | S. | — | 2.1 | |
| 21 | S. | — | 1.2 | |
| 23 | P. | — | 2.4 | |
| Mean | | — | 1.68 | |
| Div., Flex., etc. | | + | 0.80 | |

 ϵ CASSIOPEÆ (Ref.).

| 1876. | | | | |
|---------------------------|----|---|------|--|
| Oct. 3 | P. | — | 2.1 | |
| Dec. 5 | S. | — | 3.6 | |
| 6 | P. | — | 2.9 | |
| 17 | S. | — | 4.0 | |
| 21 | S. | — | 3.6 | |
| 23 | P. | — | 3.7 | |
| Mean | | — | 3.32 | |
| Div., Flex., etc. | | + | 1.27 | |

 ϵ CASSIOPEÆ, S. P.

| Right Ascension, | h. m. s. |
|--------------------|--------------|
| | 2 18 52 |
| North-Polar Dist., | ° ' " |
| | 336 50 34.66 |

| 1876. | | | | |
|---------------------------|----|---|------|--|
| June 1 | P. | + | 1.6 | |
| Div., Flex., etc. | | + | 0.22 | |

 γ CETI.

| Right Ascension, | h. m. s. |
|--------------------|-------------|
| | 2 36 53 |
| North-Polar Dist., | ° ' " |
| | 87 17 15.90 |

| 1876. | | | | |
|---------------------------|----|---|------|--|
| Feb. 2 | P. | — | 1.0 | |
| Mar. 22 | E. | + | 0.2 | |
| Oct. 13 | F. | — | 2.3 | |
| 18 | S. | + | 1.0 | |
| 27 | P. | — | 1.5 | |
| 31 | S. | — | 1.1 | |
| Nov. 7 | S. | — | 0.8 | |
| 28 | P. | — | 0.2 | |
| Dec. 6 | P. | — | 0.4 | |
| 13 | S. | + | 0.2 | |
| 21 | S. | — | 0.2 | |
| 23 | P. | + | 0.1 | |
| 27 | E. | — | 0.9 | |
| Mean | | — | 0.53 | |
| Div., Flex., etc. | | + | 1.78 | |

 γ CETI (Ref.).

| 1876. | | | | |
|---------------------------|----|---|------|--|
| Dec. 27 | E. | — | 0.1 | |
| Div., Flex., etc. | | + | 0.38 | |

 α CETI.

| Right Ascension, | h. m. s. |
|--------------------|-------------|
| | 2 55 48 |
| North-Polar Dist., | ° ' " |
| | 86 23 52.72 |

| 1876. | | | | |
|---------------------------|----|---|------|--|
| Feb. 2 | P. | — | 0.0 | |
| April 6 | P. | — | 0.8 | |
| May 31 | P. | — | 2.2 | |
| June 1 | E. | — | 0.6 | |
| Oct. 18 | S. | — | 0.1 | |
| 31 | S. | — | 0.8 | |
| Nov. 1 | E. | — | 2.2 | |
| 7 | S. | — | 1.1 | |
| 26 | F. | — | 0.5 | |
| 28 | P. | — | 0.8 | |
| Dec. 6 | P. | — | 1.3 | |
| 7 | E. | — | 1.7 | |
| 13 | S. | — | 0.6 | |
| 19 | E. | — | 1.5 | |
| 23 | P. | — | 0.5 | |
| 27 | E. | — | 1.8 | |
| Mean | | — | 1.03 | |
| Div., Flex., etc. | | + | 1.78 | |

 α CETI (Ref.).

| 1876. | | | | |
|---------------------------|----|---|------|--|
| Nov. 26 | F. | — | 0.5 | |
| Dec. 27 | E. | + | 0.2 | |
| Mean | | — | 0.15 | |
| Div., Flex., etc. | | + | 0.34 | |

 δ CEPHEI.

| Right Ascension, | h. m. s. |
|--------------------|-------------|
| | 3 4 39 |
| North-Polar Dist., | ° ' " |
| | 12 43 27.96 |

| 1876. | | | | |
|---------------------------|----|---|------|--|
| Oct. 12 | P. | — | 1.2 | |
| Nov. 1 | E. | — | 1.8 | |
| 28 | P. | — | 1.5 | |
| Dec. 27 | E. | — | 2.1 | |
| Mean | | — | 1.65 | |
| Div., Flex., etc. | | + | 0.53 | |

 δ CEPHEI (Ref.).

| 1876. | | | | |
|---------------------------|----|---|------|--|
| Dec. 27 | E. | — | 2.1 | |
| Div., Flex., etc. | | + | 1.24 | |

 δ CEPHEI, S. P.

| Right Ascension, | h. m. s. |
|--------------------|--------------|
| | 3 4 39 |
| North-Polar Dist., | ° ' " |
| | 347 16 32.04 |

| 1876. | | | | |
|---------------------------|----|---|------|--|
| Jan. 20 | S. | — | 1.1 | |
| May 3 | S. | + | 0.5 | |
| June 26 | E. | + | 2.9 | |
| Mean | | + | 0.77 | |
| Div., Flex., etc. | | + | 0.36 | |

 ζ ARIETIS.

| Right Ascension, | h. m. s. |
|--------------------|-------------|
| | 3 7 47 |
| North-Polar Dist., | ° ' " |
| | 69 24 58.19 |

| 1876. | | | | |
|---------------------------|----|---|------|--|
| Oct. 12 | P. | + | 0.7 | |
| 27 | P. | + | 0.1 | |
| Nov. 1 | E. | — | 0.7 | |
| 26 | F. | — | 1.8 | |
| Dec. 3 | E. | — | 0.3 | |
| 6 | P. | — | 1.1 | |
| 7 | E. | — | 0.2 | |
| 17 | S. | — | 0.7 | |
| 19 | E. | + | 0.3 | |
| Mean | | — | 0.41 | |
| Div., Flex., etc. | | + | 1.60 | |

 ζ ARIETIS (Ref.).

| 1876. | | | | |
|---------------------------|----|---|------|--|
| Oct. 12 | P. | + | 0.4 | |
| 27 | P. | + | 0.1 | |
| Dec. 3 | E. | — | 0.2 | |
| 6 | P. | + | 0.2 | |
| 17 | S. | + | 0.9 | |
| 19 | E. | + | 0.1 | |
| Mean | | + | 0.25 | |
| Div., Flex., etc. | | + | 0.47 | |

 α PERSEI.

| Right Ascension, | h. m. s. |
|--------------------|-------------|
| | 3 15 29 |
| North-Polar Dist., | ° ' " |
| | 40 34 55.90 |

| 1876. | | | | |
|---------|----|---|-----|--|
| April 6 | P. | — | 0.9 | |
| 12 | F. | — | 0.9 | |
| May 21 | P. | — | 1.0 | |
| 31 | P. | — | 0.4 | |

 α PERSEI—Continued.

| 1876. | | | | |
|---------------------------|----|---|------|--|
| June 2 | F. | — | 2.6 | |
| Oct. 12 | P. | — | 0.1 | |
| 27 | P. | — | 0.5 | |
| Nov. 5 | E. | — | 1.3 | |
| 26 | F. | — | 2.6 | |
| 28 | P. | — | 1.8 | |
| Dec. 3 | E. | — | 0.1 | |
| 7 | E. | — | 1.4 | |
| 21 | S. | — | 2.5 | |
| 23 | P. | — | 1.4 | |
| 27 | E. | — | 0.3 | |
| Mean | | — | 1.19 | |
| Div., Flex., etc. | | + | 0.58 | |

 α PERSEI (Ref.).

| 1876. | | | | |
|---------------------------|----|---|------|--|
| May 31 | P. | — | 2.3 | |
| Oct. 27 | P. | — | 1.1 | |
| Nov. 5 | E. | — | 2.9 | |
| 28 | P. | — | 2.8 | |
| Dec. 3 | E. | — | 1.0 | |
| 7 | E. | — | 2.5 | |
| 21 | S. | — | 2.4 | |
| 23 | P. | — | 1.1 | |
| 27 | E. | — | 1.8 | |
| Mean | | — | 1.99 | |
| Div., Flex., etc. | | + | 1.46 | |

 δ PERSEI.

| Right Ascension, | h. m. s. |
|--------------------|-------------|
| | 3 34 6 |
| North-Polar Dist., | ° ' " |
| | 42 36 40.12 |

| 1876. | | | | |
|---------------------------|----|---|------|--|
| April 6 | P. | — | 0.7 | |
| June 28 | P. | — | 1.4 | |
| Oct. 12 | P. | — | 0.8 | |
| 27 | P. | + | 0.2 | |
| Nov. 5 | E. | — | 0.5 | |
| 22 | F. | — | 0.8 | |
| 28 | P. | — | 1.7 | |
| Dec. 5 | S. | — | 1.2 | |
| 23 | P. | — | 1.1 | |
| Mean | | — | 0.89 | |
| Div., Flex., etc. | | + | 0.50 | |

 δ PERSEI (Ref.).

| 1876. | | | | |
|---------------------------|----|---|------|--|
| Oct. 12 | P. | — | 1.5 | |
| 27 | P. | — | 2.4 | |
| Nov. 5 | E. | — | 1.4 | |
| 22 | F. | — | 2.9 | |
| 28 | P. | — | 1.7 | |
| Dec. 5 | S. | — | 3.4 | |
| 23 | P. | — | 2.4 | |
| Mean | | — | 2.21 | |
| Div., Flex., etc. | | + | 1.49 | |

 η TAURI.

| Right Ascension, | h. m. s. |
|--------------------|-------------|
| | 3 40 7 |
| North-Polar Dist., | ° ' " |
| | 66 16 47.61 |

| 1876. | | | | |
|---------|----|---|-----|--|
| Jan. 24 | S. | — | 0.2 | |
| Feb. 2 | P. | + | 0.5 | |
| April 6 | P. | — | 0.5 | |
| 8 | F. | + | 1.1 | |
| 11 | E. | + | 0.1 | |
| 12 | F. | — | 0.9 | |

| TAURI—Continued. | | | | | γ ¹ ERIDANI—Continued. | | | | | α TAURI—Continued. | | | | | ε AURIGÆ (Ref.). | | | | |
|---------------------------|----|----|---|--------------|-----------------------------------|----|----|---|------|---------------------------|----|----|-------------|--------------------------------|--------------------------------|----|----|------|------|
| 1876. | | | | | 1876. | | | | | 1876. | | | | | 1876. | | | | |
| May | 4 | P. | + | 0.9 | Nov. | 22 | F. | — | 0.9 | April | 15 | E. | + | 0.4 | July | 2 | P. | + | 2.5 |
| | 31 | P. | + | 0.1 | | 26 | F. | — | 0.5 | | 17 | S. | + | 0.6 | Dec. | 12 | F. | + | 0.3 |
| June | 28 | P. | — | 0.5 | | 28 | P. | | 0.0 | | 27 | E. | + | 0.4 | Mean | | | + | 1.40 |
| Oct. | 12 | P. | — | 0.6 | Mean | | | — | 0.20 | June | 26 | F. | + | 1.0 | Div., Flex., etc. | | | + | 0.93 |
| | 18 | S. | — | 0.8 | Div., Flex., etc. | | | + | 1.70 | | 27 | S. | — | 0.2 | II ORIONIS. | | | | |
| | 27 | P. | — | 0.3 | γ TAURI. | | | | | July | 5 | P. | + | 0.4 | Right Ascension, h. m. s. | | | | |
| Nov. | 7 | S. | — | 1.3 | | | | | | | 10 | P. | — | 1.2 | 4 57 29 | | | | |
| | 22 | F. | — | 1.2 | | | | | | Oct. | 12 | P. | — | 1.1 | North-Polar Dist., 74 46 12.84 | | | | |
| | 26 | F. | — | 2.6 | | | | | | Nov. | 26 | F. | + | 0.3 | 1876. | | | | |
| Dec. | 3 | E. | — | 1.1 | | | | | | 27 | S. | — | 0.9 | Jan. | 25 | P. | — | 0.5 | |
| | 7 | E. | — | 0.4 | | | | | | Dec. | 6 | P. | — | 0.8 | | 5 | S. | + | 1.2 |
| Mean | | | | 0.45 | | | | | | 7 | E. | + | 0.9 | | 21 | S. | — | 0.1 | |
| Div., Flex., etc. | | | | 1.64 | | | | | | 8 | F. | — | 1.9 | | 31 | E. | — | 0.9 | |
| η TAURI (Ref.). | | | | | | | | | | 19 | E. | — | 1.3 | Mean | | | — | 0.08 | |
| 1876. | | | | | | | | | | 31 | E. | — | 0.1 | Div., Flex., etc. | | | + | 1.67 | |
| Oct. | 12 | P. | | 0.0 | | | | | | Mean | | | 0.07 | III ORIONIS (Ref.). | | | | | |
| | 27 | P. | — | 1.0 | | | | | | Div., Flex., etc. | | | 1.64 | 1876. | | | | | |
| Mean | | | | 0.50 | | | | | | α TAURI (Ref.). | | | | | 1876. | | | | |
| Div., Flex., etc. | | | | 0.57 | | | | | | 1876. | | | | | Jan. | 25 | P. | + | 2.1 |
| ζ PERSEI. | | | | | | | | | | July | 5 | P. | — | 3.9 | | 26 | E. | + | 1.0 |
| h. m. s. | | | | | | | | | | 10 | P. | + | 3.2 | Dec. | 5 | S. | + | 0.5 | |
| Right Ascension, | | | | 3 46 20 | | | | | | Mean | | | 0.35 | | 21 | S. | + | 3.5 | |
| North-Polar Dist., | | | | 58 29 11.13 | | | | | | Div., Flex., etc. | | | 0.29 | | 31 | E. | — | 0.1 | |
| 1876. | | | | | | | | | | 9 CAMELOPARDALIS. | | | | | Mean | | | + | 1.40 |
| Jan. | 24 | S. | — | 0.1 | | | | | | Right Ascension, | | | 4 41 44 | Div., Flex., etc. | | | + | 0.25 | |
| Feb. | 2 | P. | + | 0.4 | | | | | | North-Polar Dist., | | | 23 52 15.97 | α AURIGÆ. | | | | | |
| April | 6 | P. | — | 0.2 | | | | | | h. m. s. | | | | | Right Ascension, 5 7 32 | | | | |
| | 8 | F. | — | 0.8 | | | | | | 1876. | | | | | North-Polar Dist., 44 7 50.11 | | | | |
| | 10 | P. | — | 0.9 | | | | | | Mar. | 2 | E. | + | 0.8 | 1876. | | | | |
| | 11 | E. | + | 0.5 | | | | | | July | 5 | P. | — | 0.8 | May | 20 | P. | — | 0.2 |
| | 12 | F. | + | 0.6 | | | | | | Nov. | 24 | S. | — | 2.1 | June | 1 | P. | + | 0.2 |
| | 17 | S. | — | 0.7 | | | | | | 26 | F. | — | 1.9 | | 2 | E. | + | 0.0 | |
| June | 2 | F. | — | 2.2 | | | | | | Dec. | 31 | E. | + | 0.5 | | 3 | F. | + | 0.4 |
| | 28 | P. | — | 1.0 | | | | | | Mean | | | 0.70 | | 28 | P. | + | 0.4 | |
| July | 2 | P. | — | 0.5 | | | | | | Div., Flex., etc. | | | 0.82 | | July | 5 | P. | + | 0.9 |
| Oct. | 18 | S. | — | 0.3 | | | | | | 9 CAMELOPARDALIS (Ref.). | | | | | 10 | P. | — | 0.7 | |
| | 27 | P. | — | 1.3 | | | | | | 1876. | | | | | 11 | F. | — | 1.1 | |
| Nov. | 5 | E. | — | 2.5 | | | | | | Nov. | 24 | S. | — | 0.9 | Oct. | 27 | P. | — | 0.7 |
| | 7 | S. | — | 1.3 | | | | | | Dec. | 31 | E. | — | 0.2 | Dec. | 31 | E. | — | 1.0 |
| | 22 | F. | — | 2.0 | | | | | | Mean | | | 0.63 | Mean | | | — | 0.18 | |
| | 26 | F. | — | 2.1 | | | | | | Div., Flex., etc. | | | 1.29 | Div., Flex., etc. | | | + | 0.39 | |
| | 28 | P. | — | 1.9 | | | | | | ε AURIGÆ. | | | | | α AURIGÆ (Ref.). | | | | |
| Dec. | 3 | E. | — | 0.3 | | | | | | Right Ascension, | | | 4 48 55 | 1876. | | | | | |
| | 7 | E. | — | 2.4 | | | | | | North-Polar Dist., | | | 57 4 55.80 | June | 1 | P. | — | 0.3 | |
| Mean | | | | 0.95 | | | | | | 1876. | | | | | 2 | E. | — | 1.2 | |
| Div., Flex., etc. | | | | 1.50 | | | | | | Jan. | 20 | S. | + | 1.2 | | 3 | F. | + | 0.0 |
| ζ PERSEI (Ref.). | | | | | | | | | | 25 | P. | + | 0.3 | | 28 | P. | — | 0.4 | |
| 1876. | | | | | | | | | | Feb. | 10 | P. | + | 1.1 | July | 5 | P. | — | 0.4 |
| Oct. | 27 | P. | | 0.0 | | | | | | Mar. | 2 | E. | + | 0.3 | 10 | P. | — | 0.3 | |
| Nov. | 5 | F. | — | 1.4 | | | | | | 29 | P. | + | 1.9 | | 11 | F. | — | 1.6 | |
| | 28 | P. | — | 1.1 | | | | | | April | 15 | E. | + | 1.4 | Oct. | 27 | P. | + | 0.1 |
| Mean | | | | 0.83 | | | | | | 17 | S. | + | 1.2 | Dec. | 31 | E. | — | 0.9 | |
| Div., Flex., etc. | | | | 0.84 | | | | | | 27 | E. | + | 0.8 | Mean | | | — | 0.56 | |
| γ ¹ ERIDANI. | | | | | | | | | | May | 15 | P. | + | 1.8 | Div., Flex., etc. | | | + | 1.50 |
| h. m. s. | | | | | | | | | | June | 27 | S. | + | 0.3 | β ORIONIS. | | | | |
| Right Ascension, | | | | 3 52 15 | | | | | | Nov. | 26 | F. | — | 0.3 | Right Ascension, 5 8 35 | | | | |
| North-Polar Dist., | | | | 103 51 44.14 | | | | | | Dec. | 6 | P. | + | 0.1 | North-Polar Dist., 98 20 47.06 | | | | |
| 1876. | | | | | | | | | | 7 | E. | + | 0.7 | 1876. | | | | | |
| Jan. | 24 | S. | — | 0.2 | | | | | | 12 | F. | — | 0.4 | Jan. | 12 | S. | — | 1.0 | |
| Feb. | 2 | P. | + | 0.5 | | | | | | Mean | | | 0.65 | | 25 | P. | — | 1.0 | |
| April | 8 | F. | — | 0.6 | | | | | | Div., Flex., etc. | | | 1.48 | | 26 | E. | — | 0.2 | |
| June | 28 | P. | + | 0.9 | | | | | | α TAURI. | | | | | 31 | F. | + | 0.0 | |
| July | 2 | P. | + | 0.4 | | | | | | Right Ascension, | | | 4 28 48 | Right Ascension, 5 8 35 | | | | | |
| | 5 | P. | — | 0.8 | | | | | | North-Polar Dist., | | | 73 44 29.44 | North-Polar Dist., 98 20 47.06 | | | | | |
| Oct. | 18 | S. | + | 0.6 | | | | | | 1876. | | | | | h. m. s. | | | | |
| Nov. | 7 | S. | — | 1.6 | | | | | | Jan. | 20 | S. | | 0.0 | Right Ascension, 5 8 35 | | | | |
| γ ¹ ERIDANI. | | | | | | | | | | Feb. | 10 | P. | + | 0.2 | North-Polar Dist., 98 20 47.06 | | | | |
| h. m. s. | | | | | | | | | | Mar. | 2 | E. | + | 1.0 | 1876. | | | | |
| Right Ascension, | | | | 3 52 15 | | | | | | 29 | P. | + | 1.4 | Jan. | 12 | S. | — | 1.0 | |
| North-Polar Dist., | | | | 103 51 44.14 | | | | | | April | 10 | P. | + | 0.9 | | 25 | P. | — | 1.0 |
| 1876. | | | | | | | | | | 11 | E. | — | 1.4 | | 26 | E. | — | 0.2 | |
| Jan. | 24 | S. | — | 0.2 | | | | | | 12 | F. | + | 1.1 | | 31 | F. | + | 0.0 | |
| Feb. | 2 | P. | + | 0.5 | | | | | | Mean | | | 0.65 | | | | | | |
| April | 8 | F. | — | 0.6 | | | | | | Div., Flex., etc. | | | 1.48 | | | | | | |
| June | 28 | P. | + | 0.9 | | | | | | α TAURI. | | | | | h. m. s. | | | | |
| July | 2 | P. | + | 0.4 | | | | | | Right Ascension, | | | 4 28 48 | Right Ascension, 5 8 35 | | | | | |
| | 5 | P. | — | 0.8 | | | | | | North-Polar Dist., | | | 73 44 29.44 | North-Polar Dist., 98 20 47.06 | | | | | |
| Oct. | 18 | S. | + | 0.6 | | | | | | 1876. | | | | | h. m. s. | | | | |
| Nov. | 7 | S. | — | 1.6 | | | | | | Jan. | 20 | S. | | 0.0 | Right Ascension, 5 8 35 | | | | |
| γ ¹ ERIDANI. | | | | | | | | | | Feb. | 10 | P. | + | 0.2 | North-Polar Dist., 98 20 47.06 | | | | |
| h. m. s. | | | | | | | | | | Mar. | 2 | E. | + | 1.0 | 1876. | | | | |
| Right Ascension, | | | | 3 52 15 | | | | | | 29 | P. | + | 1.4 | Jan. | 12 | S. | — | 1.0 | |
| North-Polar Dist., | | | | 103 51 44.14 | | | | | | April | 10 | P. | + | 0.9 | | 25 | P. | — | 1.0 |
| 1876. | | | | | | | | | | 11 | E. | — | 1.4 | | 26 | E. | — | 0.2 | |
| Jan. | 24 | S. | — | 0.2 | | | | | | 12 | F. | + | 1.1 | | 31 | F. | + | 0.0 | |
| Feb. | 2 | P. | + | 0.5 | | | | | | Mean | | | 0.65 | | | | | | |
| April | 8 | F. | — | 0.6 | | | | | | Div., Flex., etc. | | | 1.48 | | | | | | |
| June | 28 | P. | + | 0.9 | | | | | | α TAURI. | | | | | h. m. s. | | | | |
| July | 2 | P. | + | 0.4 | | | | | | Right Ascension, | | | 4 28 48 | Right Ascension, 5 8 35 | | | | | |
| | 5 | P. | — | 0.8 | | | | | | North-Polar Dist., | | | 73 44 29.44 | North-Polar Dist., 98 20 47.06 | | | | | |
| Oct. | 18 | S. | + | 0.6 | | | | | | 1876. | | | | | h. m. s. | | | | |
| Nov. | 7 | S. | — | 1.6 | | | | | | Jan. | 20 | S. | | 0.0 | Right Ascension, 5 8 35 | | | | |
| γ ¹ ERIDANI. | | | | | | | | | | Feb. | 10 | P. | + | 0.2 | North-Polar Dist., 98 20 47.06 | | | | |
| h. m. s. | | | | | | | | | | Mar. | 2 | E. | + | 1.0 | 1876. | | | | |
| Right Ascension, | | | | 3 52 15 | | | | | | 29 | P. | + | 1.4 | Jan. | 12 | S. | — | 1.0 | |
| North-Polar Dist., | | | | 103 51 44.14 | | | | | | April | 10 | P. | + | 0.9 | | 25 | P. | — | 1.0 |
| 1876. | | | | | | | | | | 11 | E. | — | 1.4 | | 26 | E. | — | 0.2 | |
| Jan. | 24 | S. | — | 0.2 | | | | | | 12 | F. | + | 1.1 | | 31 | F. | + | 0.0 | |
| Feb. | 2 | P. | + | 0.5 | | | | | | Mean | | | 0.65 | | | | | | |
| April | 8 | F. | — | 0.6 | | | | | | Div., Flex., etc. | | | 1.48 | | | | | | |
| June | 28 | P. | + | 0.9 | | | | | | α TAURI. | | | | | h. m. s. | | | | |
| July | 2 | P. | + | 0.4 | | | | | | Right Ascension, | | | 4 28 48 | Right Ascension, 5 8 35 | | | | | |
| | 5 | P. | — | 0.8 | | | | | | North-Polar Dist., | | | 73 44 29.44 | North-Polar Dist., 98 20 47.06 | | | | | |
| Oct. | 18 | S. | + | 0.6 | | | | | | 1876. | | | | | h. m. s. | | | | |
| Nov. | 7 | S. | — | 1.6 | | | | | | Jan. | 20 | S. | | 0.0 | Right Ascension, 5 8 35 | | | | |
| γ ¹ ERIDANI. | | | | | | | | | | Feb. | 10 | P. | + | 0.2 | North-Polar Dist., 98 20 47.06 | | | | |
| h. m. s. | | | | | | | | | | Mar. | 2 | E. | + | 1.0 | 1876. | | | | |
| Right Ascension, | | | | 3 52 15 | | | | | | 29 | P. | + | 1.4 | Jan. | 12 | S. | — | 1.0 | |
| North-Polar Dist., | | | | 103 51 44.14 | | | | | | April | 10 | P. | + | 0.9 | | 25 | P. | — | 1.0 |
| 1876. | | | | | | | | | | 11 | E. | — | 1.4 | | 26 | E. | — | 0.2 | |
| Jan. | 24 | S. | — | 0.2 | | | | | | 12 | F. | + | 1.1 | | 31 | F. | + | 0.0 | |
| Feb. | 2 | P. | + | 0.5 | | | | | | Mean | | | 0.65 | | | | | | |
| April | 8 | F. | — | 0.6 | | | | | | Div., Flex., etc. | | | 1.48 | | | | | | |
| June | 28 | P. | + | 0.9 | | | | | | α TAURI. | | | | | h. m. s. | | | | |
| July | 2 | P. | + | 0.4 | | | | | | Right Ascension, | | | 4 28 48 | Right Ascension, 5 8 35 | | | | | |
| | 5 | P. | — | 0.8 | | | | | | North-Polar Dist., | | | 73 44 29.44 | North-Polar Dist., 98 20 47.06 | | | | | |
| Oct. | 18 | S. | + | 0.6 | | | | | | 1876. | | | | | h. m | | | | |

[illegible]

γ GEMINORUM—Continued.

| | | | | |
|-------------------|----|----|---|------|
| 1875. | | | | |
| June | 1 | P. | + | 1.2 |
| | 3 | F. | — | 0.5 |
| July | 24 | F. | + | 0.9 |
| | 26 | P. | — | 0.8 |
| Oct. | 9 | P. | — | 0.2 |
| | 27 | P. | — | 0.2 |
| Nov. | 5 | E. | — | 0.4 |
| Dec. | 3 | E. | — | 1.5 |
| | 6 | P. | — | 0.8 |
| | 12 | F. | + | 0.1 |
| | 13 | S. | — | 0.1 |
| | 15 | E. | — | 2.0 |
| | 19 | E. | + | 1.2 |
| | 27 | E. | + | 0.1 |
| Mean | | | + | 0.35 |
| Div., Flex., etc. | | | + | 1.34 |

 γ GEMINORUM (Ref.).

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Jan. | 26 | E. | + | 0.7 |
| Mar. | 2 | E. | + | 2.2 |
| | 6 | E. | + | 3.5 |
| May | 29 | E. | — | 0.4 |
| Dec. | 3 | E. | — | 1.5 |
| Mean | | | + | 0.90 |
| Div., Flex., etc. | | | + | 0.30 |

 α CANIS MAJORIS.

| | |
|--------------------|-----------------|
| Right Ascension, | h. m. s. |
| | 6 39 41 |
| North-Polar Dist., | 106° 32' 50".29 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Jan. | 14 | E. | + | 0.2 |
| | 20 | S. | + | 0.2 |
| | 21 | P. | — | 0.2 |
| Feb. | 2 | P. | — | 0.5 |
| | 10 | P. | + | 0.6 |
| | 17 | S. | — | 0.3 |
| | 18 | P. | + | 0.1 |
| Mar. | 3 | F. | + | 2.1 |
| | 5 | P. | + | 0.0 |
| | 13 | P. | + | 0.7 |
| | 15 | P. | + | 1.9 |
| May | 20 | P. | + | 0.8 |
| | 22 | P. | + | 2.4 |
| | 23 | P. | + | 0.6 |
| June | 1 | P. | — | 0.3 |
| | 3 | F. | — | 0.1 |
| July | 11 | F. | — | 0.1 |
| | 17 | S. | + | 0.8 |
| | 24 | F. | — | 0.3 |
| | 25 | S. | + | 1.2 |
| | 26 | S. | — | 0.7 |
| Oct. | 9 | P. | — | 0.1 |
| | 27 | P. | — | 0.7 |
| Nov. | 5 | E. | — | 0.9 |
| Dec. | 6 | E. | — | 0.4 |
| | 13 | S. | + | 0.6 |
| | 19 | E. | + | 0.4 |
| Mean | | | + | 0.21 |
| Div., Flex., etc. | | | + | 1.80 |

51 CEPHEI.

| | |
|--------------------|---------------|
| Right Ascension, | h. m. s. |
| | 6 41 45 |
| North-Polar Dist., | 2° 45' 59".23 |

| | | | | |
|-------|----|----|---|-----|
| 1876. | | | | |
| Jan. | 12 | S. | — | 1.1 |
| | 14 | E. | — | 0.6 |
| | 24 | S. | — | 2.2 |
| | 26 | E. | — | 1.2 |
| Feb. | 2 | P. | — | 0.9 |
| | 5 | S. | + | 1.0 |
| | 10 | P. | — | 0.8 |

51 CEPHEI—Continued.

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Feb. | 18 | P. | — | 0.3 |
| Mar. | 5 | P. | + | 0.2 |
| | 6 | E. | — | 1.5 |
| | 13 | P. | + | 0.6 |
| Oct. | 9 | P. | — | 1.2 |
| | 10 | S. | — | 1.1 |
| Nov. | 5 | E. | — | 1.8 |
| | 28 | P. | + | 0.1 |
| Dec. | 3 | E. | — | 1.2 |
| | 6 | P. | — | 0.8 |
| | 8 | F. | — | 1.3 |
| Dec. | 12 | F. | — | 0.4 |
| | 27 | E. | — | 0.6 |
| | 31 | E. | — | 0.2 |
| Mean | | | — | 0.73 |
| Div., Flex., etc. | | | + | 0.49 |

51 CEPHEI (Ref.).

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Jan. | 26 | E. | — | 0.3 |
| Mar. | 6 | E. | — | 0.9 |
| Mean | | | — | 0.60 |
| Div., Flex., etc. | | | + | 1.35 |

51 CEPHEI, S. P

| | |
|--------------------|----------------|
| Right Ascension, | h. m. s. |
| | 6 41 45 |
| North-Polar Dist., | 357° 14' 0".77 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| April | 14 | P. | + | 0.1 |
| May | 4 | P. | — | 1.1 |
| June | 1 | P. | — | 0.1 |
| | 26 | E. | + | 0.4 |
| July | 7 | P. | — | 0.5 |
| | 17 | F. | — | 0.5 |
| | 22 | S. | — | 0.0 |
| | 27 | P. | — | 0.6 |
| Aug. | 9 | E. | — | 0.7 |
| | 16 | E. | — | 2.6 |
| Sept. | 4 | S. | — | 1.3 |
| | 25 | P. | — | 0.5 |
| Mean | | | — | 0.62 |
| Div., Flex., etc. | | | + | 0.48 |

 ϵ CANIS MAJORIS.

| | |
|--------------------|-----------------|
| Right Ascension, | h. m. s. |
| | 6 53 45 |
| North-Polar Dist., | 118° 48' 16".30 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Jan. | 25 | P. | — | 1.4 |
| Feb. | 12 | F. | + | 0.1 |
| Mar. | 4 | S. | — | 0.2 |
| | 31 | F. | — | 0.0 |
| April | 1 | S. | — | 0.4 |
| May | 20 | P. | — | 0.2 |
| June | 1 | P. | — | 2.4 |
| July | 24 | F. | — | 0.9 |
| Oct. | 10 | S. | — | 1.0 |
| Dec. | 2 | P. | — | 1.2 |
| Mean | | | — | 0.76 |
| Div., Flex., etc. | | | + | 1.81 |

 δ CANIS MAJORIS.

| | |
|--------------------|-----------------|
| Right Ascension, | h. m. s. |
| | 7 3 21 |
| North-Polar Dist., | 116° 11' 49".67 |

| | | | | |
|-------|----|----|---|-----|
| 1876. | | | | |
| Feb. | 12 | F. | + | 2.6 |
| | 18 | P. | — | 1.1 |

 δ CANIS MAJORIS—Continued.

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Mar. | 4 | S. | + | 0.3 |
| | 31 | F. | + | 3.4 |
| April | 1 | S. | — | 0.6 |
| June | 1 | P. | + | 1.1 |
| Aug. | 14 | F. | + | 1.1 |
| Oct. | 10 | S. | — | 0.5 |
| Dec. | 2 | P. | + | 1.0 |
| Mean | | | + | 0.81 |
| Div., Flex., etc. | | | + | 1.90 |

 δ GEMINORUM.

| | |
|--------------------|----------------|
| Right Ascension, | h. m. s. |
| | 7 12 43 |
| North-Polar Dist., | 67° 47' 27".69 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Jan. | 20 | S. | — | 1.6 |
| Feb. | 12 | F. | + | 4.3 |
| Mar. | 4 | S. | — | 1.2 |
| | 5 | P. | — | 0.8 |
| | 21 | P. | + | 1.0 |
| | 29 | P. | — | 0.6 |
| | 31 | F. | + | 1.0 |
| May | 20 | P. | + | 1.9 |
| Aug. | 14 | F. | — | 0.1 |
| Oct. | 10 | S. | — | 0.6 |
| Dec. | 2 | P. | + | 0.1 |
| Mean | | | + | 0.31 |
| Div., Flex., etc. | | | + | 1.61 |

 δ GEMINORUM (Ref.).

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Jan. | 20 | S. | + | 0.2 |
| Mar. | 5 | P. | + | 1.0 |
| Mean | | | + | 0.60 |
| Div., Flex., etc. | | | + | 0.53 |

 α^2 GEMINORUM.

| | |
|--------------------|----------------|
| Right Ascension, | h. m. s. |
| | 7 26 41 |
| North-Polar Dist., | 57° 50' 29".61 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Jan. | 24 | S. | — | 0.7 |
| | 25 | P. | — | 0.5 |
| Feb. | 17 | S. | — | 1.3 |
| Mar. | 5 | P. | — | 0.4 |
| | 6 | E. | — | 0.0 |
| | 21 | P. | + | 0.9 |
| | 22 | E. | — | 0.1 |
| | 29 | P. | + | 1.4 |
| May | 20 | P. | + | 1.3 |
| | 29 | E. | + | 1.8 |
| June | 2 | E. | + | 4.1 |
| | 27 | F. | + | 0.5 |
| July | 20 | F. | — | 3.6 |
| Aug. | 8 | E. | — | 1.8 |
| | 14 | F. | — | 1.9 |
| | 20 | E. | — | 0.9 |
| Oct. | 9 | P. | — | 0.4 |
| Nov. | 8 | P. | — | 0.8 |
| Dec. | 3 | E. | — | 1.5 |
| | 20 | F. | + | 0.9 |
| | 31 | E. | — | 1.1 |
| Mean | | | — | 0.20 |
| Div., Flex., etc. | | | + | 1.49 |

 α^2 GEMINORUM (Ref.).

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Aug. | 14 | F. | — | 0.4 |
| Div., Flex., etc. | | | + | 0.89 |

 α CANIS MINORIS.

| | |
|--------------------|----------------|
| Right Ascension, | h. m. s. |
| | 7 32 49 |
| North-Polar Dist., | 84° 27' 32".02 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Jan. | 24 | S. | — | 3.1 |
| Feb. | 17 | S. | — | 2.1 |
| | 18 | P. | — | 0.4 |
| Mar. | 6 | E. | + | 0.5 |
| | 21 | P. | — | 1.4 |
| | 22 | E. | — | 0.5 |
| | 29 | P. | — | 1.9 |
| | 31 | F. | — | 2.0 |
| May | 29 | E. | — | 0.5 |
| June | 2 | E. | — | 0.2 |
| | 27 | F. | — | 0.4 |
| | 28 | S. | — | 1.7 |
| July | 20 | F. | — | 3.5 |
| | 26 | P. | — | 1.3 |
| Aug. | 8 | E. | — | 1.9 |
| | 14 | F. | — | 2.3 |
| | 20 | E. | — | 2.3 |
| | 27 | E. | — | 2.9 |
| Oct. | 9 | P. | — | 2.3 |
| Nov. | 8 | P. | — | 1.4 |
| Dec. | 3 | E. | — | 2.1 |
| | 20 | F. | — | 0.6 |
| | 31 | E. | — | 2.3 |
| Mean | | | — | 1.59 |
| Div., Flex., etc. | | | + | 1.82 |

 α CANIS MINORIS (Ref.).

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Jan. | 14 | E. | — | 0.4 |
| | 18 | P. | + | 0.9 |
| Mean | | | + | 0.25 |
| Div., Flex., etc. | | | + | 0.20 |

 β GEMINORUM.

| | |
|--------------------|----------------|
| Right Ascension, | h. m. s. |
| | 7 37 44 |
| North-Polar Dist., | 61° 40' 33".33 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Jan. | 24 | S. | — | 0.7 |
| Feb. | 17 | S. | + | 0.3 |
| Mar. | 6 | E. | + | 1.4 |
| | 21 | P. | + | 1.5 |
| | 22 | E. | + | 1.6 |
| | 29 | P. | + | 0.6 |
| | 31 | F. | + | 1.4 |
| May | 29 | E. | + | 1.8 |
| June | 1 | P. | + | 0.5 |
| | 2 | E. | + | 1.6 |
| July | 24 | F. | — | 0.9 |
| Aug. | 8 | E. | — | 0.3 |
| | 14 | F. | — | 0.1 |
| | 20 | E. | — | 1.8 |
| | 27 | E. | — | 0.2 |
| Oct. | 9 | P. | — | 0.3 |
| Nov. | 8 | P. | — | 0.1 |
| Dec. | 3 | E. | — | 1.2 |
| | 20 | F. | + | 1.4 |
| | 31 | E. | — | 0.9 |
| Mean | | | + | 0.28 |
| Div., Flex., etc. | | | + | 1.56 |

 β GEMINORUM (Ref.).

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| June | 1 | P. | + | 1.2 |
| July | 24 | F. | — | 0.2 |
| Mean | | | + | 0.50 |
| Div., Flex., etc. | | | + | 0.65 |

| ♄ GEMINORUM. | | | | ε HYDRÆ—Continued. | | | | σ² URSÆ MAJORIS (Ref.). | | | | α HYDRÆ. | | | |
|--------------------------|--|--|--|--------------------|----|---|-----|-------------------------|----|---|-----|-------------------------|--|--|--|
| h. m. s. | | | | 1876. | | | | 1876. | | | | h. m. s. | | | |
| Right Ascension, | | | | April 2 | P. | — | 1.7 | Jan. 14 | E. | — | 4.2 | Right Ascension, | | | |
| North-Polar Dist., | | | | 5 | S. | — | 1.0 | April 2 | P. | — | 2.2 | 9 21 30 | | | |
| 1876. | | | | 6 | P. | — | 1.7 | 18 | P. | — | 2.2 | North-Polar Dist., | | | |
| Nov. 28 | | | | 10 | P. | — | 0.6 | Nov. 8 | P. | — | 2.9 | 98 7 18.88 | | | |
| Div., Flex., etc., . . . | | | | 15 | E. | — | 0.8 | 28 | P. | — | 3.4 | 1876. | | | |
| + 1.4 | | | | 18 | P. | — | 1.0 | Mean | | | | Jan. 12 | | | |
| + 1.58 | | | | 22 | P. | — | 0.3 | Div., Flex., etc. . . . | | | | S. | | | |
| 3 URSÆ MAJORIS. | | | | July 3 | P. | + | 0.3 | 2.98 | | | | Mar. 9 | | | |
| h. m. s. | | | | Sept. 3 | S. | + | 0.3 | 1.23 | | | | P. | | | |
| Right Ascension, | | | | Oct. 10 | S. | + | 1.6 | σ² URSÆ MAJORIS, S. P. | | | | 13 | | | |
| North-Polar Dist., | | | | Nov. 8 | P. | — | 0.3 | h. m. s. | | | | 21 | | | |
| 21 9 50.43 | | | | 28 | P. | + | 0.1 | 8 59 27 | | | | P. | | | |
| 1876. | | | | Mean | | | | North-Polar Dist., | | | | 18 | | | |
| Mar. 9 | | | | 0.64 | | | | 337 38 7.14 | | | | P. | | | |
| April 1 | | | | 1.85 | | | | 1876. | | | | 10 | | | |
| Dec. 12 | | | | 0.0 | | | | July 7 | | | | P. | | | |
| Mean | | | | ε HYDRÆ (Ref.). | | | | P. | | | | + 1.4 | | | |
| + 0.20 | | | | 1876. | | | | Oct. 12 | | | | + 0.7 | | | |
| Div., Flex., etc. . . . | | | | Jan. 14 | | | | 24 | | | | + 2.1 | | | |
| + 0.87 | | | | 20 | | | | Mean | | | | + 1.40 | | | |
| 3 URSÆ MAJORIS (Ref.). | | | | Mar. 22 | | | | Div., Flex., etc. . . . | | | | + 0.21 | | | |
| 1876. | | | | 5 | | | | κ CANCRI. | | | | h. m. s. | | | |
| Mar. 9 | | | | 15 | | | | Right Ascension, | | | | 9 1 2 | | | |
| April 1 | | | | 8 | | | | North-Polar Dist., | | | | 78 50 1.43 | | | |
| Mean | | | | + 1.93 | | | | 1876. | | | | Mar. 22 | | | |
| + 1.20 | | | | 0.14 | | | | July 7 | | | | E. | | | |
| 3 URSÆ MAJORIS, S. P. | | | | ι URSÆ MAJORIS. | | | | P. | | | | — | | | |
| h. m. s. | | | | Right Ascension, | | | | + 1.1 | | | | + 1.80 | | | |
| Right Ascension, | | | | 8 50 43 | | | | Div., Flex., etc. . . . | | | | + 0.30 | | | |
| North-Polar Dist., | | | | 41 28 23.52 | | | | κ CANCRI (Ref.). | | | | h. m. s. | | | |
| 1876. | | | | 1876. | | | | 1876. | | | | 9 23 29 | | | |
| April 15 | | | | April 15 | | | | Mar. 22 | | | | North-Polar Dist., | | | |
| E. | | | | 18 | | | | E. | | | | 19 37 35.94 | | | |
| — 0.4 | | | | P. | | | | + 2.6 | | | | 1876. | | | |
| — 0.1 | | | | 30 | | | | Div., Flex., etc. . . . | | | | Mar. 4 | | | |
| — 0.1 | | | | June 27 | | | | <ι URSÆ MAJORIS. | | | | S. | | | |
| + 0.1 | | | | P. | | | | Right Ascension, | | | | — | | | |
| + 0.2 | | | | July 6 | | | | 9 19 15 | | | | 2.8 | | | |
| — 0.3 | | | | Aug. 14 | | | | North-Polar Dist., | | | | Mean | | | |
| — 0.9 | | | | Nov. 8 | | | | 8 7 41.42 | | | | — | | | |
| — 0.4 | | | | P. | | | | 1876. | | | | 2.00 | | | |
| — 1.6 | | | | Dec. 12 | | | | Mar. 22 | | | | Div., Flex., etc. . . . | | | |
| Mean | | | | — 0.39 | | | | E. | | | | + 0.86 | | | |
| Div., Flex., etc. . . . | | | | + 0.56 | | | | + 0.4 | | | | 1876. | | | |
| ι URSÆ MAJORIS (Ref.). | | | | 1876. | | | | + 0.1 | | | | Mar. 4 | | | |
| 1876. | | | | April 15 | | | | + 0.6 | | | | Dec. 12 | | | |
| April 15 | | | | E. | | | | Mean | | | | — | | | |
| — 3.0 | | | | 18 | | | | + 0.47 | | | | 1.2 | | | |
| — 2.0 | | | | P. | | | | <δ URSÆ MAJORIS, S. P. | | | | h. m. s. | | | |
| — 1.7 | | | | July 6 | | | | Right Ascension, | | | | 9 23 29 | | | |
| — 2.9 | | | | Aug. 14 | | | | North-Polar Dist., | | | | 240 22 24.06 | | | |
| — 2.2 | | | | Nov. 8 | | | | 1876. | | | | 1876. | | | |
| — 2.6 | | | | P. | | | | Mar. 22 | | | | July 7 | | | |
| — 2.5 | | | | Dec. 12 | | | | E. | | | | P. | | | |
| Mean | | | | — 2.41 | | | | + 0.4 | | | | + 0.1 | | | |
| Div., Flex., etc. . . . | | | | + 1.47 | | | | + 0.41 | | | | + 0.4 | | | |
| σ² URSÆ MAJORIS. | | | | 1876. | | | | Mean | | | | + 0.9 | | | |
| Right Ascension, | | | | h. m. s. | | | | + 0.75 | | | | + 0.21 | | | |
| 8 59 27 | | | | North-Polar Dist., | | | | <θ URSÆ MAJORIS. | | | | h. m. s. | | | |
| 22 21 52.86 | | | | 1876. | | | | Right Ascension, | | | | 9 24 33 | | | |
| 1876. | | | | Jan. 14 | | | | North-Polar Dist., | | | | 37 45 31.82 | | | |
| April 2 | | | | E. | | | | 1876. | | | | 1876. | | | |
| — 3.8 | | | | P. | | | | July 7 | | | | 3 | | | |
| — 1.2 | | | | 5 | | | | P. | | | | P. | | | |
| — 0.6 | | | | Nov. 18 | | | | + 1.9 | | | | + 0.2 | | | |
| — 1.4 | | | | P. | | | | + 2.3 | | | | + 0.9 | | | |
| — 2.5 | | | | 28 | | | | Mean | | | | + 0.55 | | | |
| — 1.8 | | | | Mean | | | | + 0.53 | | | | Div., Flex., etc. . . . | | | |
| Mean | | | | — 1.88 | | | | Div., Flex., etc. . . . | | | | + 0.54 | | | |
| Div., Flex., etc. . . . | | | | + 0.82 | | | | Div., Flex., etc. . . . | | | | + 0.54 | | | |

[illegible]

| | | | | | | | | | | | | | | | |
|-------------------------------|-----------------|---|------|---|----------------|-----|------|---------------------------|----------------|---|------|---------------------------|----------------|-----|------|
| <i>l</i> LEONIS (Ref.). | | | | <i>a</i> URSÆ MAJORIS, S. P.—Continued. | | | | <i>τ</i> LEONIS. | | | | <i>ν</i> LEONIS, (Ref.). | | | |
| 1876. | | | " | 1876. | | | " | Right Ascension, | h. m. s. | | | 1876. | | | " |
| Jan. 25 | P. | + | 2.0 | Oct. 12 | P. | + | 2.6 | 11 21 34 | | | | Mar. 23 | F. | + | 1.1 |
| Mar. 6 | E. | + | 2.1 | 13 | F. | — | 1.9 | | | | | Dec. 26 | P. | | 0.0 |
| April 10 | P. | + | 1.6 | 18 | S. | + | 4.0 | North-Polar Dist., | 86° 27' 39".26 | | | Mean | | + | 0.55 |
| 19 | E. | + | 4.3 | 27 | P. | + | 1.3 | | | | | Div., Flex., etc. | | + | 0.39 |
| 29 | S. | + | 2.2 | Nov. 7 | S. | + | 0.5 | 1876. | | | | | | | |
| May 4 | P. | + | 1.9 | Mean | | + | 0.96 | Mar. 5 | P. | + | 0.8 | | | | |
| Dec. 5 | S. | + | 2.3 | Div., Flex., etc. | | + | 0.14 | April 6 | P. | — | 0.7 | | | | |
| 12 | F. | + | 1.3 | | | | | May 29 | E. | + | 0.5 | | | | |
| 13 | S. | + | 4.2 | | | | | Mean | | + | 0.20 | | | | |
| Mean | | + | 2.43 | <i>δ</i> LEONIS. | | | | Div., Flex., etc. | | + | 1.78 | | | | |
| Div., Flex., etc. | | + | 0.24 | | | | | | | | | <i>β</i> LEONIS. | | | |
| <i>a</i> URSÆ MAJORIS. | | | | | | | | | | | | | | | |
| Right Ascension, | h. m. s. | | | Right Ascension, | h. m. s. | | | <i>τ</i> LEONIS (Ref.). | | | | Right Ascension, | h. m. s. | | |
| 10 56 4 | | | | North-Polar Dist., | 68° 47' 49".16 | | | 1876. | | | | North-Polar Dist., | 74° 44' 4".23 | | |
| North-Polar Dist., | 27° 34' 48".73 | | | 1876. | | | | April 6 | P. | + | 1.2 | 1876. | | | |
| 1876. | | | " | Jan. 14 | E. | + | 1.3 | Div., Flex., etc. | | + | 0.34 | Jan. 14 | E. | + | 1.3 |
| Jan. 14 | E. | — | 0.7 | 25 | P. | — | 0.9 | | | | | Mar. 4 | S. | + | 0.4 |
| 25 | P. | — | 0.6 | Feb. 2 | P. | — | 0.1 | <i>λ</i> DRACONIS. | | | | 5 | P. | + | 0.6 |
| Feb. 19 | E. | + | 1.8 | 10 | P. | 0.0 | | Right Ascension, | h. m. s. | | | 6 | E. | + | 1.4 |
| Mar. 4 | S. | — | 0.5 | 19 | E. | — | 1.8 | 11 24 7 | | | | 9 | P. | 0.0 | |
| 5 | P. | — | 1.8 | Mar. 4 | S. | + | 1.0 | North-Polar Dist., | 19° 59' 6".83 | | | 23 | F. | + | 0.4 |
| 6 | E. | + | 1.1 | 6 | E. | + | 0.2 | | | | | 31 | F. | + | 4.1 |
| April 6 | P. | — | 1.1 | 22 | E. | + | 0.6 | 1876. | | | | 1 | S. | — | 0.8 |
| 29 | S. | — | 0.2 | April 1 | S. | + | 0.2 | April 9 | S. | — | 2.3 | 8 | F. | 0.0 | |
| May 4 | P. | + | 0.7 | 6 | P. | — | 1.1 | 19 | E. | — | 2.2 | 10 | P. | 0.0 | |
| 10 | E. | — | 1.0 | 8 | F. | — | 0.6 | Sept. 19 | P. | — | 3.3 | 12 | F. | + | 0.7 |
| 29 | E. | — | 0.7 | May 4 | P. | + | 0.5 | 8 | P. | — | 2.6 | 18 | P. | + | 0.3 |
| Aug. 9 | E. | — | 2.6 | 29 | E. | 0.0 | | 11 | P. | — | 4.0 | 19 | E. | + | 0.2 |
| 21 | E. | — | 1.1 | July 21 | F. | 0.0 | | 12 | F. | — | 3.8 | 20 | F. | — | 0.3 |
| Sept. 14 | F. | — | 1.7 | 27 | P. | + | 0.7 | 18 | P. | — | 1.8 | 22 | P. | — | 0.3 |
| 27 | S. | — | 2.3 | Oct. 1 | S. | — | 1.8 | 23 | E. | — | 3.4 | 25 | S. | — | 0.6 |
| 28 | P. | — | 1.7 | 2 | P. | — | 1.1 | Mean | | — | 2.77 | 26 | P. | + | 0.5 |
| Oct. 1 | S. | — | 1.1 | 6 | P. | — | 0.2 | Div., Flex., etc. | | + | 0.87 | 29 | E. | + | 1.7 |
| 2 | P. | — | 0.8 | 8 | P. | — | 0.9 | <i>λ</i> DRACONIS (Ref.). | | | | Oct. 1 | S. | + | 0.6 |
| 8 | P. | — | 1.6 | 11 | P. | — | 0.6 | 1876. | | | | 2 | P. | + | 1.2 |
| 11 | P. | — | 0.6 | 18 | P. | — | 0.7 | April 9 | S. | — | 2.2 | 8 | P. | + | 0.3 |
| Dec. 5 | S. | — | 2.9 | 23 | E. | — | 1.7 | 19 | E. | — | 2.5 | 12 | F. | + | 0.2 |
| 13 | S. | — | 2.4 | Nov. 9 | E. | + | 1.1 | Mean | | — | 2.35 | 18 | P. | — | 0.6 |
| 26 | P. | — | 1.1 | Dec. 5 | S. | — | 0.8 | Div., Flex., etc. | | + | 1.21 | 23 | E. | + | 0.6 |
| Mean | | — | 1.00 | Mean | | — | 0.11 | | | | | 26 | P. | + | 0.2 |
| Div., Flex., etc. | | + | 0.83 | Div., Flex., etc. | | + | 1.60 | | | | | 31 | E. | + | 0.1 |
| <i>a</i> URSÆ MAJORIS (Ref.). | | | | <i>δ</i> LEONIS (Ref.). | | | | <i>λ</i> DRACONIS, S. P. | | | | Nov. 9 | E. | + | 1.6 |
| 1876. | | | " | 1876. | | | " | Right Ascension, | h. m. s. | | | Dec. 13 | S. | — | 0.7 |
| Jan. 14 | E. | — | 1.4 | Feb. 19 | E. | + | 1.8 | 11 24 7 | | | | Mean | | + | 0.49 |
| 25 | P. | — | 1.9 | Oct. 2 | P. | + | 1.4 | North-Polar Dist., | 34° 0' 53".17 | | | Div., Flex., etc. | | + | 1.66 |
| Feb. 19 | E. | — | 1.8 | Mean | | + | 1.60 | 1876. | | | | | | | |
| Mar. 4 | S. | — | 1.4 | Div., Flex., etc. | | + | 0.50 | Oct. 3 | P. | + | 2.2 | | | | |
| 5 | P. | — | 1.7 | | | | | 11 | F. | + | 2.8 | | | | |
| 6 | E. | — | 0.4 | <i>δ</i> CRATERIS. | | | | 12 | P. | + | 2.5 | | | | |
| April 6 | P. | — | 0.7 | | | | | 18 | S. | + | 2.9 | | | | |
| 29 | S. | — | 1.3 | Right Ascension, | h. m. s. | | | 27 | P. | + | 2.1 | | | | |
| May 4 | P. | — | 2.0 | 11 13 9 | | | | Mean | | + | 2.50 | | | | |
| 10 | E. | — | 2.9 | North-Polar Dist., | 104° 6' 27".16 | | | Div., Flex., etc. | | + | 0.21 | | | | |
| 29 | E. | — | 1.9 | 1876. | | | " | | | | | | | | |
| Aug. 9 | E. | — | 0.9 | Jan. 14 | E. | — | 0.2 | <i>ν</i> LEONIS. | | | | Right Ascension, | h. m. s. | | |
| 21 | E. | — | 3.2 | 25 | P. | — | 0.8 | Right Ascension, | h. m. s. | | | 11 47 15 | | | |
| Sept. 27 | S. | — | 2.1 | Feb. 2 | P. | + | 0.8 | 11 30 36 | | | | North-Polar Dist., | 35° 36' 57".03 | | |
| 28 | P. | — | 1.9 | 10 | P. | 0.0 | | 90° 8' 20".71 | | | | | | | |
| Oct. 2 | P. | — | 3.5 | Mar. 4 | S. | — | 0.1 | 1876. | | | | 1876. | | | " |
| 8 | P. | — | 1.8 | 6 | E. | + | 1.9 | Mar. 23 | F. | — | 2.2 | April 19 | E. | + | 0.8 |
| 11 | P. | — | 1.3 | 22 | E. | + | 0.6 | May 29 | E. | + | 0.3 | 25 | S. | + | 1.8 |
| Dec. 5 | S. | — | 0.2 | April 1 | S. | — | 1.2 | Oct. 2 | P. | — | 1.1 | 26 | P. | + | 0.7 |
| 13 | S. | — | 2.4 | 6 | P. | — | 0.3 | Nov. 9 | E. | + | 0.3 | May 29 | E. | — | 0.1 |
| 26 | P. | — | 1.8 | 8 | F. | — | 1.1 | Dec. 12 | F. | — | 1.5 | Aug. 9 | E. | — | 0.3 |
| Mean | | — | 1.74 | 10 | P. | + | 0.4 | 26 | P. | — | 1.0 | 21 | E. | — | 0.3 |
| Div., Flex., etc. | | + | 1.40 | 18 | P. | — | 1.3 | Mean | | — | 1.00 | 28 | E. | — | 0.9 |
| <i>a</i> URSÆ MAJORIS, S. P. | | | | 22 | P. | — | 0.3 | Div., Flex., etc. | | + | 1.86 | Sept. 28 | P. | — | 0.4 |
| Right Ascension, | h. m. s. | | | May 4 | P. | + | 0.8 | | | | | Oct. 2 | P. | + | 0.3 |
| 10 56 4 | | | | 29 | E. | — | 0.4 | | | | | 8 | P. | — | 1.6 |
| North-Polar Dist., | 332° 25' 11".27 | | | Nov. 9 | E. | — | 0.1 | | | | | 12 | F. | + | 1.1 |
| 1876. | | | " | Dec. 5 | S. | — | 0.7 | | | | | 5 | S. | — | 0.8 |
| Oct. 3 | P. | + | 0.6 | Mean | | — | 0.12 | | | | | 12 | F. | — | 1.6 |
| 11 | F. | — | 0.4 | Div., Flex., etc. | | + | 1.70 | | | | | | | | |

γ URSE MAJORIS (Ref.).

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| April | 19 | E. | — | 1.4 |
| | 26 | P. | — | 1.4 |
| Aug. | 9 | E. | — | 1.9 |
| | 21 | E. | — | 1.4 |
| | 28 | E. | — | 1.2 |
| Oct. | 12 | F. | — | 2.8 |
| Dec. | 5 | S. | — | 0.4 |
| | 12 | F. | — | 2.4 |
| Mean | | | — | 1.61 |
| Div., Flex., etc. | | | + | 1.40 |

α VIRGINIS.

| | |
|--------------------|----------------|
| Right Ascension, | h. m. s. |
| | 11 58 54 |
| North-Polar Dist., | 80° 34' 40".88 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Mar. | 5 | P. | + | 1.0 |
| April | 15 | E. | — | 1.4 |
| | 26 | P. | — | 0.6 |
| May | 29 | E. | — | 0.0 |
| Oct. | 12 | F. | — | 5.7 |
| Nov. | 3 | P. | — | 2.0 |
| Mean | | | — | 1.45 |
| Div., Flex., etc. | | | + | 1.87 |

α VIRGINIS (Ref.).

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| April | 15 | E. | + | 2.6 |
| | 26 | P. | + | 1.0 |
| Mean | | | + | 1.80 |
| Div., Flex., etc. | | | + | 0.17 |

4 DRACONIS.

| | |
|--------------------|----------------|
| Right Ascension, | h. m. s. |
| | 12 6 22 |
| North-Polar Dist., | 11° 41' 42".38 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| May | 29 | E. | — | 2.0 |
| Oct. | 2 | P. | — | 3.4 |
| Nov. | 3 | P. | — | 2.9 |
| Dec. | 26 | P. | — | 2.0 |
| Mean | | | — | 2.58 |
| Div., Flex., etc. | | | + | 0.50 |

4 DRACONIS (Ref.).

| | | | | |
|-------------------|----|--|---|------|
| 1876. | | | | |
| Dec. | 26 | | — | 3.3 |
| Div., Flex., etc. | | | + | 1.20 |

4 DRACONIS, S. P.

| | |
|--------------------|-----------------|
| Right Ascension, | h. m. s. |
| | 12 6 22 |
| North-Polar Dist., | 348° 18' 17".62 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Oct. | 3 | P. | + | 2.7 |
| | 12 | P. | + | 1.6 |
| | 27 | P. | + | 2.2 |
| Mean | | | + | 2.17 |
| Div., Flex., etc. | | | + | 0.42 |

η VIRGINIS.

| | |
|--------------------|----------------|
| Right Ascension, | h. m. s. |
| | 12 13 34 |
| North-Polar Dist., | 89° 58' 38".41 |

η VIRGINIS—Continued.

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Feb. | 16 | F. | — | 0.3 |
| Mar. | 3 | F. | — | 1.7 |
| | 5 | P. | + | 0.6 |
| April | 4 | F. | — | 0.8 |
| | 6 | P. | — | 1.4 |
| | 22 | P. | + | 0.2 |
| | 25 | S. | + | 0.7 |
| May | 23 | S. | — | 1.3 |
| June | 1 | P. | + | 0.1 |
| | 2 | E. | + | 0.7 |
| Oct. | 23 | E. | — | 0.1 |
| | 31 | E. | + | 1.3 |
| Nov. | 3 | P. | — | 2.4 |
| | 7 | P. | — | 2.3 |
| Dec. | 13 | S. | — | 1.1 |
| | 26 | P. | — | 0.3 |
| Mean | | | — | 0.51 |
| Div., Flex., etc. | | | + | 1.86 |

β CORVI.

| | |
|--------------------|-----------------|
| Right Ascension, | h. m. s. |
| | 12 27 56 |
| North-Polar Dist., | 112° 42' 37".03 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Feb. | 12 | F. | + | 4.0 |
| Mar. | 5 | P. | + | 1.7 |
| May | 23 | S. | + | 0.1 |
| | 31 | S. | + | 0.3 |
| June | 2 | E. | + | 0.6 |
| Nov. | 3 | P. | — | 3.3 |
| | 7 | P. | — | 0.9 |
| Dec. | 26 | P. | + | 0.3 |
| Mean | | | + | 0.35 |
| Div., Flex., etc. | | | + | 1.88 |

κ DRACONIS.

| | |
|--------------------|----------------|
| Right Ascension, | h. m. s. |
| | 12 28 11 |
| North-Polar Dist., | 19° 31' 42".48 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Oct. | 2 | P. | — | 2.5 |
| | 18 | P. | — | 0.4 |
| | 23 | E. | — | 4.6 |
| | 26 | P. | — | 1.8 |
| Nov. | 3 | P. | — | 2.9 |
| Mean | | | — | 2.44 |
| Div., Flex., etc. | | | + | 0.86 |

κ DRACONIS, S. P.

| | |
|--------------------|-----------------|
| Right Ascension, | h. m. s. |
| | 12 28 11 |
| North-Polar Dist., | 340° 28' 17".52 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Sept. | 29 | P. | + | 0.6 |
| Oct. | 18 | S. | + | 4.5 |
| Dec. | 6 | E. | + | 0.5 |
| | 21 | S. | + | 2.7 |
| Mean | | | + | 2.08 |
| Div., Flex., etc. | | | + | 0.21 |

32² CAMELOPARDALIS.

| | |
|--------------------|---------------|
| Right Ascension, | h. m. s. |
| | 12 48 14 |
| North-Polar Dist., | 5° 54' 48".63 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| May | 1 | E. | — | 2.0 |
| | 29 | E. | — | 2.4 |
| June | 2 | E. | — | 3.8 |
| Mean | | | — | 2.73 |
| Div., Flex., etc. | | | + | 0.37 |

32² CAMELOPARDALIS (Ref.).

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| May | 29 | E. | + | 0.2 |
| Div., Flex., etc. | | | + | 1.45 |

32² CAMELOPARDALIS, S. P.

| | |
|--------------------|----------------|
| Right Ascension, | h. m. s. |
| | 12 48 14 |
| North-Polar Dist., | 354° 5' 11".37 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Sept. | 29 | P. | + | 1.0 |
| Oct. | 3 | P. | + | 1.9 |
| Nov. | 29 | E. | + | 0.4 |
| Dec. | 15 | E. | + | 2.7 |
| | 19 | E. | + | 3.3 |
| | 26 | P. | — | 2.6 |
| Mean | | | + | 1.12 |
| Div., Flex., etc. | | | + | 0.51 |

12 CANUM VENATICORUM.

| | |
|--------------------|---------------|
| Right Ascension, | h. m. s. |
| | 12 50 14 |
| North-Polar Dist., | 51° 0' 41".15 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Feb. | 12 | F. | + | 0.6 |
| Mar. | 5 | P. | — | 0.2 |
| | 9 | P. | + | 0.4 |
| | 13 | P. | + | 0.2 |
| | 21 | P. | + | 0.8 |
| | 23 | F. | — | 1.0 |
| | 31 | F. | — | 0.1 |
| April | 5 | S. | + | 0.2 |
| | 6 | P. | — | 0.8 |
| | 9 | S. | + | 1.4 |
| | 10 | P. | — | 0.9 |
| | 22 | P. | — | 0.2 |
| | 26 | P. | + | 0.8 |
| | 29 | S. | — | 0.4 |
| May | 3 | S. | + | 0.2 |
| | 4 | P. | + | 0.3 |
| | 23 | S. | — | 1.5 |
| | 27 | S. | + | 0.3 |
| | 31 | S. | — | 0.3 |
| June | 1 | P. | + | 0.8 |
| | 2 | E. | — | 1.0 |
| Aug. | 9 | E. | — | 0.6 |
| | 26 | F. | — | 1.6 |
| | 28 | E. | — | 0.7 |
| Sept. | 4 | S. | + | 0.2 |
| Oct. | 23 | E. | — | 1.1 |
| | 26 | P. | — | 0.2 |
| Nov. | 1 | F. | — | 1.5 |
| | 3 | P. | — | 0.6 |
| | 7 | P. | — | 1.1 |
| | 8 | E. | — | 1.0 |
| | 9 | S. | — | 1.4 |
| | 12 | E. | — | 2.7 |
| | 26 | P. | + | 1.6 |
| Mean | | | — | 0.33 |
| Div., Flex., etc. | | | + | 0.90 |

θ VIRGINIS.

| | |
|--------------------|----------------|
| Right Ascension, | h. m. s. |
| | 13 3 32 |
| North-Polar Dist., | 94° 52' 34".55 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Feb. | 12 | F. | — | 0.3 |
| Mar. | 9 | P. | — | 0.1 |
| | 23 | F. | — | 1.3 |
| April | 6 | P. | — | 0.4 |
| | 8 | F. | + | 0.5 |
| | 20 | F. | — | 0.2 |
| May | 13 | E. | — | 0.2 |
| Mean | | | — | 0.26 |
| Div., Flex., etc. | | | + | 1.61 |

θ VIRGINIS (Ref.).

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| May | 13 | E. | + | 1.3 |
| Div., Flex., etc. | | | + | 0.41 |

α VIRGINIS.

| | |
|--------------------|-----------------|
| Right Ascension, | h. m. s. |
| | 13 18 40 |
| North-Polar Dist., | 100° 30' 47".50 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Feb. | 16 | F. | + | 0.4 |
| Mar. | 5 | P. | + | 0.8 |
| | 9 | P. | + | 0.8 |
| | 13 | P. | + | 1.5 |
| | 23 | F. | + | 0.4 |
| | 31 | F. | + | 1.5 |
| April | 1 | S. | — | 2.1 |
| | 4 | F. | — | 1.1 |
| | 9 | S. | — | 0.8 |
| | 15 | E. | + | 1.0 |
| | 19 | E. | + | 1.3 |
| | 20 | F. | + | 0.4 |
| | 22 | P. | + | 0.9 |
| May | 1 | E. | + | 0.8 |
| | 4 | P. | + | 0.3 |
| | 13 | E. | + | 0.2 |
| | 27 | S. | + | 0.9 |
| | 31 | S. | — | 0.4 |
| June | 29 | P. | + | 0.6 |
| Aug. | 9 | E. | — | 0.8 |
| | 21 | E. | — | 0.0 |
| Sept. | 2 | F. | — | 1.0 |
| | 4 | S. | — | 1.1 |
| Oct. | 26 | P. | — | 0.6 |
| Nov. | 3 | P. | — | 1.5 |
| | 8 | E. | — | 1.0 |
| | 12 | E. | — | 0.8 |
| | 23 | S. | — | 1.2 |
| | 26 | P. | — | 1.5 |
| Mean | | | — | 0.07 |
| Div., Flex., etc. | | | + | 1.67 |

α VIRGINIS (Ref.).

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Dec. | 26 | P. | + | 1.9 |
| Div., Flex., etc. | | | + | 0.19 |

ζ VIRGINIS.

| | |
|--------------------|----------------|
| Right Ascension, | h. m. s. |
| | 13 28 23 |
| North-Polar Dist., | 89° 57' 39".27 |

| | | | | |
|-------|----|----|---|-----|
| 1876. | | | | |
| Feb. | 16 | F. | — | 1.3 |
| Mar. | 5 | P. | + | 0.2 |
| | 9 | P. | — | 0.0 |
| | 13 | P. | — | 0.7 |
| April | 1 | S. | — | 0.9 |
| | 5 | S. | — | 0.0 |
| | 6 | P. | — | 1.5 |
| | 9 | S. | — | 1.3 |
| | 10 | P. | — | 0.3 |
| | 15 | E. | — | 0.1 |
| | 25 | S. | + | 1.6 |
| | 26 | P. | + | 0.6 |
| May | 1 | E. | + | 0.6 |
| | 13 | E. | + | 0.6 |
| | 27 | S. | + | 1.3 |
| | 31 | S. | + | 1.8 |
| June | 1 | P. | — | 0.4 |
| July | 26 | S. | + | 0.2 |
| Aug. | 21 | E. | — | 0.5 |
| | 26 | F. | + | 0.7 |
| | 30 | F. | + | 0.6 |
| Sept. | 2 | F. | + | 0.9 |
| | 4 | S. | + | 0.7 |
| Nov. | 7 | P. | — | 1.1 |
| | 8 | E. | + | 0.4 |

| | | | | | | | | | | | | | | | | |
|-----------------------------|-------------|----|-------|---------------------------|----|----|-------|----------------------------|----|-------|----------|---------------------------|--------------|----|-------|-----|
| ζ VIRGINIS—Continued. | | | | η BOOTIS—Continued. | | | | α BOOTIS—Continued. | | | | 5 URSÆ MINORIS (Ref.). | | | | |
| 1876. | | | | 1876. | | | | 1876. | | | | 1876. | | | | |
| Nov. | 9 | E. | + 3.0 | June | 1 | P. | + 0.0 | Nov. | 7 | P. | — 0.3 | Mar. | 5 | P. | — 3.5 | |
| | 23 | S. | — 0.7 | | 20 | P. | + 0.2 | | 8 | E. | + 0.2 | April | 12 | F. | — 3.9 | |
| | | | | July | 26 | S. | + 1.5 | | 21 | F. | — 2.3 | | 20 | F. | — 3.8 | |
| Mean | | + | 0.16 | Aug. | 21 | E. | + 1.1 | | 23 | S. | + 0.5 | May | 31 | S. | — 1.6 | |
| Div., Flex., etc. | | + | 1.86 | | 26 | F. | + 0.9 | | 24 | E. | — 1.0 | June | 1 | P. | — 2.7 | |
| η URSÆ MAJORIS. | | | | | 30 | F. | + 1.6 | Dec. | 5 | P. | + 0.1 | | | | | |
| | | | | Sept. | 2 | F. | — 0.5 | Mean | | + | 0.54 | Mean | | — | 3.10 | |
| Right Ascension, | h. m. s. | | | | 20 | S. | — 0.8 | Div., Flex., etc. | | + | 1.61 | Div., Flex., etc. | | + | 1.28 | |
| 13 42 39 | | | | Nov. | 1 | F. | — 0.9 | α BOOTIS (Ref.) | | | | 5 URSÆ MINORIS, S. P. | | | | |
| North-Polar Dist., | 40 4 2.14 | | | | 8 | E. | — 0.3 | 1876. | | | " | Right Ascension, | h. m. s. | | | |
| | | | | | 23 | S. | + 0.1 | Mar. | 5 | P. | + 2.1 | 14 27 49 | | | | |
| 1876. | | | " | Mean | | + | 0.09 | 9 | P. | + | 2.2 | North-Polar Dist., | 346 14 48.35 | | | |
| Mar. | 9 | P. | — 0.3 | Div., Flex., etc. | | + | 1.61 | April | 1 | S. | + 2.4 | 1876. | | | " | |
| May | 1 | E. | + 0.5 | η BOOTIS (Ref.). | | | | 22 | P. | + | 1.9 | Oct. | 3 | P. | + 1.7 | |
| June | 1 | P. | + 0.1 | 1876. | | | " | May | 29 | E. | + 1.6 | 12 | P. | + | 1.6 | |
| | 20 | P. | — 1.4 | May | 29 | E. | + 0.5 | 1 | P. | + | 1.9 | 31 | S. | + | 1.5 | |
| July | 26 | S. | + 0.2 | Div., Flex., etc. | | + | 0.36 | June | 5 | P. | + 1.6 | Dec. | 5 | S. | + 1.9 | |
| Oct. | 9 | P. | — 0.9 | α DRACONIS. | | | | 27 | P. | + | 0.7 | 6 | P. | + | 0.3 | |
| | 23 | E. | — 1.1 | | | | | Oct. | 3 | P. | + 1.5 | 21 | S. | + | 2.4 | |
| | 26 | P. | — 0.5 | | | | | 9 | P. | + | 0.4 | | | | | |
| | 31 | E. | — 2.1 | | | | | 12 | P. | + | 1.1 | Mean | | + | 1.57 | |
| Nov. | 1 | F. | — 0.9 | | | | | Nov. | 7 | P. | + 1.3 | Div., Flex., etc. | | + | 0.33 | |
| | 7 | P. | — 0.8 | | | | | 8 | E. | + | 1.1 | ϵ BOOTIS. | | | | |
| | 8 | E. | — 0.2 | | | | | 23 | S. | + | 0.8 | Right Ascension, | h. m. s. | | | |
| | 12 | E. | — 1.6 | | | | | 24 | E. | — 1.6 | 14 39 34 | | | | | |
| | 23 | S. | — 0.1 | | | | | Dec. | 5 | P. | + 1.8 | North-Polar Dist., | 62 24 6.62 | | | |
| | 24 | E. | — 1.0 | | | | | Mean | | + | 1.30 | 1876. | | | " | |
| Mean | | — | 0.67 | | | | | Div., Flex., etc. | | + | 0.42 | Jan. | 20 | S. | — 1.5 | |
| Div., Flex., etc. | | + | 0.59 | | | | | θ BOOTIS. | | | | Mar. | 21 | P. | + | 0.6 |
| η URSÆ MAJORIS (Ref.). | | | | | | | | | | | | April | 4 | F. | + | 1.1 |
| 1876. | | | " | | | | | | | | | 12 | F. | + | 1.5 | |
| May | 1 | E. | + 0.3 | | | | | | | | | 18 | P. | + | 0.6 | |
| June | 1 | P. | — 1.3 | | | | | | | | | 20 | F. | + | 0.2 | |
| | 20 | P. | — 1.1 | | | | | | | | | 26 | P. | — | 1.1 | |
| Oct. | 9 | P. | — 2.2 | | | | | | | | | June | 1 | P. | + | 1.3 |
| | 23 | E. | + 0.3 | | | | | | | | | 5 | P. | + | 2.3 | |
| | 26 | P. | — 1.1 | | | | | | | | | 26 | E. | — | 0.5 | |
| | 31 | E. | — 0.1 | | | | | | | | | 30 | E. | — | 0.9 | |
| Nov. | 7 | P. | — 1.1 | | | | | | | | | July | 27 | P. | + | 1.0 |
| | 8 | E. | — 1.4 | | | | | | | | | Sept. | 28 | S. | — | 1.0 |
| | 12 | E. | — 1.9 | | | | | | | | | 29 | P. | + | 0.2 | |
| | 23 | S. | — 1.2 | | | | | | | | | Oct. | 2 | S. | + | 1.5 |
| | 24 | E. | — 1.1 | | | | | | | | | 3 | P. | + | 0.5 | |
| Mean | | — | 0.99 | | | | | | | | | 6 | S. | + | 0.8 | |
| Div., Flex., etc. | | + | 1.45 | | | | | | | | | 7 | P. | + | 0.7 | |
| η BOOTIS. | | | | | | | | | | | | 9 | P. | + | 0.4 | |
| | | | | | | | | | | | | 11 | F. | — | 0.6 | |
| Right Ascension, | h. m. s. | | | | | | | | | | | 12 | P. | + | 0.3 | |
| 13 48 47 | | | | | | | | | | | | 17 | F. | — | 0.2 | |
| North-Polar Dist., | 70 58 46.60 | | | | | | | | | | | Nov. | 12 | E. | — | 0.4 |
| | | | | | | | | | | | | 21 | F. | — | 0.9 | |
| 1876. | | | " | | | | | | | | | 23 | S. | — | 0.4 | |
| Feb. | 16 | F. | — 2.2 | | | | | | | | | 24 | E. | — | 1.0 | |
| Mar. | 5 | P. | + 0.3 | | | | | | | | | Dec. | 4 | S. | — | 0.5 |
| | 9 | P. | + 0.3 | | | | | | | | | 5 | P. | + | 0.1 | |
| | 21 | P. | + 0.9 | | | | | | | | | 12 | S. | — | 2.4 | |
| | 31 | F. | + 1.3 | | | | | | | | | Mean | | + | 0.05 | |
| April | 1 | S. | — 1.6 | | | | | | | | | Div., Flex., etc. | | + | 1.57 | |
| | 4 | F. | + 2.2 | | | | | | | | | ϵ BOOTIS (Ref.). | | | | |
| | 5 | S. | — 0.4 | | | | | | | | | 1876. | | | " | |
| | 6 | P. | — 2.0 | | | | | | | | | June | 1 | P. | + 0.7 | |
| | 8 | F. | — 0.5 | | | | | | | | | Div., Flex., etc. | | + | 0.65 | |
| | 9 | S. | — 0.8 | | | | | | | | | α^2 LIBRÆ. | | | | |
| | 10 | P. | — 0.3 | | | | | | | | | | | | | |
| | 15 | E. | + 0.6 | | | | | | | | | Right Ascension, | h. m. s. | | | |
| | 18 | P. | 0.0 | | | | | | | | | 14 44 1 | | | | |
| | 19 | E. | + 1.0 | | | | | | | | | North-Polar Dist., | 105 31 29.68 | | | |
| | 29 | S. | — 0.8 | | | | | | | | | 1876. | | | " | |
| May | 1 | E. | + 1.7 | | | | | | | | | Jan. | 20 | S. | — 0.3 | |
| | 13 | E. | + 0.4 | | | | | | | | | Mar. | 13 | P. | — 0.5 | |
| | 27 | S. | + 0.6 | | | | | | | | | 21 | P. | + | 0.9 | |
| | 29 | E. | — 0.8 | | | | | | | | | April | 4 | F. | + 1.6 | |
| | 31 | S. | — 1.3 | | | | | | | | | 12 | F. | + | 2.5 | |

α^2 LIBRÆ—Continued.

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| April | 18 | P. | + | 0.1 |
| | 20 | F. | + | 2.1 |
| | 26 | P. | + | 0.4 |
| June | 5 | P. | + | 1.5 |
| | 26 | E. | + | 0.4 |
| | 30 | E. | + | 0.6 |
| July | 27 | P. | + | 2.2 |
| Sept. | 28 | S. | + | 1.0 |
| Oct. | 3 | P. | + | 1.1 |
| | 11 | F. | | 0.0 |
| | 17 | F. | + | 2.2 |
| Nov. | 21 | F. | — | 1.0 |
| Dec. | 5 | P. | + | 0.9 |
| Mean | | | + | 0.63 |
| Div., Flex., etc. | | | + | 1.73 |

 β URSÆ MINORIS.

| | | | |
|--------------------|----|----|----------|
| | | | h. m. s. |
| Right Ascension, | 14 | 51 | 5 |
| North-Polar Dist., | 15 | 20 | 17.41 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Jan. | 20 | S. | — | 3.9 |
| Mar. | 13 | P. | — | 2.5 |
| May | 22 | S. | + | 0.9 |
| June | 5 | P. | — | 0.3 |
| | 30 | E. | — | 0.4 |
| Oct. | 9 | P. | — | 3.2 |
| | 11 | P. | — | 1.9 |
| Mean | | | — | 1.61 |
| Div., Flex., etc. | | | + | 0.57 |

 β URSÆ MINORIS (Ref.).

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Mar. | 13 | P. | — | 2.2 |
| June | 30 | E. | — | 0.5 |
| Mean | | | — | 1.35 |
| Div., Flex., etc. | | | + | 1.29 |

 β URSÆ MINORIS, S. P.

| | | | |
|--------------------|-----|----|----------|
| | | | h. m. s. |
| Right Ascension, | 14 | 51 | 5 |
| North-Polar Dist., | 344 | 39 | 42.59 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| May | 22 | S. | + | 0.9 |
| Oct. | 12 | P. | + | 1.6 |
| Nov. | 22 | F. | — | 0.2 |
| | 28 | P. | + | 1.3 |
| Dec. | 13 | S. | + | 1.0 |
| Mean | | | + | 0.92 |
| Div., Flex., etc. | | | + | 0.29 |

 β BOOTIS.

| | | | |
|--------------------|----|----|----------|
| | | | h. m. s. |
| Right Ascension, | 14 | 57 | 17 |
| North-Polar Dist., | 49 | 7 | 9.78 |

| | | | | |
|-------|----|----|---|-----|
| 1876. | | | | |
| Jan. | 20 | S. | — | 2.2 |
| Mar. | 13 | P. | — | 0.4 |
| April | 10 | P. | — | 1.3 |
| | 12 | F. | — | 0.8 |
| | 18 | P. | — | 0.2 |
| | 26 | P. | — | 0.4 |
| June | 5 | P. | + | 1.5 |
| July | 27 | P. | + | 0.4 |
| Oct. | 3 | P. | + | 0.6 |
| | 6 | P. | — | 0.7 |
| | 11 | F. | — | 0.8 |
| | 12 | P. | | 0.0 |

 β BOOTIS—Continued.

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Oct. | 13 | F. | — | 0.4 |
| | 17 | F. | — | 1.5 |
| Dec. | 4 | S. | + | 0.1 |
| | 5 | P. | — | 0.2 |
| | 12 | S. | — | 1.3 |
| Mean | | | — | 0.45 |
| Div., Flex., etc. | | | + | 0.74 |

 β LIBRÆ.

| | | | |
|--------------------|----|----|----------|
| | | | h. m. s. |
| Right Ascension, | 15 | 10 | 20 |
| North-Polar Dist., | 98 | 55 | 25.04 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Jan. | 20 | S. | — | 1.1 |
| Mar. | 13 | P. | — | 0.7 |
| April | 4 | F. | + | 1.0 |
| | 6 | P. | — | 0.8 |
| | 25 | S. | + | 1.5 |
| May | 3 | S. | — | 0.6 |
| | 4 | P. | + | 0.9 |
| June | 30 | E. | + | 0.9 |
| July | 27 | P. | + | 0.8 |
| Oct. | 3 | P. | — | 0.1 |
| | 7 | P. | + | 0.4 |
| | 11 | F. | — | 0.1 |
| | 12 | P. | — | 0.2 |
| | 13 | F. | + | 0.2 |
| | 17 | F. | + | 0.9 |
| Dec. | 12 | S. | — | 1.5 |
| Mean | | | + | 0.09 |
| Div., Flex., etc. | | | + | 1.69 |

 β LIBRÆ (Ref.).

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Mar. | 13 | P. | + | 1.0 |
| June | 30 | E. | + | 2.8 |
| Mean | | | + | 1.90 |
| Div., Flex., etc. | | | + | 0.33 |

 μ^1 BOOTIS.

| | | | |
|--------------------|----|----|----------|
| | | | h. m. s. |
| Right Ascension, | 15 | 19 | 48 |
| North-Polar Dist., | 52 | 11 | 12.52 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Jan. | 20 | S. | — | 1.2 |
| Mar. | 13 | P. | + | 1.0 |
| April | 4 | F. | + | 0.4 |
| | 6 | P. | + | 0.7 |
| | 10 | P. | — | 0.1 |
| | 18 | P. | + | 0.4 |
| | 22 | P. | + | 0.5 |
| | 25 | S. | + | 0.8 |
| May | 3 | S. | — | 0.1 |
| | 4 | P. | — | 0.4 |
| Oct. | 13 | F. | + | 3.0 |
| Nov. | 2 | F. | — | 0.7 |
| Mean | | | + | 0.36 |
| Div., Flex., etc. | | | + | 1.07 |

 γ^2 URSÆ MINORIS.

| | | | |
|--------------------|----|----|----------|
| | | | h. m. s. |
| Right Ascension, | 15 | 20 | 56 |
| North-Polar Dist., | 17 | 43 | 28.67 |

| | | | | |
|-------|----|----|---|-----|
| 1876. | | | | |
| July | 27 | P. | + | 0.5 |
| Oct. | 11 | F. | — | 0.8 |
| | 12 | P. | — | 0.1 |
| | 13 | F. | + | 0.3 |

 γ^2 URSÆ MINORIS—Continued.

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Oct. | 17 | F. | — | 1.5 |
| | 27 | P. | + | 0.3 |
| Mean | | | — | 0.18 |
| Div., Flex., etc. | | | + | 0.77 |

 γ^2 URSÆ MINORIS (Ref.).

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| July | 27 | P. | — | 1.4 |
| Div., Flex., etc. | | | + | 1.26 |

 γ^2 URSÆ MINORIS, S. P.

| | | | |
|--------------------|-----|----|----------|
| | | | h. m. s. |
| Right Ascension, | 15 | 20 | 56 |
| North-Polar Dist., | 342 | 16 | 31.33 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Oct. | 12 | P. | | 0.3 |
| | 27 | P. | + | 0.2 |
| Nov. | 28 | P. | | 0.0 |
| Dec. | 7 | E. | — | 1.9 |
| Mean | | | — | 0.50 |
| Div., Flex., etc. | | | + | 0.24 |

 α CORONÆ BOREALIS.

| | | | |
|--------------------|----|----|----------|
| | | | h. m. s. |
| Right Ascension, | 15 | 29 | 26 |
| North-Polar Dist., | 62 | 51 | 59.63 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Jan. | 20 | S. | — | 0.1 |
| Feb. | 16 | F. | — | 0.6 |
| April | 10 | P. | + | 0.3 |
| | 12 | F. | + | 1.3 |
| May | 13 | E. | + | 3.1 |
| June | 30 | E. | + | 0.5 |
| July | 2 | S. | — | 0.6 |
| | 22 | S. | — | 0.7 |
| | 26 | S. | + | 0.4 |
| Sept. | 27 | F. | + | 0.5 |
| Oct. | 9 | P. | + | 0.9 |
| | 11 | F. | + | 0.1 |
| | 12 | P. | + | 1.0 |
| | 17 | F. | — | 0.4 |
| | 24 | E. | + | 0.5 |
| Nov. | 2 | F. | + | 1.9 |
| | 21 | F. | — | 1.8 |
| Dec. | 5 | P. | — | 0.6 |
| Mean | | | + | 0.38 |
| Div., Flex., etc. | | | + | 1.58 |

 α CORONÆ BOREALIS (Ref.).

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| June | 30 | E. | + | 4.4 |
| Oct. | 24 | E. | + | 0.8 |
| Dec. | 5 | P. | + | 1.0 |
| Mean | | | + | 2.07 |
| Div., Flex., etc. | | | + | 0.67 |

 α SERPENTIS.

| | | | |
|--------------------|----|----|----------|
| | | | h. m. s. |
| Right Ascension, | 15 | 38 | 10 |
| North-Polar Dist., | 83 | 10 | 57.43 |

| | | | | |
|-------|----|----|---|-----|
| 1876. | | | | |
| Jan. | 20 | S. | — | 1.2 |
| Feb. | 16 | F. | — | 1.1 |
| Mar. | 13 | P. | + | 0.1 |
| April | 4 | F. | + | 0.1 |
| | 10 | P. | — | 0.6 |
| | 12 | F. | + | 0.5 |

 α SERPENTIS—Continued.

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| May | 4 | P. | — | 0.2 |
| | 13 | E. | — | 0.9 |
| | 29 | E. | — | 0.2 |
| June | 26 | E. | + | 1.0 |
| July | 2 | S. | — | 2.2 |
| | 22 | S. | — | 1.6 |
| | 26 | S. | — | 0.3 |
| Sept. | 27 | F. | — | 1.0 |
| Oct. | 9 | P. | + | 1.2 |
| | 11 | F. | | 0.0 |
| | 17 | F. | — | 0.4 |
| Nov. | 2 | F. | — | 1.6 |
| Dec. | 6 | E. | — | 0.7 |
| | 26 | E. | — | 2.1 |
| Mean | | | — | 0.40 |
| Div., Flex., etc. | | | + | 1.85 |

 α SERPENTIS (Ref.).

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Mar. | 13 | P. | + | 2.5 |
| April | 10 | P. | + | 2.4 |
| June | 26 | E. | + | 5.9 |
| Mean | | | + | 3.60 |
| Div., Flex., etc. | | | + | 0.15 |

 ϵ SERPENTIS.

| | | | |
|--------------------|----|----|----------|
| | | | h. m. s. |
| Right Ascension, | 15 | 44 | 38 |
| North-Polar Dist., | 85 | 18 | 50.60 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Feb. | 16 | F. | — | 2.2 |
| April | 6 | P. | — | 0.3 |
| | 12 | F. | — | 0.2 |
| | 25 | S. | — | 0.6 |
| May | 13 | P. | — | 1.1 |
| | 29 | E. | | 0.0 |
| July | 2 | S. | — | 1.6 |
| | 22 | S. | — | 0.7 |
| | 26 | S. | + | 0.2 |
| Sept. | 27 | F. | + | 0.3 |
| Oct. | 11 | F. | | 0.0 |
| | 13 | F. | + | 2.9 |
| | 17 | F. | | 0.0 |
| | 24 | E. | + | 1.9 |
| Mean | | | — | 0.10 |
| Div., Flex., etc. | | | + | 1.80 |

 ζ URSÆ MINORIS.

| | | | |
|--------------------|----|----|----------|
| | | | h. m. s. |
| Right Ascension, | 15 | 48 | 32 |
| North-Polar Dist., | 11 | 49 | 30.01 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Mar. | 13 | P. | — | 0.5 |
| April | 10 | P. | — | 0.4 |
| | 22 | P. | + | 0.1 |
| July | 5 | P. | — | 0.8 |
| Mean | | | — | 0.40 |
| Div., Flex., etc. | | | + | 0.51 |

 ζ URSÆ MINORIS (Ref.).

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Mar. | 13 | P. | — | 0.2 |
| April | 10 | P. | — | 1.4 |
| | 22 | P. | + | 0.7 |
| July | 5 | P. | — | 0.3 |
| Mean | | | — | 0.30 |
| Div., Flex., etc. | | | + | 1.20 |

| | | | | | | | | | | | | | | | |
|-------------------------------------|----|---|------|--------------------------------|----|---|------|---------------------------------|----|------|------|---------------------------------|----|---|------|
| ζ URSAE MINORIS, S. P. | | | | δ OPHIUCHI. | | | | η DRACONIS, S. P. | | | | η HERCULIS—Continued. | | | |
| Right Ascension, h. m. s. | | | | Right Ascension, h. m. s. | | | | Right Ascension, h. m. s. | | | | 1876. | | | |
| 15 48 32 | | | | 16 7 51 | | | | 16 22 19 | | | | April 26 | P. | + | 1.3 |
| North-Polar Dist., 348 10 29.99 | | | | North-Polar Dist., 93 22 23.12 | | | | North-Polar Dist., 331 47 42.88 | | | | June 1 | P. | + | 1.2 |
| 1876. | | | | 1876. | | | | 1876. | | | | 5 | P. | + | 1.6 |
| Oct. 12 | P. | + | 0.2 | Feb. 18 | P. | — | 0.2 | Oct. 27 | P. | — | 1.0 | Aug. 26 | F. | + | 1.2 |
| Dec. 17 | S. | — | 1.3 | Mar. 21 | P. | — | 0.0 | Div., Flex., etc. | + | 0.13 | | Oct. 27 | P. | + | 1.9 |
| 21 | S. | + | 1.1 | April 10 | P. | — | 0.7 | A DRACONIS. | | | | Nov. 1 | E. | — | 0.3 |
| Mean | | | 0.00 | 26 | P. | — | 0.4 | Right Ascension, h. m. s. | | | | Dec. 19 | F. | + | 2.8 |
| Div., Flex., etc. | + | | 0.41 | May 23 | S. | — | 0.6 | 16 28 14 | | | | Mean | | | 1.30 |
| ϵ CORONAE BOREALIS. | | | | 27 | S. | — | 0.3 | North-Polar Dist., 20 57 49.11 | | | | Div., Flex., etc. | + | | 0.89 |
| Right Ascension, h. m. s. | | | | 29 | E. | — | 0.0 | 1876. | | | | κ OPHIUCHI. | | | |
| 15 52 27 | | | | 31 | S. | — | 0.7 | Right Ascension, h. m. s. | | | | 16 51 48 | | | |
| North-Polar Dist., 62 45 41.29 | | | | July 5 | P. | — | 0.0 | North-Polar Dist., 20 57 49.11 | | | | 1876. | | | |
| 1876. | | | | 18 | S. | — | 0.9 | 1876. | | | | Right Ascension, h. m. s. | | | |
| April 12 | F. | + | 0.3 | Oct. 11 | F. | + | 1.0 | June 26 | | | | 16 51 48 | | | |
| June 26 | E. | + | 1.2 | 13 | F. | + | 0.5 | Oct. 17 | F. | + | 0.8 | North-Polar Dist., 80 25 48.97 | | | |
| Oct. 17 | F. | + | 1.6 | 17 | F. | + | 1.0 | 19 | P. | — | 1.7 | 1876. | | | |
| Nov. 4 | P. | + | 1.1 | 19 | P. | + | 0.6 | 24 | E. | — | 2.3 | Feb. 18 | | | |
| Mean | | | 1.05 | 26 | E. | — | 0.9 | Nov. 4 | P. | — | 1.5 | June 5 | | | |
| Div., Flex., etc. | + | | 1.58 | Mean | | | 0.01 | Mean | | | 1.18 | Aug. 26 | | | |
| ϵ CORONAE BOREALIS (Ref.). | | | | Div., Flex., etc. | + | | 1.70 | Div., Flex., etc. | + | | 0.88 | Oct. 24 | | | |
| 1876. | | | | τ HERCULIS. | | | | A DRACONIS (Ref.). | | | | Mean | | | |
| April 12 | | | | Right Ascension, h. m. s. | | | | 1876. | | | | Div., Flex., etc. | | | |
| June 26 | | | | 16 16 1 | | | | June 26 | | | | 1876. | | | |
| Mean | | | 3.70 | North-Polar Dist., 43 23 25.63 | | | | Div., Flex., etc. | | | | Feb. 18 | | | |
| Div., Flex., etc. | + | | 0.66 | 1876. | | | | A DRACONIS, S. P. | | | | June 5 | | | |
| δ SCORPII. | | | | Feb. 16 | | | | Right Ascension, h. m. s. | | | | Aug. 26 | | | |
| Right Ascension, h. m. s. | | | | July 5 | | | | 16 28 14 | | | | Div., Flex., etc. | | | |
| 15 53 0 | | | | Oct. 17 | | | | North-Polar Dist., 339 2 10.89 | | | | 1876. | | | |
| North-Polar Dist., 112 15 59.23 | | | | Dec. 19 | | | | 1876. | | | | Right Ascension, h. m. s. | | | |
| 1876. | | | | Mean | | | | Oct. 27 | | | | 16 57 2 | | | |
| May 4 | P. | + | 0.2 | Div., Flex., etc. | | | | Dec. 3 | | | | North-Polar Dist., 56 15 2.17 | | | |
| 23 | S. | + | 0.1 | α SCORPII. | | | | 12 | | | | 1876. | | | |
| 27 | S. | + | 2.1 | Right Ascension, h. m. s. | | | | Mean | | | | Aug. 26 | | | |
| 29 | E. | + | 1.6 | 16 21 48 | | | | Div., Flex., etc. | | | | Div., Flex., etc. | | | |
| 31 | S. | + | 0.6 | North-Polar Dist., 116 9 16.90 | | | | 1876. | | | | 1876. | | | |
| July 18 | S. | + | 0.8 | 1876. | | | | Oct. 27 | | | | Right Ascension, h. m. s. | | | |
| Oct. 11 | F. | — | 1.0 | Feb. 16 | | | | Dec. 3 | | | | 16 58 45 | | | |
| 13 | F. | + | 1.3 | Mar. 21 | | | | 12 | | | | North-Polar Dist., 7 45 42.53 | | | |
| 19 | P. | + | 0.7 | April 6 | | | | Mean | | | | 1876. | | | |
| 24 | E. | + | 1.3 | 13 | | | | Div., Flex., etc. | | | | Jan. 13 | | | |
| Mean | | | 0.77 | 22 | | | | 1876. | | | | Feb. 18 | | | |
| Div., Flex., etc. | + | | 1.90 | 26 | | | | Oct. 27 | | | | April 6 | | | |
| β^1 SCORPII. | | | | June 5 | | | | 1876. | | | | May 4 | | | |
| Right Ascension, h. m. s. | | | | July 5 | | | | Feb. 18 | | | | June 5 | | | |
| 15 58 14 | | | | Oct. 17 | | | | Mar. 21 | | | | Oct. 24 | | | |
| North-Polar Dist., 109 27 51.09 | | | | Nov. 1 | | | | April 6 | | | | Nov. 4 | | | |
| 1876. | | | | Dec. 6 | | | | 22 | | | | 8 | | | |
| Mar. 13 | P. | + | 0.2 | 19 | | | | 26 | | | | Mean | | | |
| 21 | P. | — | 1.2 | Mean | | | | 26 | | | | Div., Flex., etc. | | | |
| April 4 | F. | + | 0.7 | Div., Flex., etc. | | | | Aug. 26 | | | | 1876. | | | |
| 6 | P. | — | 0.9 | η DRACONIS. | | | | Oct. 27 | | | | April 6 | | | |
| 10 | P. | — | 1.3 | Right Ascension, h. m. s. | | | | Nov. 1 | | | | May 4 | | | |
| 12 | F. | — | 1.5 | 16 22 19 | | | | Dec. 19 | | | | Mean | | | |
| May 4 | P. | — | 0.3 | North-Polar Dist., 28 12 17.12 | | | | Mean | | | | Div., Flex., etc. | | | |
| 23 | S. | — | 1.5 | 1876. | | | | Div., Flex., etc. | | | | 1876. | | | |
| 27 | S. | — | 0.9 | Oct. 11 | | | | η HERCULIS. | | | | Right Ascension, h. m. s. | | | |
| 29 | E. | — | 0.9 | 24 | | | | Right Ascension, h. m. s. | | | | 16 58 45 | | | |
| 31 | S. | — | 1.6 | 27 | | | | North-Polar Dist., 50 50 25.69 | | | | North-Polar Dist., 352 14 17.47 | | | |
| July 5 | P. | — | 1.4 | Nov. 1 | | | | 1876. | | | | 1876. | | | |
| 18 | S. | — | 1.1 | 4 | | | | Feb. 18 | | | | Feb. 10 | | | |
| Oct. 11 | F. | — | 1.8 | Mean | | | | April 6 | | | | July 2 | | | |
| 13 | F. | — | 2.1 | Div., Flex., etc. | | | | 13 | | | | 5 | | | |
| 17 | F. | — | 0.0 | η DRACONIS. | | | | 22 | | | | Oct. 12 | | | |
| 19 | P. | — | 1.2 | Right Ascension, h. m. s. | | | | 1876. | | | | 27 | | | |
| Dec. 19 | F. | — | — | 16 22 19 | | | | Oct. 27 | | | | Mean | | | |
| Mean | | | 0.99 | North-Polar Dist., 28 12 17.12 | | | | 1876. | | | | Div., Flex., etc. | | | |
| Div., Flex., etc. | + | | 1.96 | 1876. | | | | Feb. 18 | | | | 1876. | | | |

ϵ URSÆ MINORIS, S. P.—Continued.

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Nov. | 26 | F. | — | 2.1 |
| | 28 | P. | — | 0.2 |
| Dec. | 2 | P. | — | 1.4 |
| | 6 | P. | — | 1.1 |
| | 12 | F. | — | 2.0 |
| Mean | . | . | . | 0.94 |
| Div., Flex., etc. | . | . | . | 0.53 |

 α^1 HERCULIS.

| | |
|--------------------|-------------|
| Right Ascension, | h. m. s. |
| | 17 9 0 |
| North-Polar Dist., | 75 27 59.56 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Jan. | 12 | P. | + | 0.0 |
| | 13 | E. | + | 0.3 |
| April | 6 | P. | + | 0.0 |
| July | 27 | P. | + | 0.5 |
| Aug. | 26 | F. | — | 0.6 |
| Oct. | 24 | E. | — | 0.1 |
| Nov. | 1 | E. | — | 0.0 |
| | 4 | P. | + | 0.9 |
| | 8 | P. | — | 0.2 |
| | 9 | E. | — | 1.0 |
| | 22 | F. | — | 0.1 |
| Dec. | 26 | E. | — | 2.1 |
| Mean | . | . | . | 0.20 |
| Div., Flex., etc. | . | . | . | 1.67 |

 α^1 HERCULIS (Ref.).

| | | | | |
|-------------------|---|----|---|------|
| 1876. | | | | |
| April | 6 | P. | + | 0.8 |
| Nov. | 8 | P. | + | 0.9 |
| Mean | . | . | . | 0.85 |
| Div., Flex., etc. | . | . | . | 0.22 |

 β DRACONIS.

| | |
|--------------------|-------------|
| Right Ascension, | h. m. s. |
| | 17 27 38 |
| North-Polar Dist., | 37 36 22.50 |

| | | | | |
|-------------------|----|----|---|--------|
| 1876. | | | | |
| Jan. | 13 | E. | + | 2.6 |
| | 25 | E. | — | 1.7 |
| April | 6 | P. | — | 0.3 |
| | 13 | S. | — | 0.1 |
| July | 18 | S. | + | (12.4) |
| Aug. | 16 | E. | — | 1.8 |
| Dec. | 6 | P. | — | 1.3 |
| Mean | . | . | . | 0.43 |
| Div., Flex., etc. | . | . | . | 0.55 |

 β DRACONIS (Ref.).

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| April | 6 | P. | — | 2.3 |
| Aug. | 16 | E. | — | 2.5 |
| Dec. | 6 | P. | — | 2.0 |
| Mean | . | . | . | 2.27 |
| Div., Flex., etc. | . | . | . | 1.39 |

 α OPHIUCHI.

| | |
|--------------------|-------------|
| Right Ascension, | h. m. s. |
| | 17 29 11 |
| North-Polar Dist., | 77 20 52.36 |

| | | | | |
|-------|----|----|---|-----|
| 1876. | | | | |
| Jan. | 12 | P. | — | 0.0 |
| | 13 | E. | — | 0.4 |

 α OPHIUCHI—Continued.

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Jan. | 19 | S. | + | 3.3 |
| | 25 | E. | — | 0.4 |
| Feb. | 19 | E. | — | 0.8 |
| May | 4 | P. | — | 0.2 |
| June | 1 | P. | + | 0.3 |
| July | 17 | F. | + | 0.4 |
| Oct. | 24 | E. | + | 1.8 |
| Nov. | 4 | P. | + | 0.7 |
| | 8 | P. | + | 0.8 |
| | 9 | E. | + | 1.6 |
| Dec. | 19 | F. | — | 1.8 |
| Mean | . | . | . | 0.41 |
| Div., Flex., etc. | . | . | . | 1.73 |

 α OPHIUCHI (Ref.).

| | | | | |
|-------------------|---|----|---|------|
| 1876. | | | | |
| June | 1 | P. | + | 2.3 |
| Nov. | 8 | P. | — | 0.0 |
| Mean | . | . | . | 1.15 |
| Div., Flex., etc. | . | . | . | 0.22 |

 ω DRACONIS.

| | |
|--------------------|------------|
| Right Ascension, | h. m. s. |
| | 17 37 41 |
| North-Polar Dist., | 21 11 7.71 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| June | 1 | P. | — | 2.1 |
| Aug. | 16 | E. | — | 3.0 |
| Nov. | 4 | P. | — | 2.9 |
| Mean | . | . | . | 2.67 |
| Div., Flex., etc. | . | . | . | 0.87 |

 ω DRACONIS (Ref.).

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| June | 1 | P. | — | 2.4 |
| Aug. | 16 | E. | — | 4.0 |
| Mean | . | . | . | 3.20 |
| Div., Flex., etc. | . | . | . | 1.20 |

 ω DRACONIS, S. P.

| | |
|--------------------|----------------|
| Right Ascension, | h. m. s. |
| | 17 37 41 |
| North-Polar Dist., | 33 38 48 52.29 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Nov. | 28 | P. | + | 1.3 |
| Dec. | 6 | P. | + | 3.4 |
| | 19 | E. | + | 1.3 |
| | 27 | E. | + | 1.6 |
| Mean | . | . | . | 1.90 |
| Div., Flex., etc. | . | . | . | 0.20 |

 μ HERCULIS.

| | |
|--------------------|-------------|
| Right Ascension, | h. m. s. |
| | 17 41 36 |
| North-Polar Dist., | 62 12 18.64 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Jan. | 12 | P. | + | 0.8 |
| | 13 | E. | + | 1.5 |
| | 19 | S. | — | 0.2 |
| | 20 | P. | — | 0.5 |
| | 25 | E. | + | 0.7 |
| Feb. | 19 | E. | — | 0.1 |
| Aug. | 16 | E. | + | 0.8 |
| Nov. | 1 | E. | + | 0.3 |
| | 4 | P. | + | 0.3 |
| | 8 | P. | + | 1.7 |
| | 9 | E. | — | 0.6 |
| | 22 | F. | + | 0.9 |
| Mean | . | . | . | 0.47 |
| Div., Flex., etc. | . | . | . | 1.56 |

 ψ^1 DRACONIS.

| | | | | | |
|--------------------|---|----|----|----|-------|
| | | | h. | m. | s. |
| Right Ascension, | | | 17 | 44 | 9 |
| North-Polar Dist., | | | 17 | 47 | 26.84 |
| 1876. | | | | | " |
| April | 6 | P. | | — | 0.3 |
| Div., Flex., etc. | . | . | . | + | 0.77 |

 ψ^1 DRACONIS (Ref.).

| | | | | |
|-------------------|---|----|---|------|
| 1876. | | | | |
| April | 6 | P. | + | 0.7 |
| Div., Flex., etc. | . | . | . | 1.25 |

 ψ^1 DRACONIS (S. P.)

| | | | | | |
|--------------------|----|----|-------------------|-----------------|----------------------|
| | | | h. | m. | s. |
| Right Ascension, | | | 17 | 44 | 9 |
| North-Polar Dist., | | | 34 ^o 2 | 12 ['] | 33 ^{''} .16 |
| 1876. | | | | | " |
| Oct. | 27 | P. | | | 0.0 |
| Nov. | 23 | P. | — | | 0.2 |
| Dec. | 6 | P. | — | | 0.6 |
| | 19 | E. | — | | 0.6 |
| | 27 | E. | — | | 1.9 |

 γ DRACONIS.

| | |
|--------------------|-------------|
| Right Ascension, | h. m. s. |
| | 17 53 44 |
| North-Polar Dist., | 38 29 45.15 |

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Jan. | 20 | P. | + | 0.1 |
| | 25 | E. | — | 0.6 |
| Feb. | 19 | E. | — | 0.6 |
| Aug. | 28 | F. | + | 0.1 |
| Nov. | 1 | E. | — | 0.1 |
| | 4 | P. | — | 0.3 |
| | 9 | E. | — | 0.2 |
| | 22 | F. | — | 0.8 |
| Dec. | 6 | P. | — | 1.0 |
| | 15 | E. | — | 0.5 |
| Mean | . | . | . | 0.39 |
| Div., Flex., etc. | . | . | . | 0.54 |

 γ DRACONIS (Ref.).

| | | | | |
|-------------------|----|----|---|------|
| 1876. | | | | |
| Aug. | 28 | E. | — | 1.8 |
| Nov. | 1 | E. | — | 1.5 |
| | 4 | P. | — | 2.4 |
| | 9 | E. | — | 2.5 |
| | 22 | F. | — | 3.0 |
| Dec. | 6 | P. | — | 2.2 |
| | 15 | E. | — | 1.6 |
| Mean | . | . | . | 2.14 |
| Div., Flex., etc. | . | . | . | 1.41 |

 γ^2 SAGITTARII.

| | |
|-----------------------------|--|
| Right Ascension, | h. m. s. |
| | 17 57 51 |
| North-Polar Dist., 1876. | 120 25 24. ¹¹ / ₁₁ |
| Feb. 19 E. | — 1.4 |
| July 18 S. | — 0.1 |
| Aug. 16 E. | — 0.5 |
| Nov. 4 P. | — 1.3 |
| Mean | — 0.82 |
| Div., Flex., etc. | + 1.78 |

 δ URSÆ MINORIS.

| | |
|--------------------|------------|
| Right Ascension, | h. m. s. |
| | 18 12 20 |
| North-Polar Dist., | 3 23 31.45 |

| | | | | |
|-------|----|----|---|-----|
| 1876. | | | | |
| Jan. | 20 | P. | — | 2.4 |
| | 25 | E. | — | 1.2 |
| Feb. | 19 | E. | — | 3.0 |
| April | 14 | P. | + | 0.7 |
| May | 4 | P. | — | 1.1 |
| June | 26 | E. | — | 1.5 |
| July | 5 | P. | — | 0.9 |
| | 17 | F. | — | 0.9 |
| | 21 | F. | — | 0.9 |
| | 22 | S. | — | 1.2 |
| | 26 | S. | — | 3.2 |
| | 27 | P. | — | 1.9 |
| Aug. | 9 | E. | — | 1.9 |
| | 16 | E. | — | 3.4 |
| | 28 | E. | — | 1.0 |
| Sept. | 25 | P. | — | 1.4 |
| Nov. | 9 | E. | — | 3.2 |
| Dec. | 6 | P. | — | 0.6 |
| | 15 | E. | — | 3.3 |

| | | | | |
|-------------------|---|---|---|------|
| Mean | . | . | . | 1.70 |
| Div., Flex., etc. | . | . | . | 0.45 |

 δ URSÆ MINORIS, S. P.

| | |
|--------------------|--------------|
| Right Ascension, | h. m. s. |
| | 18 12 20 |
| North-Polar Dist., | 356 36 28.55 |

| | | | | |
|-------|----|----|---|-----|
| 1876. | | | | |
| Jan. | 12 | S. | + | 0.2 |
| | 14 | E. | — | 0.2 |
| | 20 | S. | + | 0.3 |
| | 21 | P. | + | 0.1 |
| | 24 | S. | — | 0.5 |
| | 25 | P. | — | 3.4 |
| | 26 | E. | — | 0.7 |
| Feb. | 2 | P. | — | 0.4 |
| | 4 | F. | — | 1.0 |
| | 10 | P. | — | 0.2 |
| | 17 | S. | — | 0.6 |
| | 18 | P. | + | 1.3 |
| Mar. | 2 | E. | + | 1.2 |
| | 3 | F. | + | 0.6 |
| | 5 | P. | — | 0.0 |
| | 6 | E. | — | 1.8 |
| | 13 | P. | + | 1.2 |
| July | 2 | P. | — | 1.7 |
| Oct. | 9 | P. | + | 0.8 |
| | 27 | P. | — | 0.1 |
| Nov. | 5 | P. | + | 0.2 |
| | 28 | P. | + | 0.6 |
| Dec. | 2 | P. | — | 1.1 |
| | 3 | E. | + | 0.2 |
| | 6 | P. | + | 1.0 |
| | 8 | F. | — | 1.5 |
| | 12 | F. | — | 0.2 |
| | 15 | E. | — | 0.3 |
| | 19 | E. | — | 0.8 |
| | 27 | E. | — | 0.1 |
| | 31 | E. | — | 1.3 |

| | | | | |
|-------------------|---|---|---|------|
| Mean | . | . | . | 0.26 |
| Div., Flex., etc. | . | . | . | 0.48 |

 η SERPENTIS.

| | |
|--------------------|-------------|
| Right Ascension, | h. m. s. |
| | 18 14 54 |
| North-Polar Dist., | 92 55 43.95 |

| | | | | |
|-------|----|----|---|-----|
| 1876. | | | | |
| Jan. | 20 | P. | — | 2.1 |
| Feb. | 19 | E. | — | 0.0 |

η SERPENTIS—Continued.

| 1876. | | | | |
|---------------------------|----|---|-----|------|
| May 4 | P. | + | 1.3 | |
| Nov. 4 | P. | | 0.0 | |
| 9 | E. | — | 0.9 | |
| 24 | S. | + | 0.9 | |
| Mean | | | — | 0.13 |
| Div., Flex., etc. | | | + | 1.74 |

 ι AQUILÆ.

| | | | h. m. s. |
|--------------------|----|----|----------|
| Right Ascension, | | | 18 28 27 |
| North-Polar Dist., | 98 | 19 | 43.11 |

| 1876. | | | | |
|---------------------------|----|---|-----|------|
| Feb. 19 | E. | + | 0.8 | |
| June 26 | E. | — | 0.4 | |
| July 21 | F. | — | 1.4 | |
| Aug. 16 | E. | | 0.0 | |
| Nov. 9 | E. | + | 0.2 | |
| Mean | | | — | 0.16 |
| Div., Flex., etc. | | | + | 1.68 |

 α LYRÆ.

| | | | h. m. s. |
|--------------------|----|----|----------|
| Right Ascension, | | | 18 32 44 |
| North-Polar Dist., | 51 | 19 | 50.22 |

| 1876. | | | | |
|---------------------------|----|---|-----|------|
| Jan. 12 | P. | + | 0.9 | |
| 13 | E. | + | 1.2 | |
| 20 | P. | + | 0.1 | |
| 25 | E. | — | 0.3 | |
| Feb. 4 | S. | + | 1.0 | |
| 6 | E. | — | 1.0 | |
| 19 | E. | — | 0.4 | |
| April 14 | P. | + | 0.6 | |
| May 4 | P. | — | 0.2 | |
| June 26 | E. | — | 0.4 | |
| July 5 | P. | — | 0.5 | |
| 21 | F. | + | 0.6 | |
| 22 | S. | — | 0.7 | |
| 27 | P. | — | 0.3 | |
| Aug. 9 | E. | — | 0.6 | |
| 11 | F. | — | 0.6 | |
| Sept. 25 | P. | — | 1.1 | |
| Nov. 8 | P. | + | 1.1 | |
| 9 | E. | + | 0.5 | |
| 22 | F. | — | 1.0 | |
| 24 | S. | + | 0.4 | |
| Dec. 6 | P. | + | 0.5 | |
| 15 | E. | + | 0.5 | |
| 19 | E. | + | 1.2 | |
| 20 | F. | — | 1.2 | |
| Mean | | | + | 0.01 |
| Div., Flex., etc. | | | + | 0.95 |

 β LYRÆ.

| | | | h. m. s. |
|--------------------|---|----|----------|
| Right Ascension, | | | 18 45 30 |
| North-Polar Dist., | 6 | 46 | 48.31 |

| 1876. | | | | |
|---------|----|---|-----|--|
| Jan. 20 | P. | — | 1.4 | |
| 23 | S. | — | 0.7 | |
| 25 | E. | — | 1.9 | |
| Feb. 19 | E. | — | 0.6 | |
| June 1 | P. | + | 0.2 | |
| 26 | E. | + | 0.4 | |
| July 7 | P. | + | 0.8 | |
| 21 | F. | — | 0.3 | |
| 22 | S. | | 0.0 | |
| 27 | P. | — | 0.5 | |
| Aug. 9 | E. | + | 0.6 | |
| 11 | F. | — | 0.4 | |
| Sept. 4 | S. | — | 1.4 | |
| 25 | P. | — | 0.3 | |

 β LYRÆ—Continued.

| 1876. | | | | |
|---------------------------|----|---|-----|------|
| Nov. 8 | P. | + | 0.2 | |
| 24 | S. | — | 1.3 | |
| Dec. 6 | P. | + | 0.1 | |
| 15 | E. | — | 0.3 | |
| 19 | E. | — | 0.1 | |
| Mean | | | — | 0.36 |
| Div., Flex., etc. | | | + | 1.48 |

50 DRACONIS, S. P.

| | | | h. m. s. |
|--------------------|-----|----|----------|
| Right Ascension, | | | 18 50 22 |
| North-Polar Dist., | 345 | 17 | 10.92 |

| 1876. | | | | |
|---------------------------|----|---|-----|------|
| Mar. 5 | P. | + | 1.2 | |
| Div., Flex., etc. | | | + | 0.31 |

 ζ AQUILÆ.

| | | | h. m. s. |
|--------------------|----|----|----------|
| Right Ascension, | | | 18 59 43 |
| North-Polar Dist., | 76 | 19 | 8.79 |

| 1876. | | | | |
|---------------------------|----|---|-----|------|
| Jan. 20 | P. | + | 0.6 | |
| 25 | E. | — | 0.5 | |
| Feb. 19 | E. | + | 0.8 | |
| April 14 | P. | — | 0.5 | |
| May 4 | P. | — | 0.4 | |
| June 1 | P. | — | 0.3 | |
| July 5 | P. | — | 0.2 | |
| 7 | P. | + | 0.4 | |
| 21 | F. | — | 0.1 | |
| Aug. 9 | E. | — | 0.5 | |
| 15 | F. | — | 0.3 | |
| Sept. 4 | S. | — | 0.7 | |
| 25 | P. | + | 0.2 | |
| Nov. 24 | S. | — | 0.4 | |
| Dec. 6 | P. | + | 2.1 | |
| 15 | E. | + | 1.7 | |
| 19 | E. | + | 1.1 | |
| Mean | | | + | 0.18 |
| Div., Flex., etc. | | | + | 1.69 |

 δ SAGITTARIÆ.

| | | | h. m. s. |
|--------------------|-----|----|----------|
| Right Ascension, | | | 19 10 23 |
| North-Polar Dist., | 109 | 10 | 14.50 |

| 1876. | | | | |
|---------------------------|----|---|-----|------|
| July 17 | F. | + | 2.2 | |
| 21 | F. | + | 2.0 | |
| Mean | | | + | 2.10 |
| Div., Flex., etc. | | | + | 1.96 |

 δ DRACONIS.

| | | | h. m. s. |
|--------------------|----|----|----------|
| Right Ascension, | | | 19 12 31 |
| North-Polar Dist., | 22 | 33 | 24.32 |

| 1876. | | | | |
|---------------------------|----|---|-----|------|
| Jan. 12 | P. | — | 2.0 | |
| 20 | P. | — | 2.6 | |
| 25 | E. | — | 1.7 | |
| Feb. 18 | E. | — | 2.2 | |
| 22 | E. | + | 1.0 | |
| April 14 | P. | — | 1.3 | |
| July 5 | P. | — | 1.7 | |
| 7 | P. | — | 2.2 | |
| Aug. 4 | P. | — | 2.2 | |
| 9 | E. | — | 0.3 | |
| 28 | E. | — | 1.9 | |
| Sept. 25 | P. | — | 2.1 | |
| Mean | | | — | 1.60 |
| Div., Flex., etc. | | | + | 0.81 |

 δ DRACONIS (Ref.).

| 1876. | | | | |
|---------------------------|----|---|-----|------|
| April 14 | P. | — | 1.8 | |
| July 5 | P. | — | 1.3 | |
| 7 | P. | — | 1.8 | |
| Aug. 4 | P. | — | 2.6 | |
| 9 | E. | — | 2.9 | |
| 28 | E. | — | 2.2 | |
| Sept. 25 | P. | — | 2.1 | |
| Mean | | | — | 2.10 |
| Div., Flex., etc. | | | + | 1.24 |

 δ DRACONIS, S. P.

| | | | h. m. s. |
|--------------------|-----|----|----------|
| Right Ascension, | | | 19 12 31 |
| North-Polar Dist., | 337 | 26 | 35.68 |

| 1876. | | | | |
|---------------------------|----|---|-----|------|
| Oct. 9 | P. | — | 0.1 | |
| Nov. 28 | P. | + | 0.5 | |
| Dec. 12 | F. | — | 0.6 | |
| Mean | | | — | 0.07 |
| Div., Flex., etc. | | | + | 0.21 |

 τ DRACONIS.

| | | | h. m. s. |
|--------------------|----|----|----------|
| Right Ascension, | | | 19 17 56 |
| North-Polar Dist., | 16 | 52 | 31.85 |

| 1876. | | | | |
|---------------------------|----|---|-----|------|
| Aug. 9 | E. | — | 1.3 | |
| Div., Flex., etc. | | | + | 0.70 |

 τ DRACONIS (Ref.).

| 1876. | | | | |
|---------------------------|----|---|-----|------|
| Aug. 9 | E. | + | 2.3 | |
| Div., Flex., etc. | | | + | 1.27 |

 τ DRACONIS, S. P.

| | | | h. m. s. |
|--------------------|-----|---|----------|
| Right Ascension, | | | 19 17 56 |
| North-Polar Dist., | 343 | 7 | 28.15 |

| 1876. | | | | |
|---------------------------|----|---|-----|------|
| Oct. 9 | P. | + | 0.7 | |
| Dec. 12 | F. | + | 0.1 | |
| Mean | | | + | 0.40 |
| Div., Flex., etc. | | | + | 0.25 |

 δ AQUILÆ.

| | | | h. m. s. |
|--------------------|----|---|----------|
| Right Ascension, | | | 19 19 15 |
| North-Polar Dist., | 87 | 7 | 50.15 |

| 1876. | | | | |
|---------------------------|----|---|-----|------|
| Feb. 18 | E. | — | 1.3 | |
| April 14 | P. | — | 0.9 | |
| July 5 | P. | — | 0.4 | |
| 7 | P. | + | 0.1 | |
| 17 | F. | — | 0.7 | |
| 27 | P. | + | 0.1 | |
| Aug. 4 | P. | — | 0.4 | |
| 26 | F. | + | 0.1 | |
| 28 | E. | — | 1.0 | |
| Sept. 28 | S. | — | 1.3 | |
| 29 | P. | — | 0.3 | |
| Oct. 2 | S. | — | 0.3 | |
| Dec. 20 | F. | — | 0.6 | |
| Mean | | | — | 0.53 |
| Div., Flex., etc. | | | + | 1.78 |

 κ AQUILÆ.

| | | | h. m. s. |
|--------------------|----|----|----------|
| Right Ascension, | | | 19 30 13 |
| North-Polar Dist., | 97 | 18 | 3.45 |

| 1876. | | | | |
|---------------------------|----|---|-----|------|
| May 4 | P. | + | 1.0 | |
| July 27 | P. | — | 0.2 | |
| Aug. 9 | E. | + | 0.3 | |
| 28 | E. | — | 1.2 | |
| Sept. 25 | P. | | 0.0 | |
| Mean | | | — | 0.02 |
| Div., Flex., etc. | | | + | 1.65 |

 κ AQUILÆ (Ref.).

| 1876. | | | | |
|---------------------------|----|---|-----|------|
| May 4 | P. | + | 3.6 | |
| July 27 | P. | + | 2.4 | |
| Aug. 9 | E. | + | 2.3 | |
| 28 | E. | + | 0.3 | |
| Sept. 25 | P. | + | 1.0 | |
| Mean | | | + | 1.92 |
| Div., Flex., etc. | | | + | 0.42 |

 γ AQUILÆ.

| | | | h. m. s. |
|--------------------|----|----|----------|
| Right Ascension, | | | 19 40 22 |
| North-Polar Dist., | 79 | 41 | 14.44 |

| 1876. | | | | |
|---------------------------|----|---|-----|------|
| Jan. 23 | S. | | 0.0 | |
| Feb. 16 | S. | — | 1.3 | |
| 17 | P. | — | 1.4 | |
| 18 | E. | — | 1.6 | |
| 22 | E. | + | 0.5 | |
| April 14 | P. | — | 0.4 | |
| July 26 | S. | — | 1.0 | |
| 27 | P. | — | 0.8 | |
| Aug. 9 | E. | — | 1.5 | |
| 15 | F. | — | 1.6 | |
| 28 | E. | + | 0.2 | |
| Sept. 4 | S. | — | 0.6 | |
| 20 | S. | — | 1.2 | |
| 25 | P. | — | 1.3 | |
| 28 | S. | — | 2.7 | |
| 29 | P. | — | 1.2 | |
| Oct. 2 | S. | — | 1.6 | |
| 3 | P. | — | 0.6 | |
| Dec. 15 | E. | — | 2.1 | |
| 19 | E. | — | 0.6 | |
| Mean | | | — | 1.04 |
| Div., Flex., etc. | | | + | 1.84 |

 γ AQUILÆ (Ref.).

| 1876. | | | | |
|---------------------------|----|---|-----|------|
| Aug. 9 | E. | + | 2.2 | |
| Sept. 25 | P. | + | 0.3 | |
| Mean | | | + | 1.25 |
| Div., Flex., etc. | | | + | 0.21 |

 α AQUILÆ.

| | | | h. m. s. |
|--------------------|----|----|----------|
| Right Ascension, | | | 19 44 44 |
| North-Polar Dist., | 81 | 27 | 27.31 |

| 1876. | | | | |
|---------|----|---|-----|--|
| Jan. 23 | S. | + | 1.1 | |
| Feb. 4 | S. | + | 1.0 | |
| 7 | F. | + | 0.7 | |
| 11 | F. | — | 1.2 | |
| 16 | S. | — | 2.2 | |
| 17 | P. | — | 0.2 | |
| 18 | E. | — | 1.2 | |

| α AQUILÆ—Continued. | | | | ϵ DRACONIS. | | | | κ CEPHEI, S. P. | | | | α CYGNI—Continued. | | | |
|----------------------------|----|----|-------|-----------------------------|--|--|--|---------------------------|--|--|--|---------------------------|----|----|-------|
| 1876. | | | | h. m. s. | | | | h. m. s. | | | | 1876. | | | |
| Feb. | 22 | E. | + 1.7 | Right Ascension, | | | | 20 13 2 | | | | Feb. | 11 | F. | — 1.3 |
| | 24 | S. | — 1.6 | | | | | | | | | | 17 | P. | — 0.2 |
| April | 14 | P. | — 1.2 | North-Polar Dist., | | | | 347 20 12".15 | | | | | 18 | E. | — 0.3 |
| July | 7 | P. | — 0.9 | 1876. | | | | 1876. | | | | Mar. | 3 | S. | — 1.1 |
| | 17 | F. | — 0.0 | June 1 P. | | | | Nov. 8 P. | | | | | 8 | P. | + 1.3 |
| | 26 | S. | — 3.0 | July 27 P. | | | | Dec. 12 F. | | | | May | 4 | P. | — 1.0 |
| | 27 | P. | — 2.1 | | | | | | | | | July | 7 | P. | — 0.5 |
| Aug. | 15 | F. | — 1.5 | Mean | | | | Mean | | | | Aug. | 9 | E. | — 0.8 |
| | 28 | E. | — 0.9 | Div., Flex., etc. | | | | Div., Flex., etc. | | | | | 16 | E. | — 1.3 |
| Sept. | 4 | S. | — 0.3 | | | | | | | | | | 21 | E. | — 0.1 |
| | 20 | S. | — 2.6 | ϵ DRACONIS (Ref.). | | | | π CAPRICORN. | | | | Sept. | 13 | P. | — 1.5 |
| | 28 | S. | — 3.2 | 1876. | | | | h. m. s. | | | | | 20 | S. | — 2.9 |
| | 29 | P. | — 1.1 | June 1 P. | | | | 20 20 13 | | | | | 25 | P. | — 0.7 |
| Oct. | 2 | S. | — 2.4 | July 27 P. | | | | North-Polar Dist., | | | | Oct. | 12 | P. | — 1.3 |
| | 3 | P. | — 1.4 | | | | | 108 36 58".94 | | | | | 18 | S. | — 1.1 |
| Dec. | 15 | E. | — 1.4 | Mean | | | | 1876. | | | | | 24 | E. | — 0.2 |
| | 20 | F. | — 1.4 | Div., Flex., etc. | | | | Div., Flex., etc. | | | | Dec. | 15 | E. | — 0.8 |
| Mean | | | 1.05 | | | | | | | | | | 19 | E. | — 0.6 |
| Div., Flex., etc. | | | 1.87 | | | | | | | | | | 27 | P. | — 2.2 |
| | | | | τ AQUILÆ. | | | | | | | | Mean | | | |
| | | | | Right Ascension, | | | | h. m. s. | | | | Div., Flex., etc. | | | |
| | | | | North-Polar Dist., | | | | 19 58 5 | | | | — 0.79 | | | |
| | | | | 1876. | | | | 83 4 13".20 | | | | + 0.35 | | | |
| | | | | June 1 P. | | | | — 1.0 | | | | | | | |
| | | | | Oct. 3 P. | | | | — 0.7 | | | | | | | |
| | | | | Mean | | | | — 0.85 | | | | | | | |
| | | | | Div., Flex., etc. | | | | + 1.85 | | | | | | | |
| | | | | τ AQUILÆ (Ref.). | | | | | | | | | | | |
| | | | | 1876. | | | | h. m. s. | | | | | | | |
| | | | | June 1 P. | | | | + 2.6 | | | | | | | |
| | | | | Div., Flex., etc. | | | | + 0.14 | | | | | | | |
| | | | | α^2 CAPRICORN. | | | | | | | | | | | |
| | | | | 1876. | | | | h. m. s. | | | | | | | |
| | | | | Right Ascension, | | | | 20 11 10 | | | | | | | |
| | | | | North-Polar Dist., | | | | 102 55 38".84 | | | | | | | |
| | | | | 1876. | | | | | | | | | | | |
| | | | | May 4 P. | | | | + 0.4 | | | | | | | |
| | | | | June 1 P. | | | | — 1.9 | | | | | | | |
| | | | | Aug. 21 E. | | | | — 0.9 | | | | | | | |
| | | | | Sept. 27 F. | | | | — 1.1 | | | | | | | |
| | | | | Oct. 3 P. | | | | — 0.8 | | | | | | | |
| | | | | Mean | | | | — 0.86 | | | | | | | |
| | | | | Div., Flex., etc. | | | | + 1.70 | | | | | | | |
| | | | | κ CEPHEI. | | | | | | | | | | | |
| | | | | Right Ascension, | | | | h. m. s. | | | | | | | |
| | | | | North-Polar Dist., | | | | 20 13 2 | | | | | | | |
| | | | | 1876. | | | | 12 39 47".85 | | | | | | | |
| | | | | May 4 P. | | | | — 1.5 | | | | | | | |
| | | | | Sept. 25 P. | | | | — 1.6 | | | | | | | |
| | | | | 29 P. | | | | — 0.4 | | | | | | | |
| | | | | Oct. 12 P. | | | | — 2.6 | | | | | | | |
| | | | | 24 E. | | | | — 1.8 | | | | | | | |
| | | | | Mean | | | | — 1.58 | | | | | | | |
| | | | | Div., Flex., etc. | | | | + 0.53 | | | | | | | |
| | | | | κ CEPHEI (Ref.). | | | | | | | | | | | |
| | | | | 1876. | | | | h. m. s. | | | | | | | |
| | | | | Sept. 25 P. | | | | — 2.9 | | | | | | | |
| | | | | 29 P. | | | | — 2.6 | | | | | | | |
| | | | | Mean | | | | — 2.75 | | | | | | | |
| | | | | Div., Flex., etc. | | | | + 1.23 | | | | | | | |
| | | | | κ CEPHEI, S. P. | | | | | | | | | | | |
| | | | | Right Ascension, | | | | h. m. s. | | | | | | | |
| | | | | North-Polar Dist., | | | | 20 30 32 | | | | | | | |
| | | | | 1876. | | | | 342 6 41".54 | | | | | | | |
| | | | | 1876. | | | | h. m. s. | | | | | | | |
| | | | | Nov. 8 P. | | | | — 2.2 | | | | | | | |
| | | | | Div., Flex., etc. | | | | + 0.24 | | | | | | | |
| | | | | α CYGNI. | | | | | | | | | | | |
| | | | | Right Ascension, | | | | h. m. s. | | | | | | | |
| | | | | North-Polar Dist., | | | | 20 37 12 | | | | | | | |
| | | | | 1876. | | | | 45 9 43".13 | | | | | | | |
| | | | | 1876. | | | | h. m. s. | | | | | | | |
| | | | | Jan. 24 S. | | | | + 0.1 | | | | | | | |
| | | | | Feb. 4 S. | | | | 0.0 | | | | | | | |
| | | | | Mean | | | | + 0.70 | | | | | | | |
| | | | | Div., Flex., etc. | | | | + 0.75 | | | | | | | |

12-YEAR CAT., 1879.

| | h. | m. | s. |
|--------------------|----|----|-------|
| Right Ascension, | 20 | 53 | 9 |
| North-Polar Dist., | 9 | 54 | 50.78 |

| 1876. | | | |
|---------|----|---|-----|
| July 7 | P. | — | 0.8 |
| Oct. 12 | P. | — | 1.3 |
| 24 | E. | — | 2.0 |

| | | |
|---------------------------|---|------|
| Mean | — | 1.37 |
| Div., Flex., etc. | + | 0.48 |

61¹ CYGNI.

| | h. | m. | s. |
|--------------------|----|----|-------|
| Right Ascension, | 21 | 1 | 20 |
| North-Polar Dist., | 51 | 51 | 33.23 |

| 1876. | | | |
|----------|----|---|-----|
| July 17 | F. | — | 0.8 |
| Aug. 6 | F. | — | 0.6 |
| Sept. 25 | P. | + | 0.2 |
| Oct. 17 | F. | + | 0.8 |

| | | |
|---------------------------|---|------|
| Mean | — | 0.10 |
| Div., Flex., etc. | + | 1.02 |

ζ CYGNI.

| | h. | m. | s. |
|--------------------|----|----|-------|
| Right Ascension, | 21 | 7 | 40 |
| North-Polar Dist., | 60 | 16 | 50.42 |

| 1876. | | | |
|----------|----|---|-----|
| Jan. 24 | S. | — | 1.2 |
| Feb. 17 | P. | + | 0.5 |
| 18 | E. | — | 1.2 |
| 23 | F. | — | 2.1 |
| Mar. 5 | E. | + | 0.5 |
| 8 | P. | + | 1.5 |
| 20 | P. | — | 1.0 |
| July 7 | P. | — | 0.6 |
| 21 | F. | — | 1.0 |
| 22 | S. | — | 0.7 |
| Aug. 21 | E. | + | 0.3 |
| Sept. 13 | P. | — | 0.2 |
| 25 | P. | — | 0.6 |
| Oct. 12 | P. | — | 1.8 |
| 18 | S. | + | 0.1 |
| 24 | E. | — | 1.0 |
| Dec. 15 | E. | — | 0.7 |
| 19 | E. | + | 1.3 |
| 27 | E. | — | 3.2 |

| | | |
|---------------------------|---|------|
| Mean | — | 0.58 |
| Div., Flex., etc. | + | 1.53 |

ζ CYGNI (Ref.).

| | | | | |
|-------------------|----|----|------|--|
| 1876. | | | | |
| July 21 | F. | -- | 0.5 | |
| Div., Flex., etc. | | + | 0.71 | |

α CEPHEI.

| | h. | m. | s. |
|--------------------|----|----|-------|
| Right Ascension, | 21 | 15 | 37 |
| North-Polar Dist., | 27 | 56 | 23.34 |

| 1876. | | | |
|---------|----|---|-----|
| Jan. 21 | P. | — | 3.4 |
| Feb. 17 | P. | — | 3.4 |
| 23 | F. | — | 1.9 |
| Mar. 3 | S. | — | 3.0 |
| 5 | E. | — | 0.6 |
| 8 | P. | — | 0.8 |
| 20 | P. | — | 2.4 |

α CEPHEI—Continued.

| 1876. | | | | " |
|---------------------------|----|----|---|------|
| Sept. | 13 | P. | — | 2.2 |
| Oct. | 12 | P. | — | 2.2 |
| | 24 | E. | — | 2.0 |
| <hr/> | | | | |
| Mean | | | — | 2.19 |
| Div., Flex., etc. | | | + | 0.82 |

α CEPHEI (Ref.).

| 1876. | | | " |
|---------------------------|----|----|--------|
| Sept. | 13 | P. | — 3.8 |
| Oct. | 12 | P. | — 3.2 |
| | 24 | E. | — 3.1 |
| | | | — |
| Mean | | | — 3.37 |
| Div., Flex., etc. | | | + 1.41 |

ι PEGASI.

| | h. | m. | s. |
|--------------------|----|----|-------|
| Right Ascension, | 21 | 16 | 21 |
| North-Polar Dist., | 70 | 43 | 28.73 |

| 1876. | | | |
|----------|----|---|-----|
| July 7 | P. | + | 1.3 |
| Aug. 26 | F. | + | 0.6 |
| Sept. 27 | F. | + | 1.4 |

| | | |
|---------------------------|---|------|
| Mean | + | 1.10 |
| Div., Flex., etc. | + | 1.61 |

ι PEGASI (Ref.).

| | | | | | |
|-------------------|---|----|---|-----|------|
| 1876. | | | | | " |
| July | 7 | P. | + | 1.5 | |
| Div., Flex., etc. | . | . | . | + | 0.38 |

β AQUARI.

| | h. | m. | s. |
|--------------------|----|----|-------|
| Right Ascension, | 21 | 25 | 2 |
| North-Polar Dist., | 96 | 6 | 55.04 |

| 1876. | | | |
|----------|----|---|-----|
| Mar. 2 | F. | — | 1.0 |
| April 18 | P. | — | 1.6 |
| Aug. 6 | F. | — | 0.5 |
| 21 | E. | — | 0.0 |
| Sept. 13 | P. | — | 0.2 |
| 20 | S. | — | 0.9 |
| Oct. 12 | P. | — | 1.1 |
| 17 | F. | + | 1.1 |
| 24 | E. | + | 1.2 |
| 27 | P. | — | 0.3 |
| Dec. 19 | E. | + | 1.8 |

| | | |
|---------------------------|---|------|
| Mean | — | 0.14 |
| Div., Flex., etc. | + | 1.60 |

β CEPHEI.

| | h. | m. | s. |
|--------------------|----|----|------|
| Right Ascension, | 21 | 27 | 3 |
| North-Polar Dist., | 19 | 59 | 1.66 |

| 1876. | | | " |
|-------------------|----|----|--------|
| Jan. | 21 | P. | — 1.9 |
| Feb. | 23 | F. | — 2.9 |
| Mar. | 8 | P. | + 0.7 |
| | 20 | P. | — 2.0 |
| Sept. | 29 | P. | — 2.8 |
| Oct. | 13 | F. | — 1.9 |
| | 27 | P. | — 2.5 |
| Mean | . | . | — 1.90 |
| Div., Flex., etc. | . | . | + 0.87 |

β CEPHEI (Ref.).

| | | | | |
|-------------------|----|---|------|---|
| 1876. | | | | " |
| Sept. 29 | P. | — | 2.8 | |
| Div., Flex., etc. | | + | 1.21 | |

β CEPHEI, S. P.

| | h. | m. | s. |
|--------------------|-----|----|-------|
| Right Ascension, | 21 | 27 | 3 |
| North-Polar Dist., | 340 | 0 | 58.34 |

| | | | |
|------------------|----|---|------|
| 1876. | | | " |
| Sept. 18 | F. | | 0.0 |
| Div, Flex., etc. | | + | 0.21 |

ξ AQUARI.

| | h. | m. | s. |
|--------------------|----|----|-------|
| Right Ascension, | 21 | 31 | 9 |
| North-Polar Dist., | 98 | 24 | 32.52 |

| 1876. | | | |
|----------|----|---|-----|
| July 7 | P. | — | 0.5 |
| Sept. 25 | P. | — | 1.4 |
| Oct. 17 | F. | — | 1.2 |

| | | |
|---------------------------|---|------|
| Mean | — | 1.03 |
| Div., Flex., etc. | + | 1.68 |

ε PEGASI.

| | h. | m. | s. |
|--------------------|----|----|-------|
| Right Ascension, | 21 | 38 | 6 |
| North-Polar Dist., | 80 | 41 | 32.63 |

| 1876. | | | |
|----------|----|---|-----|
| Jan. 21 | P. | + | 0.9 |
| Feb. 15 | F. | — | 1.1 |
| 23 | F. | — | 2.5 |
| Mar. 2 | F. | — | 2.1 |
| 3 | S. | + | 0.4 |
| 5 | E. | + | 2.0 |
| 20 | P. | — | 0.5 |
| April 18 | P. | — | 1.1 |
| Aug. 6 | F. | — | 1.0 |
| 21 | E. | — | 1.7 |
| 26 | F. | + | 0.4 |
| Sept. 13 | P. | — | 1.2 |
| Oct. 13 | F. | + | 0.1 |
| 27 | P. | — | 1.5 |
| Dec. 27 | P. | — | 1.0 |

| | | |
|---------------------------|---|------|
| Mean | — | 0.66 |
| Div., Flex., etc. | + | 1.87 |

ε PEGASI (Ref.).

| | | | | |
|-------------------|-------|---|------|--|
| 1876. | | | | |
| Oct. 13 | F. | + | 0.8 | |
| Div., Flex., etc. | . . . | + | 0.16 | |

ιι CEPHEI.

| | h. | m. | s. |
|--------------------|----|----|-------|
| Right Ascension, | 21 | 40 | 6 |
| North-Polar Dist., | 19 | 15 | 34.45 |

| 1876. | | | |
|----------|----|---|-----|
| Sept. 13 | P. | — | 2.3 |
| 29 | P. | — | 2.1 |
| Oct. 12 | P. | — | 2.2 |

| | | |
|---------------------------|---|------|
| Mean | — | 2.20 |
| Div., Flex., etc. | + | 0.86 |

ιι CEPHEI (Ref.).

| | | | | |
|-------------------|-------|---|------|---|
| 1876. | | | | " |
| Oct. 12 | P. | — | 0.9 | |
| Div., Flex., etc. | . . . | + | 1.22 | |

μ CAPRICORNI.

| | h. | m. | s. |
|--------------------|-----|----|------|
| Right Ascension, | 21 | 46 | 32 |
| North-Polar Dist., | 104 | 8 | 2.35 |

| 1876. | | | |
|---------|----|---|-----|
| July 7 | P. | — | 0.1 |
| Aug. 15 | F. | — | 1.4 |
| 26 | F. | — | 0.2 |
| Oct. 13 | F. | — | 0.0 |
| Nov. 22 | F. | — | 0.3 |

| | | |
|---------------------------|---|------|
| Mean | — | 0.40 |
| Div., Flex., etc. | + | 1.70 |

79 DRACONIS.

| | h. | m. | s. |
|--------------------|----|----|------|
| Right Ascension, | 21 | 51 | 19 |
| North-Polar Dist., | 16 | 53 | 3.82 |

| 1876. | | | |
|----------|----|---|-----|
| July 7 | P. | — | 1.7 |
| Sept. 29 | P. | — | 1.1 |
| Oct. 17 | F. | — | 1.0 |
| 18 | S. | — | 0.8 |
| 24 | E. | — | 2.3 |
| Nov. 22 | F. | — | 2.5 |

| | | |
|---------------------------|---|------|
| Mean | — | 1.57 |
| Div., Flex., etc. | + | 0.70 |

79 DRACONIS, S. P.

| | h. | m. | s. |
|--------------------|-----|----|-------|
| Right Ascension, | 21 | 51 | 19 |
| North-Polar Dist., | 343 | 6 | 56.18 |

| | | | | |
|-------------------|-------|---|------|---|
| 1876. | | | | " |
| Nov. 28 | P. | + | 0.9 | |
| Div., Flex., etc. | . . . | + | 0.25 | |

α AQUARI.

| | h. | m. | s. |
|--------------------|----|----|-------|
| Right Ascension, | 21 | 59 | 25 |
| North-Polar Dist., | 90 | 55 | 16.66 |

| 1876. | | | |
|----------|----|---|-----|
| Jan. 21 | P. | + | 1.7 |
| 24 | S. | — | 0.1 |
| Mar. 20 | P. | — | 1.2 |
| 28 | P. | — | 0.5 |
| April 18 | P. | — | 2.3 |
| July 7 | P. | — | 0.2 |
| Aug. 6 | F. | — | 2.9 |
| 15 | F. | — | 1.3 |
| Oct. 12 | P. | — | 1.3 |
| 13 | F. | — | 1.1 |
| 27 | P. | — | 1.4 |
| Nov. 22 | F. | — | 0.7 |

| | | |
|---------------------------|---|------|
| Mean | — | 0.94 |
| Div., Flex., etc. | + | 1.86 |

α AQUARI (Ref.).

| | | | | |
|-------------------|----|---|-----|------|
| 1876. | | | | " |
| Oct. 12 | P. | — | 0.3 | |
| Div., Flex., etc. | . | . | + | 0.39 |

| α GRUIS. | | | | ζ PEGASI. | | | | ι CEPHEI, S. P.—Continued. | | | | α PEGASI—Continued. | | | |
|---------------------------|---|------|--|----------------------------------|---|-----|--|----------------------------------|--|--|--|----------------------------------|--|--|--|
| h. m. s. | | | | h. m. s. | | | | 1876. | | | | 1876. | | | |
| Right Ascension, | | | | Right Ascension, | | | | Mar. 22 E. — 0.8 | | | | Sept. 4 S. + 0.7 | | | |
| North-Polar Dist., | | | | North-Polar Dist., | | | | April 1 S. — 1.9 | | | | Oct. 20 S. — 1.0 | | | |
| 1876. | | | | 1876. | | | | Mean — 0.85 | | | | Oct. 13 F. — 0.3 | | | |
| Oct. 2 S. | + | 6.6 | | Mar. 5 P. | — | 0.8 | | Div., Flex., etc. + 0.23 | | | | Nov. 31 S. — 0.1 | | | |
| Div., Flex., etc. | + | 1.25 | | April 9 P. | — | 1.6 | | ζ AQUARI. | | | | Nov. 7 S. — 0.1 | | | |
| θ AQUARI. | | | | Aug. 18 P. | | | | | | | | 22 F. + 0.4 | | | |
| | | | | 19 F. | | | | | | | | 27 S. + 0.5 | | | |
| | | | | 28 E. | | | | | | | | Dec. 21 S. — 0.0 | | | |
| | | | | Sept. 4 S. | | | | | | | | Mean + 0.50 | | | |
| | | | | 20 S. | | | | | | | | Div., Flex., etc. + 1.67 | | | |
| | | | | Oct. 3 P. | | | | | | | | | | | |
| | | | | 12 P. | | | | | | | | | | | |
| | | | | 31 S. | | | | | | | | | | | |
| | | | | Nov. 1 E. | | | | | | | | | | | |
| | | | | 7 S. | | | | | | | | | | | |
| | | | | 22 F. | | | | | | | | | | | |
| | | | | Mean — 0.59 | | | | | | | | | | | |
| | | | | Div., Flex., etc. + 1.85 | | | | | | | | | | | |
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[illegible]

MEAN PLACES
OF
MISCELLANEOUS STARS
GIVEN BY
INDIVIDUAL OBSERVATIONS
WITH THE
TRANSIT CIRCLE.
1876.

MEAN PLACES OF MISCELLANEOUS STARS FOR 1876.0,

GIVEN BY

INDIVIDUAL OBSERVATIONS

WITH

THE TRANSIT CIRCLE.

4 CETI.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-----|--------|----|----|----|-------|
| Oct. 27 | P. | o 1 | 22.91 | | 93 | 14 | 19.1 |
| Nov. 22 | F. | | 22.95 | | | | 19.9 |
| Dec. 21 | S. | | 23.05 | | | | 19.0 |
| 23 | P. | | 23.08 | | | | 19.8 |
| Mean | | o 1 | 22.998 | | 93 | 14 | 19.45 |
| Div., Flex., etc. | | | | | | + | 1.71 |

5 CETI.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-----|--------|----|----|---|-------|
| Oct. 27 | P. | o 1 | 51.10 | | 93 | 8 | 15.3 |
| Nov. 22 | F. | | 51.06 | | | | 13.9 |
| Dec. 21 | S. | | 51.21 | | | | 13.8 |
| 23 | P. | | 51.19 | | | | 14.7 |
| Mean | | o 1 | 51.140 | | 93 | 8 | 14.43 |
| Div., Flex., etc. | | | | | | + | 1.72 |

B. A. C. 54.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|------|-------|----|----|----|-------|
| Oct. 27(5) | P. | o 11 | 9.07 | | 39 | 15 | 19.1 |
| Dec. 21 | S. | | 9.12 | | | | 20.6 |
| 23 | P. | | 9.20 | | | | 20.2 |
| Mean | | o 11 | 9.130 | | 39 | 15 | 19.97 |
| Div., Flex., etc. | | | | | | + | 0.56 |

B. A. C. 69.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|------|--------|----|-----|----|-------|
| Nov. 27 | S. | o 14 | 43.95 | | 129 | 55 | 39.0 |
| Dec. 21 | S. | | 43.89 | | | | 33.6 |
| Mean | | o 14 | 43.920 | | 129 | 55 | 36.30 |
| Div., Flex., etc. | | | | | | + | 1.48 |

B. A. C. 78.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|------|--------|----|----|----|-------|
| Dec. 6 | P. | o 17 | 29.84 | | 46 | 25 | 21.0 |
| 23 | P. | | 29.97 | | | | 21.6 |
| Mean | | o 17 | 29.905 | | 46 | 25 | 21.30 |
| Div., Flex., etc. | | | | | | + | 0.40 |

GROOMBRIDGE 63.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|------|--------|----|----|----|-------|
| Dec. 6 | P. | o 18 | 47.95 | | 46 | 21 | 44.7 |
| 23 | P. | | 48.04 | | | | 45.3 |
| Mean | | o 18 | 47.995 | | 46 | 21 | 45.00 |
| Div., Flex., etc. | | | | | | + | 0.39 |

LACAILLE 81.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|------|-------|----|-----|----|------|
| Nov. 22 | F. | o 19 | 13.95 | | 129 | 56 | 41.1 |
| Div., Flex., etc. | | | | | | + | 1.48 |

LALANDE 512.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|------|-------|----|----|----|-------|
| Sept. 2 | F. | o 19 | 2.79 | | 88 | 44 | 47.7 |
| Nov. 7 | S. | | 2.88 | | | | 47.9 |
| 27 | S. | | 2.89 | | | | 48.4 |
| Mean | | o 19 | 2.853 | | 88 | 44 | 48.00 |
| Div., Flex., etc. | | | | | | + | 1.81 |

B. A. C. 100.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|------|--------|----|----|----|-------|
| Dec. 6 | P. | o 21 | 34.18 | | 46 | 17 | 30.2 |
| 23 | P. | | 34.31 | | | | 29.2 |
| Mean | | o 21 | 34.245 | | 46 | 17 | 29.70 |
| Div., Flex., etc. | | | | | | + | 0.38 |

B. A. C. 136¹.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|------|--------|----|-----|----|------|
| Nov. 1 | E. | o 27 | 39.00 | | 125 | 40 | 8.5 |
| 7 | S. | | 39.04 | | | | 6.9 |
| 22 | F. | | 38.94 | | | | 9.3 |
| Mean | | o 27 | 38.993 | | 125 | 40 | 8.23 |
| Div., Flex., etc. | | | | | | + | 1.54 |

B. A. C. 136².

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|------|--------|----|-----|----|-------|
| Nov. 1 | E. | o 27 | 39.21 | | 125 | 40 | 14.4 |
| 7 | S. | | 39.22 | | | | 14.6 |
| 22 | F. | | 39.01 | | | | 14.0 |
| Mean | | o 27 | 39.147 | | 125 | 40 | 14.33 |
| Div., Flex., etc. | | | | | | + | 1.54 |

B. A. C. 154.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|------|-------|----|---|----|------|
| Oct. 27(6) | P. | o 30 | 29.05 | | 8 | 11 | 28.2 |
| Div., Flex., etc. | | | | | | + | 0.47 |

B. A. C. 166.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|------|--------|----|----|----|------|
| Jan. 30 | E. | o 32 | 42.06 | | 59 | 49 | 4.2 |
| Feb. 19 | E. | | 42.02 | | | | 3.7 |
| 23 | E. | | 41.96 | | | | 6.4 |
| Mar. 8 | P. | | 42.03 | | | | 3.8 |
| Oct. 12(3) | P. | | 42.02 | | | | 1.5 |
| Mean | | o 32 | 42.018 | | 59 | 49 | 3.92 |
| Div., Flex., etc. | | | | | | + | 1.52 |

B. A. C. 192.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|------|--------|----|-----|---|-------|
| Nov. 1 | E. | o 36 | 44.75 | | 129 | 8 | 37.1 |
| 7 | S. | | 44.89 | | | | 34.3 |
| Dec. 7 | E. | | 44.93 | | | | 38.0 |
| Mean | | o 36 | 44.856 | | 129 | 8 | 36.47 |
| Div., Flex., etc. | | | | | | + | 1.45 |

B. A. C. 202.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|------|--------|----|-----|---|-------|
| Nov. 1 | E. | o 38 | 12.21 | | 129 | 6 | 20.3 |
| 7 | S. | | 12.23 | | | | 16.8 |
| Dec. 7 | E. | | 12.25 | | | | 19.8 |
| Mean | | o 38 | 12.230 | | 129 | 6 | 18.97 |
| Div., Flex., etc. | | | | | | + | 1.45 |

WEISSE (2) 1062.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|------|--------|----|----|----|-------|
| Nov. 1 | E. | o 42 | 27.21 | | 49 | 35 | 37.8 |
| Dec. 19 | E. | | 27.00 | | | | 36.5 |
| Mean | | o 42 | 27.105 | | 49 | 35 | 37.15 |
| Div., Flex., etc. | | | | | | + | 0.78 |

B. A. C. 227.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|------|--------|----|----|----|-------|
| Nov. 1 | E. | o 42 | 59.13 | | 49 | 35 | 48.2 |
| Dec. 19 | E. | | 58.99 | | | | 47.7 |
| Mean | | o 42 | 59.060 | | 49 | 35 | 47.95 |
| Div., Flex., etc. | | | | | | + | 0.78 |

WEISSE 753.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|------|--------|----|----|----|-------|
| Sept. 2 | F. | o 44 | 39.46 | | 87 | 12 | |
| 28 | S. | | 39.42 | | | | 11.0 |
| Oct. 12(9) | P. | | 39.37 | | | | 11.5 |
| Mean | | o 44 | 39.417 | | 87 | 12 | 11.25 |
| Div., Flex., etc. | | | | | | + | 1.78 |

B. A. C. 237.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|------|--------|----|----|----|-------|
| Sept. 2 | F. | o 44 | 55.38 | | 87 | 17 | |
| 28 | S. | | 55.26 | | | | 14.0 |
| Oct. 12(6) | P. | | 55.31 | | | | 15.2 |
| Mean | | o 44 | 55.317 | | 87 | 17 | 14.60 |
| Div., Flex., etc. | | | | | | + | 1.78 |

B. A. C. 259.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|------|--------|----|----|----|-------|
| Jan. 30 | E. | o 49 | 52.56 | | 52 | 10 | 26.0 |
| Nov. 7 | S. | | 52.48 | | | | 24.8 |
| 24 | S. | | 52.51 | | | | 23.8 |
| Dec. 7 | E. | | 52.55 | | | | 24.8 |
| Mean | | o 49 | 52.532 | | 52 | 10 | 24.85 |
| Div., Flex., etc. | | | | | | + | 1.07 |

SCHJELLERUP 337.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|------|--------|----|----|----|-------|
| Sept. 2 | F. | o 51 | 54.93 | | 86 | 22 | 23.3 |
| 28 | S. | | 54.82 | | | | 23.1 |
| Oct. 27(8) | P. | | 54.88 | | | | 22.9 |
| Mean | | o 51 | 54.877 | | 86 | 22 | 23.10 |
| Div., Flex., etc. | | | | | | + | 1.78 |

| DURCH. 3 ^d , 133. | | | | WEISSE 791 ¹ . | | | | LALANDE 4803. | | | |
|------------------------------|-------------|--------|-------|------------------------------|-------------|-------|-------|-----------------------------|-------------|--------|-------|
| 1876. | h. m. s. | | | 1876. | h. m. s. | ° ' " | | 1876. | h. m. s. | ° ' " | |
| Sept. 2 F. | 0 52 18.48 | 86 27 | 48.8 | Oct. 12 (8.5) P. | 1 45 27.42 | 79 48 | 10.3 | Oct. 27 (4) P. | 2 29 17.08 | 83 42 | 19.1 |
| 23 S. | 18.31 | | 48.8 | Dec. 5 S. | 27.35 | | 10.2 | Nov. 7 S. | 17.06 | | 18.4 |
| Oct. 27 (7.8) P. | 18.35 | | 50.5 | 17 S. | 27.39 | | 8.8 | 28 P. | 17.15 | | 19.7 |
| Mean . . . | 0 52 18.380 | 86 27 | 49.37 | Mean . . . | 1 45 27.387 | 79 48 | 9.77 | Dec. 6 P. | 17.09 | | 18.9 |
| Div., Flex., etc. | | + | 1.78 | Div., Flex., etc. | | + | 1.85 | 15 E. | 17.13 | | 19.2 |
| B. A. C. 272. | | | | WEISSE 791 ² . | | | | 19 E. | 17.07 | | 19.5 |
| 1876. | h. m. s. | | | 1876. | h. m. s. | ° ' " | | 23 P. | 17.09 | | 19.8 |
| Nov. 1 E. | 0 52 37.75 | 120 1 | 40.6 | Oct. 12 (8.5) P. | 1 45 27.47 | 79 48 | 6.2 | Mean . . . | 2 29 17.096 | 83 42 | 19.23 |
| 7 S. | 37.76 | | 38.8 | Dec. 5 S. | 27.44 | | 5.6 | Div., Flex., etc. | | + | 1.84 |
| 24 S. | 37.82 | | 38.4 | 17 S. | 27.53 | | 5.1 | LALANDE 4830. | | | |
| Mean . . . | 0 52 37.777 | 120 1 | 39.27 | Mean . . . | 1 45 27.480 | 79 48 | 5.63 | 1876. | h. m. s. | ° ' " | |
| Div., Flex., etc. | | + | 1.79 | Div., Flex., etc. | | + | 1.85 | Oct. 12 (6.5) P. | 2 30 37.99 | 52 48 | 40.7 |
| B. A. C. 289. | | | | B. A. C. 569. | | | | Nov. 1 E. | 37.99 | | 38.2 |
| 1876. | h. m. s. | | | 1876. | h. m. s. | ° ' " | | 7 S. | 37.94 | | 39.7 |
| Nov. 1 E. | 0 56 31.01 | 122 13 | 11.2 | Jan. 30 E. | 1 46 0.95 | 61 1 | 32.3 | Mean . . . | 2 30 37.973 | 52 48 | 39.53 |
| 22 F. | 30.90 | | 7.0 | Mar. 6 E. | 0.96 | | 35.3 | Div., Flex., etc. | | + | 1.16 |
| 24 S. | 31.04 | | 9.8 | 27 F. | 0.97 | | 34.2 | LALANDE 4903 ¹ . | | | |
| Mean . . . | 0 56 30.983 | 122 13 | 9.33 | Dec. 19 E. | 0.93 | | 34.3 | 1876. | h. m. s. | ° ' " | |
| Div., Flex., etc. | | + | 1.69 | Mean . . . | 1 46 0.952 | 61 1 | 34.02 | Dec. 15 E. | 2 32 11.45 | 75 40 | 32.9 |
| WEISSE 982. | | | | Div., Flex., etc. | | + | 1.55 | 17 S. | 11.43 | | 33.8 |
| 1876. | h. m. s. | | | B. A. C. 590. | | | | 19 E. | 11.38 | | 33.2 |
| Oct. 12 (7) P. | 0 57 16.17 | 85 25 | 48.2 | 1876. | h. m. s. | ° ' " | | 23 P. | 11.40 | | 34.6 |
| 18 S. | 16.23 | | 49.1 | Oct. 12 (6) P. | 1 50 41.45 | 41 24 | 9.9 | 27 E. | 11.41 | | 33.3 |
| Dec. 21 S. | 16.33 | | 47.1 | 17 F. | 41.25 | | 10.0 | Mean . . . | 2 32 11.414 | 75 40 | 33.56 |
| Mean . . . | 0 57 16.243 | 85 25 | 48.13 | Dec. 17 S. | 41.35 | | 9.1 | Div., Flex., etc. | | + | 1.68 |
| Div., Flex., etc. | | + | 1.79 | Mean . . . | 1 50 41.350 | 41 24 | 9.67 | LALANDE 4903 ² . | | | |
| B. A. C. 334. | | | | Div., Flex., etc. | | + | 0.56 | 1876. | h. m. s. | ° ' " | |
| 1876. | h. m. s. | | | DURCH. 2 ^o , 315. | | | | Dec. 17 S. | 2 32 11.90 | 75 40 | 31.4 |
| Jan. 30 E. | 1 2 47.60 | 55 2 | 14.2 | 1876. | h. m. s. | ° ' " | | 27 E. | 11.88 | | 31.6 |
| Feb. 16 F. | 47.62 | | 12.1 | Oct. 12 (8.8) P. | 1 55 25.46 | 87 43 | 16.6 | Mean . . . | 2 32 11.890 | 75 40 | 31.50 |
| 19 E. | 47.62 | | 14.3 | Dec. 13 S. | 25.47 | | 15.9 | Div., Flex., etc. | | + | 1.68 |
| Mar. 9 P. | 47.61 | | 14.2 | 21 S. | 25.53 | | 16.5 | γ^1 CETI. | | | |
| April 30 E. | 47.61 | | 13.6 | Mean . . . | 1 55 25.487 | 87 43 | 16.33 | 1876. | h. m. s. | ° ' " | |
| May 21 P. | 47.63 | | 15.2 | Div., Flex., etc. | | + | 1.78 | Oct. 27 (7) P. | 2 36 52.49 | 87 17 | 13.1 |
| Mean . . . | 1 2 47.615 | 55 2 | 13.93 | B. A. C. 625 ¹ . | | | | Nov. 28 P. | 52.51 | | 14.4 |
| Div., Flex., etc. | | + | 1.37 | 1876. | h. m. s. | ° ' " | | Mean . . . | 2 36 52.500 | 87 17 | 13.75 |
| POLARIS COMES, S. P. | | | | Jan. 30 E. | 1 55 37.84 | 87 50 | 4.9 | Div., Flex., etc. | | + | 1.78 |
| 1876. | h. m. s. | | | Div., Flex., etc. | | + | 1.78 | B. A. C. 878 ¹ . | | | |
| May 29 E. | 1 12 47.59 | 1 21 | 22.6 | B. A. C. 625 ² . | | | | 1876. | h. m. s. | ° ' " | |
| Div., Flex., etc. | | + | 0.87 | 1876. | h. m. s. | ° ' " | | Oct. 27 (6.8) P. | 2 43 41.03 | 127 55 | 10.7 |
| B. A. C. 495. | | | | Jan. 30 E. | 1 55 37.95 | 87 50 | 7.7 | Nov. 1 E. | 40.81 | | 11.7 |
| 1876. | h. m. s. | | | Nov. 29 E. | 38.28 | | 8.9 | Dec. 5 S. | 41.16 | | 10.8 |
| Sept. 29 (6.5) P. | 1 32 34.48 | 74 0 | 16.0 | Mean . . . | 1 55 38.115 | 87 50 | 8.30 | Mean . . . | 2 43 41.000 | 127 55 | 11.97 |
| Oct. 12 (6.5) P. | 34.25 | | 15.9 | Div., Flex., etc. | | + | 1.78 | Div., Flex., etc. | | + | 1.44 |
| 18 S. | 34.43 | | 16.4 | B. A. C. 609. | | | | B. A. C. 878 ² . | | | |
| Mean . . . | 1 32 34.387 | 74 0 | 16.10 | 1876. | h. m. s. | ° ' " | | 1876. | h. m. s. | ° ' " | |
| Div., Flex., etc. | | + | 1.65 | Dec. 27 E. | 1 52 47.80 | 78 18 | 25.3 | Oct. 27 (8) P. | 2 43 41.29 | 127 55 | 16.0 |
| B. A. C. 501. | | | | Div., Flex., etc. | | + | 1.77 | Nov. 1 E. | 41.05 | | 16.4 |
| 1876. | h. m. s. | | | LALANDE 4528. | | | | Dec. 5 S. | 41.38 | | 16.7 |
| Oct. 3 (5.5) P. | 1 33 14.10 | 47 19 | 49.6 | 1876. | h. m. s. | ° ' " | | Mean . . . | 2 43 41.240 | 127 55 | 16.37 |
| Dec. 5 S. | 13.93 | | 49.3 | Oct. 12 (7.5) P. | 2 20 42.28 | 73 54 | 47.4 | Div., Flex., etc. | | + | 1.44 |
| 17 S. | 14.05 | | 49.0 | Nov. 7 S. | 42.32 | | 45.7 | ρ^2 ARIETIS. | | | |
| Mean . . . | 1 33 14.027 | 47 19 | 49.30 | 22 F. | 42.06 | | 47.6 | 1876. | h. m. s. | ° ' " | |
| Div., Flex., etc. | | + | 0.52 | Mean . . . | 2 20 42.220 | 73 54 | 46.90 | Feb. 2 P. | 2 48 50.53 | 72 10 | 18.6 |
| B. A. C. 544. | | | | Div., Flex., etc. | | + | 1.65 | Oct. 12 (5.8) P. | | | 18.1 |
| 1876. | h. m. s. | | | B. A. C. 625 ³ . | | | | 18 F. | 50.49 | | 19.3 |
| Oct. 12 (6.2) P. | 1 41 20.15 | 52 39 | 54.6 | 1876. | h. m. s. | ° ' " | | Nov. 24 S. | 50.62 | | 15.9 |
| Nov. 24 S. | 20.29 | | 53.9 | Oct. 12 (7.5) P. | 2 20 42.28 | 73 54 | 47.4 | Mean . . . | 2 48 50.547 | 72 10 | 17.98 |
| Dec. 5 S. | 20.14 | | 56.0 | Nov. 7 S. | 42.32 | | 45.7 | Div., Flex., etc. | | + | 1.62 |
| Mean . . . | 1 41 20.193 | 52 39 | 54.83 | 22 F. | 42.06 | | 47.6 | B. A. C. 625 ⁴ . | | | |
| Div., Flex., etc. | | + | 1.14 | Mean . . . | 2 20 42.220 | 73 54 | 46.90 | 1876. | h. m. s. | ° ' " | |

ρ^3 ARIETIS.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| Nov. 27 S. | 2 49 26.35 | 72 28 20.9 |
| Dec. 5 S. | 26.33 | 20.8 |
| 17 S. | 26.37 | 20.1 |
| Mean . . . | 2 49 26.350 | 72 28 20.60 |
| Div., Flex., etc. | | + 1.62 |

ANONYMOUS.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|------------|
| Dec. 6 P. | 2 50 42.17 | 68 56 54.6 |
| Div., Flex., etc. | | + 1.60 |

B. A. C. 920.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| Dec. 19 E. | 2 51 46.77 | 68 52 46.6 |
| 21 S. | 46.85 | 45.6 |
| 23 P. | 46.71 | 46.0 |
| Mean . . . | 2 51 46.777 | 68 52 46.07 |
| Div., Flex., etc. | | + 1.60 |

B. A. C. 937.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| Nov. 5 E. | 2 53 33.76 | 130 48 7.3 |
| 27 S. | 33.55 | 10.8 |
| Dec. 5 S. | 33.88 | 9.5 |
| Mean . . . | 2 53 33.730 | 130 48 9.20 |
| Div., Flex., etc. | | + 1.46 |

B. A. C. 938.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| Nov. 5 E. | 2 53 34.54 | 130 48 7.4 |
| 27 S. | 34.38 | 9.1 |
| Dec. 5 S. | 34.62 | 8.2 |
| Mean . . . | 2 53 34.513 | 130 48 8.23 |
| Div., Flex., etc. | | + 1.46 |

B. A. C. 953.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|------------|
| May 31 P. | 2 57 14.00 | 51 38 30.9 |
| Div., Flex., etc. | | + 0.98 |

B. A. C. 984.

| 1876. | h. m. s. | ° ' " |
|-------------------|----------|-------------|
| Feb. 2 P. | | 125 54 18.0 |
| Div., Flex., etc. | | + 1.53 |

B. A. C. 1003.

| 1876. | h. m. s. | ° ' " |
|-------------------|----------|-------------|
| Feb. 2 P. | | 126 24 34.4 |
| Div., Flex., etc. | | + 1.51 |

B. A. C. 1015.

| 1876. | h. m. s. | ° ' " |
|-------------------|----------|------------|
| Feb. 2 P. | | 126 1 14.1 |
| Div., Flex., etc. | | + 1.53 |

B. A. C. 1042.

| 1876. | h. m. s. | ° ' " |
|-------------------|----------|-------------|
| Feb. 2 P. | | 125 27 17.8 |
| Div., Flex., etc. | | + 1.55 |

B. A. C. 1060.

| 1876. | h. m. s. | ° ' " |
|-------------------|----------|------------|
| Feb. 2 P. | | 123 8 53.6 |
| Div., Flex., etc. | | + 1.63 |

B. A. C. 1100.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|-------------|
| Oct. 12 (4) P. | 3 27 5.32 | 99 52 44.4 |
| Nov. 28 P. | 5.25 | 44.4 |
| Dec. 3 E. | 5.28 | 42.8 |
| Mean . . . | 3 27 5.283 | 99 52 43.87 |
| Div., Flex., etc. | | + 1.68 |

B. A. C. 1125.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|--------------|
| Oct. 18 S. | 3 32 38.79 | 130 40 55.6 |
| Dec. 3 E. | 38.70 | 59.5 |
| 7 E. | 38.72 | 59.8 |
| 13 S. | 38.70 | 59.3 |
| Mean . . . | 3 32 38.728 | 130 40 58.55 |
| Div., Flex., etc. | | + 1.47 |

B. A. C. 1136¹.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|------------|
| Oct. 18 S. | 3 35 19.08 | 130 45 8.7 |
| Dec. 7 E. | 18.94 | |
| Mean . . . | 3 35 19.010 | 130 45 8.7 |
| Div., Flex., etc. | | + 1.47 |

B. A. C. 1136².

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| Oct. 18 S. | 3 35 19.60 | 130 45 17.2 |
| Dec. 7 E. | 19.37 | |
| Mean . . . | 3 35 19.485 | 130 45 17.2 |
| Div., Flex., etc. | | + 1.47 |

 ϵ PLEIADUM.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|------------|
| Dec. 27 E. | 3 37 49.82 | 65 55 24.8 |
| Div., Flex., etc. | | + 1.64 |

 ϵ PLEIADUM.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|-----------|
| Dec. 27 E. | 3 38 27.07 | 66 1 15.9 |
| Div., Flex., etc. | | + 1.64 |

LALANDE 7443.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|-----------|
| Oct. 27 (8.8) P. | 3 54 55.83 | 55 1 41.2 |
| Div., Flex., etc. | | + 1.37 |

LALANDE 7788.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|-------------|
| Oct. 27 (7.6) P. | 4 3 53.76 | 107 48 9.6 |
| Dec. 21 S. | 53.75 | 7.8 |
| Mean . . . | 4 3 53.755 | 107 48 8.70 |
| Div., Flex., etc. | | + 1.90 |

LALANDE 7791.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|-------------|
| Oct. 27 (8.4) P. | 4 3 59.49 | 107 50 2.7 |
| Dec. 21 S. | 59.51 | 49 57.8 |
| Mean . . . | 4 3 59.500 | 107 50 0 25 |
| Div., Flex., etc. | | + 1.90 |

B. A. C. 1294.

| 1876. | h. m. s. | ° ' " |
|-------------------|-----------|--------------|
| Nov. 5 E. | 4 6 9.42 | 125 35 42.9 |
| Dec. 15 E. | 9.35 | 46.3 |
| 31 E. | 9.38 | 44.5 |
| Mean . . . | 4 6 9.383 | 125 35 44.57 |
| Div., Flex., etc. | | + 1.55 |

B. A. C. 1312.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|--------------|
| Nov. 5 E. | 4 9 28.39 | 127 20 37.0 |
| Dec. 15 E. | 28.31 | 38.6 |
| 31 E. | 28.30 | 39.8 |
| Mean . . . | 4 9 28.333 | 127 20 38.47 |
| Div., Flex., etc. | | + 1.47 |

51 TAURI.

| 1876. | h. m. s. | ° ' " |
|-------------------|-----------|------------|
| Dec. 21 S. | 4 11 3.04 | 68 43 31.1 |
| Div., Flex., etc. | | + 1.60 |

53 TAURI.

| 1876. | h. m. s. | ° ' " |
|-------------------|-----------|-----------|
| Dec. 21 S. | 4 12 7.73 | 69 9 33.7 |
| Div., Flex., etc. | | + 1.60 |

56 TAURI.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|------------|
| Dec. 21 S. | 4 12 16.37 | 68 31 40.1 |
| Div., Flex., etc. | | + 1.60 |

B. A. C. 1333.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|-----------|
| Nov. 5 E. | 4 13 12.29 | 124 6 4.2 |
| Div., Flex., etc. | | + 1.59 |

B. A. C. 1341¹.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|-------------|
| Oct. 27 (5.2) P. | 4 15 2.38 | 64 39 53.4 |
| Nov. 5 E. | 2.21 | 54.2 |
| Dec. 15 E. | 2.27 | 51.9 |
| Mean . . . | 4 15 2.287 | 64 39 53.17 |
| Div., Flex., etc. | | + 1.64 |

B. A. C. 1341².

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|-------------|
| Oct. 27 (8.5) P. | 4 15 3.02 | 64 39 35.2 |
| Nov. 5 E. | 2.92 | 35.1 |
| Dec. 15 E. | 2.93 | 33.7 |
| Mean . . . | 4 15 2.956 | 64 39 34.67 |
| Div., Flex., etc. | | + 1.64 |

62¹ TAURI.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| Oct. 12 (8) P. | 4 16 29.28 | 65 59 10.7 |
| Dec. 6 P. | 29.37 | 10.7 |
| Mean . . . | 4 16 29.325 | 65 59 10.70 |
| Div., Flex., etc. | | + 1.64 |

62² TAURI.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| Oct. 12 (6) P. | 4 16 31.28 | 65 59 20.9 |
| Dec. 6 P. | 31.29 | 21.1 |
| Mean . . . | 4 16 31.285 | 65 59 21.00 |
| Div., Flex., etc. | | + 1.64 |

B. A. C. 1368.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|-------------|
| Jan. 20 S. | 4 18 (34.67) | 125 50 4.1 |
| 26 E. | 34.93 | 4.2 |
| Mean . . . | 4 18 34.93 | 125 50 4.15 |
| Div., Flex., etc. | | + 1.54 |

| | | | | | | | | | | | |
|-------------------|------|---------|--------------|-------------------|------|---------|--------------|------------------------------|------|---------|-------------|
| B. A. C. 1378. | | | | B. A. C. 1533. | | | | B. A. C. 1694. | | | |
| 1876. | | h m s | ° ' " | 1876. | | h m s | ° ' " | 1876. | | h m s | ° ' " |
| Nov. 28 P. | 4 21 | 22.04 | 75 32 12.0 | Feb. 10 P. | 4 50 | 45.66 | 129 49 44.9 | Jan. 20 S. | 5 19 | (22.42) | 127 27 6.7 |
| Dec. 3 E. | | 21.97 | 11.6 | Div., Flex., etc. | | | + 1.47 | Feb. 18 P. | | 22.71 | 8.5 |
| 5 S. | | 22.03 | 11.3 | | | | | Oct. 27 P. | | 22.78 | 9.0 |
| 15 E. | | 21.98 | 11.1 | | | | | Mean . . . | 5 19 | 22.745 | 127 27 8.07 |
| Mean . . . | 4 21 | 22.005 | 75 32 11.50 | LALANDE 9484. | | | | Div., Flex., etc. | | | + 1.47 |
| Div., Flex., etc. | | | + 1.68 | 1876. | | h m s | ° ' " | B. A. C. 1718. | | | |
| B. A. C. 1389. | | | | Oct. 12 (7) P. | 4 56 | 53.00 | 62 28 43.6 | 1876. | | h m s | ° ' " |
| 1876. | | h m s | ° ' " | Dec. 3 E. | | 52.91 | 44.8 | Jan. 25 P. | 5 23 | 13.94 | 122 31 12.7 |
| Jan. 24 S. | 4 22 | 26.82 | 130 48 55.1 | 6 P. | | 52.92 | 43.6 | Div., Flex., etc. | | | + 1.67 |
| 26 E. | | 26.96 | 38.5 | 15 E. | | 52.98 | 44.7 | B. A. C. 1724. | | | |
| Mean . . . | 4 22 | 26.890 | 130 48 36.80 | Mean . . . | 4 56 | 52.952 | 62 28 44.18 | 1876. | | h m s | ° ' " |
| Div., Flex., etc. | | | + 1.46 | Div., Flex., etc. | | | + 1.57 | Jan. 20 S. | 5 23 | (58.83) | 127 20 6.6 |
| B. A. C. 1407. | | | | B. A. C. 1574. | | | | Feb. 18 P. | | 58.98 | 3.9 |
| 1876. | | h m s | ° ' " | 1876. | | h m s | ° ' " | Oct. 27 P. | | 59.04 | 4.9 |
| Feb. 10 P. | 4 26 | 9.36 | 125 55 23.6 | Jan. 24 S. | 5 0 | 0.61 | 125 52 43.1 | Mean . . . | 5 23 | 59.010 | 127 20 5.13 |
| Div., Flex., etc. | | | + 1.53 | Div., Flex., etc. | | | + 1.54 | Div., Flex., etc. | | | + 1.47 |
| B. A. C. 1440. | | | | B. A. C. 1588. | | | | WEISSE 633. | | | |
| 1876. | | h m s | ° ' " | 1876. | | h m s | ° ' " | 1876. | | h m s | ° ' " |
| Jan. 20 S. | 4 32 | (15.62) | 120 40 53.7 | Jan. 26 E. | 5 1 | 45.29 | 95 14 52.1 | Dec. 3 E. | 5 26 | 49.55 | 96 35 5.5 |
| 24 S. | | 15.79 | 53.4 | Div., Flex., etc. | | | + 1.60 | 15 E. | | 49.47 | 5.4 |
| 26 E. | | 15.83 | 52.7 | B. A. C. 1599. | | | | Mean . . . | 5 26 | 49.510 | 96 35 5.45 |
| Mean . . . | 4 32 | 15.810 | 120 40 53.27 | 1876. | | h m s | ° ' " | Div., Flex., etc. | | | + 1.62 |
| Div., Flex., etc. | | | + 1.77 | Jan. 24 S. | 5 3 | 49.97 | 125 52 44.9 | WEISSE 632. | | | |
| ANONYMOUS. | | | | Div., Flex., etc. | | | + 1.54 | 1876. | | h m s | ° ' " |
| 1876. | | h m s | ° ' " | DURCH 27° 744. | | | | Dec. 3 E. | 5 26 | 49.87 | 96 35 43.8 |
| Dec. 15 E. | 4 34 | 3.35 | 68 2 34.8 | 1876. | | h m s | ° ' " | 15 E. | | 49.79 | 43.6 |
| 19 E. | | 3.27 | 34.6 | Dec. 15 E. | 5 9 | 6.31 | 62 25 21.2 | Mean . . . | 5 26 | 49.830 | 96 35 43.70 |
| Mean . . . | 4 34 | 3.310 | 68 2 34.70 | Div., Flex., etc. | | | + 1.57 | Div., Flex., etc. | | | + 1.62 |
| Div., Flex., etc. | | | + 1.60 | B. A. C. 1630. | | | | B. A. C. 1753. | | | |
| B. A. C. 1464. | | | | 1876. | | h m s | ° ' " | 1876. | | h m s | ° ' " |
| 1876. | | h m s | ° ' " | Jan. 24 S. | 5 9 | 22.51 | 125 58 7.2 | Feb. 18 P. | 5 28 | 41.27 | 125 13 31.7 |
| Jan. 24 S. | 4 37 | 40.39 | 127 23 13.6 | Div., Flex., etc. | | | + 1.53 | Div., Flex., etc. | | | + 1.56 |
| Oct. 12 (3.8) P. | | 40.58 | 13.8 | B. A. C. 1633. | | | | B. A. C. 1767. | | | |
| Nov. 28 P. | | 40.48 | 14.8 | 1876. | | h m s | ° ' " | 1876. | | h m s | ° ' " |
| Mean . . . | 4 37 | 40.483 | 127 23 14.07 | Jan. 25 P. | 5 10 | 5.71 | 126 7 14.7 | Jan. 20 S. | 5 30 | (14.02) | 68 56 5.8 |
| Div., Flex., etc. | | | + 1.47 | Div., Flex., etc. | | | + 1.53 | Feb. 18 P. | | 14.09 | 5.1 |
| B. A. C. 1467. | | | | B. A. C. 1644. | | | | Dec. 6 P. | | 13.96 | 4.7 |
| 1876. | | h m s | ° ' " | 1876. | | h m s | ° ' " | Mean . . . | 5 30 | 14.025 | 68 56 5.20 |
| Jan. 26 E. | 4 38 | 21.88 | 120 59 50.3 | Jan. 26 E. | 5 11 | 50.89 | 123 40 30.3 | Div., Flex., etc. | | | + 1.60 |
| Dec. 3 E. | | 21.87 | 51.4 | Div., Flex., etc. | | | + 1.61 | B. A. C. 1763. | | | |
| Mean . . . | 4 38 | 21.875 | 120 59 50.85 | B. A. C. 1650. | | | | 1876. | | h m s | ° ' " |
| Div., Flex., etc. | | | + 1.70 | 1876. | | h m s | ° ' " | Dec. 31 E. | 5 29 | 32.45 | 94 56 19.4 |
| B. A. C. 1480. | | | | Jan. 25 P. | 5 13 | 0.83 | 125 1 4.6 | Div., Flex., etc. | | | + 1.60 |
| 1876. | | h m s | ° ' " | Feb. 18 P. | | 0.79 | 1.9 | ♄ ORIONIS. | | | |
| Jan. 24 S. | 4 41 | 14.38 | 124 13 51.8 | Dec. 2 P. | | 0.78 | 4.0 | 1876. | | h m s | ° ' " |
| 26 E. | | 14.46 | 58.7 | Mean . . . | 5 13 | 0.800 | 125 1 3.50 | Dec. 31 E. | 5 29 | 16.06 | 94 55 17.2 |
| Oct. 12 (6.5) P. | | 14.29 | 51.8 | Div., Flex., etc. | | | + 1.57 | Div., Flex., etc. | | | + 1.60 |
| Mean . . . | 4 41 | 14.377 | 124 13 54.10 | B. A. C. 1666. | | | | B. A. C. 1794 ¹ . | | | |
| Div., Flex., etc. | | | + 1.59 | 1876. | | h m s | ° ' " | 1876. | | h m s | ° ' " |
| B. A. C. 1488. | | | | Jan. 20 S. | 5 15 | (52.59) | 124 49 27.6 | Jan. 25 P. | 5 34 | 30.15 | 92 0 34.7 |
| 1876. | | h m s | ° ' " | 26 E. | | 52.82 | 28.9 | Feb. 5 S. | | 30.13 | 35.7 |
| Jan. 24 S. | 4 42 | 59.42 | 120 14 38.2 | 31 F. | | 52.84 | 27.6 | 18 P. | | 30.13 | 33.7 |
| Nov. 28 P. | | 59.43 | 38.9 | Mean . . . | 5 15 | 52.830 | 124 49 28.03 | May 20 P. | | 30.12 | 35.7 |
| Dec. 3 E. | | 59.50 | 40.4 | Div., Flex., etc. | | | + 1.57 | July 18 P. | | 30.09 | 34.1 |
| Mean . . . | 4 42 | 59.450 | 120 14 39.17 | B. A. C. 1666. | | | | Oct. 27 (2.5) P. | | 30.20 | 32.5 |
| Div., Flex., etc. | | | + 1.78 | 1876. | | h m s | ° ' " | Dec. 2 P. | | 30.15 | 33.7 |
| B. A. C. 1488. | | | | Jan. 20 S. | 5 15 | (52.59) | 124 49 27.6 | Mean . . . | 5 34 | 30.139 | 92 0 34.30 |
| 1876. | | h m s | ° ' " | 26 E. | | 52.82 | 28.9 | Div., Flex., etc. | | | + 1.80 |
| Jan. 24 S. | 4 42 | 59.42 | 120 14 38.2 | 31 F. | | 52.84 | 27.6 | | | | |
| Nov. 28 P. | | 59.43 | 38.9 | Mean . . . | 5 15 | 52.830 | 124 49 28.03 | | | | |
| Dec. 3 E. | | 59.50 | 40.4 | Div., Flex., etc. | | | + 1.57 | | | | |

B. A. C. 1794²

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|----|---|-------|
| Feb. 18 | P. | | 5 34 | 30.33 | 92 | 0 | 36.0 |
| July 18 | P. | | | 30.09 | | | 34.1 |
| Oct. 27(4) | P. | | | 30.29 | | | 35.4 |
| Dec. 2 | P. | | | 30.28 | | | 34.2 |
| Mean | | | 5 34 | 30.248 | 92 | 0 | 34.92 |
| Div., Flex., etc. | | | | | | + | 1.80 |

B. A. C. 1825.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|---------|-----|----|-------|
| Jan. 20 | S. | | 5 39 | (24.14) | 129 | 27 | 46.2 |
| 25 | P. | | | 24.43 | | | 46.4 |
| Feb. 10 | P. | | | 24.39 | | | 47.0 |
| Mean | | | 5 39 | 24.410 | 129 | 27 | 46.53 |
| Div., Flex., etc. | | | | | | + | 1.46 |

B. A. C. 1842.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|---------|-----|----|-------|
| Jan. 20 | S. | | 5 41 | (18.29) | 129 | 21 | 52.1 |
| 25 | P. | | | 18.66 | | | 50.5 |
| Feb. 10 | P. | | | 18.38 | | | 51.6 |
| Mean | | | 5 41 | 18.520 | 129 | 21 | 51.40 |
| Div., Flex., etc. | | | | | | + | 1.46 |

B. A. C. 1841.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|-----|----|-------|
| Mar. 3 | F. | | 5 41 | 23.38 | 122 | 21 | 15.9 |
| Dec. 6 | P. | | | 23.45 | | | 16.1 |
| 13 | S. | | | 23.49 | | | 16.0 |
| Mean | | | 5 41 | 23.440 | 122 | 21 | 16.00 |
| Div., Flex., etc. | | | | | | + | 1.69 |

WEISSE 1110.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|-------|----|----|-------|
| Dec. 15 | E. | | 5 45 | 0.06 | 75 | 37 | 45.3 |
| 21 | S. | | | 0.04 | | | 43.4 |
| Mean | | | 5 45 | 0.050 | 75 | 37 | 44.35 |
| Div., Flex., etc. | | | | | | + | 1.68 |

B. A. C. 1865.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|-----|----|-------|
| Jan. 25 | P. | | 5 45 | 11.04 | 120 | 39 | 29.1 |
| Feb. 18 | P. | | | 10.96 | | | 28.9 |
| Mar. 3 | F. | | | 10.92 | | | 30.5 |
| Mean | | | 5 45 | 10.973 | 120 | 39 | 29.50 |
| Div., Flex., etc. | | | | | | + | 1.77 |

B. A. C. 1891.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|---------|-----|----|-------|
| Jan. 20 | S. | | 5 48 | (36.66) | 123 | 49 | 49.0 |
| Dec. 21 | S. | | | 36.98 | | | 44.8 |
| Mean | | | 5 48 | 36.980 | 123 | 49 | 46.90 |
| Div., Flex., etc. | | | | | | + | 1.60 |

B. A. C. 1882.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|----|---|-------|
| Jan. 25 | P. | | 5 48 | 41.19 | 61 | 4 | 46.1 |
| Nov. 5 | P. | | | 41.20 | | | 46.3 |
| Dec. 6 | P. | | | 41.12 | | | 46.6 |
| Mean | | | 5 48 | 41.170 | 61 | 4 | 46.33 |
| Div., Flex., etc. | | | | | | + | 1.55 |

B. A. C. 1900.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|----|----|-------|
| Jan. 24 | S. | | 5 51 | 15.88 | 52 | 47 | 52.5 |
| May 20 | P. | | | 16.01 | | | 55.4 |
| 22 | P. | | | 15.90 | | | 54.5 |
| July 18 | P. | | | 15.88 | | | 55.7 |
| Mean | | | 5 51 | 15.918 | 52 | 47 | 54.52 |
| Div., Flex., etc. | | | | | | + | 1.16 |

B. A. C. 1910.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|-------|-----|----|------|
| Oct. 27(5) | P. | | 5 51 | 41.00 | 121 | 24 | 0.4 |
| Div., Flex., etc. | | | | | | + | 1.74 |

B. A. C. 1922.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|-------|-----|----|-------|
| Jan. 25 | P. | | 5 53 | 8.41 | 125 | 17 | 49.4 |
| Feb. 18 | P. | | | 8.40 | | | 49.7 |
| Mar. 3 | F. | | | 8.39 | | | 51.6 |
| Mean | | | 5 53 | 8.400 | 125 | 17 | 50.23 |
| Div., Flex., etc. | | | | | | + | 1.56 |

DURCH. 17°, 1115.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|----|---|------|
| Jan. 21 | P. | | 5 57 | 53.42 | 72 | 4 | 2.2 |
| 24 | S. | | | 53.47 | | | 3.9 |
| 25 (10.0) | P. | | | 53.43 | | | 2.4 |
| Mean | | | 5 57 | 53.440 | 72 | 4 | 2.83 |
| Div., Flex., etc. | | | | | | + | 1.62 |

B. A. C. 1951.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|----|----|------|
| Oct. 27(6,8) | P. | | 5 59 | 15.09 | 66 | 21 | 6.0 |
| Nov. 5 | E. | | | 15.08 | | | 7.1 |
| Dec. 3 | E. | | | 15.18 | | | 8.0 |
| 5 | S. | | | 15.15 | | | 8.0 |
| 12 | F. | | | 15.03 | | | 6.1 |
| 15 | E. | | | 15.15 | | | 6.9 |
| 19 | E. | | | 15.21 | | | 8.0 |
| Mean | | | 5 59 | 15.127 | 66 | 21 | 7.16 |
| Div., Flex., etc. | | | | | | + | 1.64 |

Σ 853¹.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|----|----|---------|
| Oct. 27(9) | P. | | 6 2 | 14.57 | 78 | 19 | 0.7 |
| Nov. 5 | E. | | | 14.56 | | | 0.1 |
| Dec. 6 | P. | | | 14.47 | | | 1.2 |
| 12 | F. | | | 14.57 | | | 0.1 |
| 15 | E. | | | 14.61 | | | 18 59.5 |
| Mean | | | 6 2 | 14.556 | 78 | 19 | 0.32 |
| Div., Flex., etc. | | | | | | + | 1.78 |

Σ 853².

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|----|----|-------|
| Oct. 27(8,8) | P. | | 6 2 | 14.97 | 78 | 19 | 26.4 |
| Nov. 5 | E. | | | 14.89 | | | 26.0 |
| Dec. 6 | P. | | | 14.93 | | | 28.3 |
| 12 | F. | | | 14.97 | | | 26.8 |
| 15 | E. | | | 14.92 | | | 26.6 |
| Mean | | | 6 2 | 14.936 | 78 | 19 | 26.82 |
| Div., Flex., etc. | | | | | | + | 1.78 |

B. A. C. 1976.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|---------|-----|----|-------|
| Jan. 20 | S. | | 6 2 | (35.47) | 124 | 17 | 50.5 |
| 21 | P. | | | 35.64 | | | 50.9 |
| Mar. 13 | P. | | | 35.75 | | | 51.5 |
| Mean | | | 6 2 | 35.695 | 124 | 17 | 50.97 |
| Div., Flex., etc. | | | | | | + | 1.58 |

DURCH. 18°, 1111.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|----|----|-------|
| Jan. 24 | S. | | 6 3 | 25.38 | 71 | 16 | 29.8 |
| Feb. 4 | F. | | | 25.33 | | | 31.7 |
| Mar. 3 | F. | | | 25.45 | | | 32.7 |
| Mean | | | 6 3 | 25.387 | 71 | 16 | 31.40 |
| Div., Flex., etc. | | | | | | + | 1.61 |

B. A. C. 1996.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|-----|----|-------|
| Jan. 20 | S. | | 6 6 | (5.90) | 124 | 47 | 33.3 |
| Feb. 5 | S. | | | 6.07 | | | 28.9 |
| Mar. 13 | P. | | | 6.20 | | | 32.3 |
| Mean | | | 6 6 | 6.135 | 124 | 47 | 31.50 |
| Div., Flex., etc. | | | | | | + | 1.57 |

B. A. C. 2061.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|-----|----|-------|
| May 20 | P. | | 6 17 | 14.26 | 107 | 53 | 45.1 |
| 22 | P. | | | 14.34 | | | 45.1 |
| June 1 | P. | | | 14.44 | | | 43.6 |
| Oct. 9 | P. | | | 14.27 | | | 43.6 |
| Mean | | | 6 17 | 14.328 | 107 | 53 | 44.35 |
| Div., Flex., etc. | | | | | | + | 1.90 |

B. A. C. 2077.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|-----|----|---------|
| Jan. 21 | P. | | 6 19 | 28.40 | 126 | 57 | 0.6 |
| Nov. 28 | P. | | | 28.50 | | | 56 58.7 |
| Mean | | | 6 19 | 28.450 | 126 | 56 | 59.65 |
| Div., Flex., etc. | | | | | | + | 1.49 |

B. A. C. 2089.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|-------|-----|----|------|
| Feb. 10 | P. | | 6 20 | 43.08 | 130 | 12 | 56.8 |
| Div., Flex., etc. | | | | | | + | 1.48 |

B. A. C. 2098.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|---------|-----|----|-------|
| Jan. 20 | S. | | 6 21 | (48.16) | 130 | 54 | . . |
| 24 | S. | | | 48.32 | | | 11.6 |
| Feb. 18 | P. | | | 48.47 | | | 11.9 |
| Mar. 3 | F. | | | 48.33 | | | 11.4 |
| Mean | | | 6 21 | 48.373 | 130 | 54 | 11.63 |
| Div., Flex., etc. | | | | | | + | 1.46 |

B. A. C. 2109.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|-----|----|-------|
| Jan. 25 | P. | | 6 23 | 34.38 | 122 | 30 | 9.6 |
| Nov. 28 | P. | | | 34.39 | | | 10.4 |
| Dec. 2 | P. | | | 34.47 | | | 10.6 |
| 27 | E. | | | 34.51 | | | 11.3 |
| Mean | | | 6 23 | 34.438 | 122 | 30 | 10.47 |
| Div., Flex., etc. | | | | | | + | 1.67 |

B. A. C. 2117.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|-----|----|-------|
| Jan. 24 | S. | | 6 24 | 44.20 | 130 | 59 | 41.9 |
| Feb. 18 | P. | | | 44.28 | | | 41.6 |
| Mar. 3 | F. | | | 44.31 | | | 44.0 |
| Mean | | | 6 24 | 44.263 | 130 | 59 | 42.50 |
| Div., Flex., etc. | | | | | | + | 1.46 |

B. A. C. 2122.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|-------|-----|----|------|
| Dec. 15 | E. | | 6 25 | 5.31 | 130 | 17 | 29.8 |
| 19 | E. | | | 5.14 | | | 24.2 |
| Mean | | | 6 25 | 5.225 | 130 | 17 | 27.0 |
| Div., Flex., etc. | | | | | | + | 1.48 |

BRISBANE 1256.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|-----|----|------|
| Dec. 15 | E. | | 6 25 | 11.00 | 130 | 17 | |
| 19 | E. | | | 10.68 | | | 52.2 |
| Mean | | | 6 25 | 10.840 | 130 | 17 | 52.2 |
| Div., Flex., etc. | | | | | | + | 1.48 |

DURCH. 68°, 446.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|----|----|-------|
| Feb. 2 | P. | | 6 25 | 12.52 | 21 | 10 | 15.2 |
| 4 | F. | | | 12.51 | | | 13.5 |
| 10 | P. | | | 12.47 | | | 16.3 |
| Mean | | | 6 25 | 12.500 | 21 | 10 | 15.00 |
| Div., Flex., etc. | | | | | | + | 0.87 |

B. A. C. 2135.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|-----|----|------|
| Dec. 15 | E. | | 6 26 | 39.76 | 130 | 21 | 44.1 |
| 19 | E. | | | 39.51 | | | 41.5 |
| Mean | | | 6 26 | 39.635 | 130 | 21 | 42.8 |
| Div., Flex., etc. | | | | | | + | 1.47 |

B. A. C. 2136.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|-----|----|-------|
| Jan. 21 | P. | | 6 26 | 48.11 | 125 | 10 | 20.4 |
| 25 | P. | | | 48.12 | | | 19.3 |
| Feb. 17 | S. | | | 48.31 | | | 15.4 |
| Mean | | | 6 26 | 48.180 | 125 | 10 | 18.37 |
| Div., Flex., etc. | | | | | | + | 1.56 |

DURCH. 65°, 447.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|-------|----|----|-------|
| Feb. 2 | P. | | 6 28 | 8.08 | 21 | 14 | 49.1 |
| 4 | F. | | | 8.28 | | | 50.5 |
| 10 | P. | | | 8.19 | | | 50.8 |
| Mean | | | 6 28 | 8.183 | 21 | 14 | 50.13 |
| Div., Flex., etc. | | | | | | + | 0.87 |

LALANDE 12661.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|----|----|-------|
| Jan. 25 | P. | | 6 30 | 31.20 | 60 | 54 | 42.1 |
| Feb. 4 | F. | | | 31.19 | | | 39.7 |
| 10 | P. | | | 31.23 | | | 42.0 |
| Mean | | | 6 30 | 31.207 | 60 | 54 | 41.27 |
| Div., Flex., etc. | | | | | | + | 1.55 |

B. A. C. 2179.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|-----|---|-------|
| Mar. 3 | F. | | 6 32 | 49.32 | 128 | 2 | 36.0 |
| 13 | P. | | | 49.30 | | | 38.4 |
| Nov. 28 | P. | | | 49.27 | | | 35.5 |
| Mean | | | 6 32 | 49.297 | 128 | 2 | 36.63 |
| Div., Flex., etc. | | | | | | + | 1.44 |

B. A. C. 2190.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|-----|----|------|
| Jan. 21 | P. | | 6 34 | 26.00 | 127 | 53 | 11.4 |
| 25 | P. | | | 26.03 | | | 7.5 |
| Mean | | | 6 34 | 26.015 | 127 | 53 | 9.45 |
| Div., Flex., etc. | | | | | | + | 1.44 |

B. A. C. 2195.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|-----|---|-------|
| Mar. 3 | F. | | 6 35 | 43.42 | 128 | 2 | 40.2 |
| 13 | P. | | | 43.52 | | | 41.2 |
| Nov. 28 | P. | | | 43.45 | | | 39.0 |
| Mean | | | 6 35 | 43.463 | 128 | 2 | 40.13 |
| Div., Flex., etc. | | | | | | + | 1.44 |

B. A. C. 2194.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|----|----|-------|
| Mar. 5 | P. | | 6 36 | 18.20 | 64 | 44 | 54.6 |
| May 20 | P. | | | 18.21 | | | 54.5 |
| 22 | P. | | | 18.21 | | | 54.4 |
| June 1 | P. | | | 18.10 | | | 54.0 |
| July 26 | P. | | | 18.10 | | | 53.2 |
| Oct. 9 | P. | | | 18.14 | | | 52.5 |
| Dec. 6 | P. | | | 18.18 | | | 52.4 |
| Mean | | | 6 36 | 18.163 | 64 | 44 | 53.66 |
| Div., Flex., etc. | | | | | | + | 1.65 |

B. A. C. 2207¹.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|-------|-----|----|-------|
| Nov. 28 | P. | | 6 38 | 3.83 | 128 | 16 | 41.3 |
| Dec. 31 | E. | | | 4.03 | | | 38.3 |
| Mean | | | 6 38 | 3.930 | 128 | 16 | 39.80 |
| Div., Flex., etc. | | | | | | + | 1.44 |

B. A. C. 2207².

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|-------|-----|----|-------|
| Jan. 25 | P. | | 6 38 | 4.51 | 128 | 16 | 40.5 |
| Nov. 28 | P. | | | 4.57 | | | 42.2 |
| Dec. 31 | P. | | | 4.67 | | | 36.6 |
| Mean | | | 6 38 | 4.583 | 128 | 16 | 39.77 |
| Div., Flex., etc. | | | | | | + | 1.44 |

B. A. C. 2252.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|-------|-----|----|------|
| Dec. 3 | E. | | 6 46 | 22.02 | 124 | 13 | 19.5 |
| Div., Flex., etc. | | | | | | + | 1.59 |

B. A. C. 2258.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|-----|---|-------|
| Jan. 21 | P. | | 6 47 | 19.98 | 126 | 4 | 51.3 |
| Feb. 12 | F. | | | 19.95 | | | 48.0 |
| 18 | F. | | | 19.96 | | | 49.0 |
| Mean | | | 6 47 | 19.963 | 126 | 4 | 49.43 |
| Div., Flex., etc. | | | | | | + | 1.53 |

B. A. C. 2282.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|-----|----|-------|
| Nov. 5 | E. | | 6 52 | 18.67 | 125 | 10 | 40.5 |
| 28 | P. | | | 18.60 | | | 44.5 |
| Dec. 3 | E. | | | 18.62 | | | 44.3 |
| Mean | | | 6 52 | 18.630 | 125 | 10 | 43.10 |
| Div., Flex., etc. | | | | | | + | 1.56 |

B. A. C. 2288.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|-----|----|-------|
| Feb. 2 | P. | | 6 52 | 51.55 | 125 | 20 | 34.9 |
| 5 | S. | | | 51.52 | | | 34.2 |
| 10 | P. | | | 51.46 | | | 35.7 |
| Mean | | | 6 52 | 51.510 | 125 | 20 | 34.93 |
| Div., Flex., etc. | | | | | | + | 1.56 |

B. A. C. 2295.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|-----|----|-------|
| Feb. 18 | P. | | 6 53 | 52.75 | 123 | 56 | 39.9 |
| Mar. 13 | P. | | | 52.83 | | | 40.5 |
| Mean | | | 6 53 | 52.790 | 123 | 56 | 40.20 |
| Div., Flex., etc. | | | | | | + | 1.59 |

WEISSE (2) 1675.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|----|----|-------|
| Nov. 28 (8) | P. | | 6 56 | 44.19 | 69 | 13 | 26.7 |
| Dec. 2 | P. | | | 44.27 | | | 25.3 |
| 3 (8.5) | E. | | | 44.28 | | | 24.1 |
| 5 | S. | | | 44.20 | | | 24.1 |
| Mean | | | 6 56 | 44.258 | 69 | 13 | 25.05 |
| Div., Flex., etc. | | | | | | + | 1.60 |

B. A. C. 2305.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|----|----|-------|
| Nov. 28 (4) | P. | | 6 56 | 45.16 | 69 | 14 | 57.6 |
| Dec. 2 | P. | | | 45.28 | | | 58.0 |
| 3 | E. | | | 45.26 | | | 57.3 |
| 5 | S. | | | 45.19 | | | 58.2 |
| Mean | | | 6 56 | 45.222 | 69 | 14 | 57.78 |
| Div., Flex., etc. | | | | | | + | 1.60 |

B. A. C. 2309.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|-----|----|-------|
| Feb. 18 | P. | | 6 56 | 46.71 | 117 | 45 | 30.6 |
| Mar. 13 | P. | | | 46.82 | | | 30.2 |
| Mean | | | 6 56 | 46.765 | 117 | 45 | 30.40 |
| Div., Flex., etc. | | | | | | + | 1.84 |

B. A. C. 2315.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|-----|----|-------|
| Feb. 2 | P. | | 6 57 | 20.45 | 125 | 22 | 11.1 |
| 5 | S. | | | 20.43 | | | 14.6 |
| 10 | P. | | | 20.50 | | | 14.8 |
| Mean | | | 6 57 | 20.460 | 125 | 22 | 13.50 |
| Div., Flex., etc. | | | | | | + | 1.56 |

B. A. C. 2335.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|-------|-----|----|------|
| Feb. 18 | P. | | 7 1 | 46.93 | 128 | 11 | 36.9 |
| Div., Flex., etc. | | | | | | + | 1.44 |

47 GEMINORUM.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|----|----|-------|
| Feb. 10 | P. | | 7 3 | 41.62 | 62 | 56 | 29.8 |
| Mar. 23 | F. | | | 41.57 | | | 28.9 |
| 29 | P. | | | 41.60 | | | 29.8 |
| Oct. 9 | P. | | | | | | 29.0 |
| Mean | | | 7 3 | 41.597 | 62 | 56 | 29.38 |
| Div., Flex., etc. | | | | | | + | 1.58 |

47 GEMINORUM (R.).

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|----|----|----|------|
| Oct. 9 | P. | | | | 62 | 56 | 29.7 |
| Div., Flex., etc. | | | | | | + | 0.67 |

B. A. C. 2372.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|-------|-----|----|------|
| Feb. 10 | P. | | 7 7 | 10.07 | 128 | 53 | 49.2 |
| Div., Flex., etc. | | | | | | + | 1.45 |

B. A. C. 2385.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|------|-----|----|------|
| Feb. 10 | P. | | 7 9 | 1.10 | 120 | 52 | 17.4 |
| Div., Flex., etc. | | | | | | + | 1.76 |

B. A. C. 2412.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|--------|-----|---|-------|
| Feb. 2 | P. | | 7 12 | 14.66 | 128 | 5 | 57.5 |
| 10 | P. | | | 14.66 | | | 54.5 |
| Mean | | | 7 12 | 14.660 | 128 | 5 | 56.00 |
| Div., Flex., etc. | | | | | | + | 1.44 |

B. A. C. 2427.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|--------|-----|------|
| Feb. 2 | P. | 7 14 | 10.92 | 128 59 | 5.5 | |
| Div., Flex., etc. | | | | | + | 1.45 |

B. A. C. 2446.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|--------|-------|------|
| Jan. 26 | E. | 7 17 | 51.70 | 121 48 | 32.9 | |
| 31 | F. | | 51.76 | | 33.3 | |
| Mar. 31 | F. | | 51.70 | | 36.8 | |
| Dec. 31 | E. | | 51.96 | | 31.1 | |
| Mean | | 7 17 | 51.780 | 121 48 | 33.52 | |
| Div., Flex., etc. | | | | | + | 1.72 |

B. A. C. 2449.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|--------|------|------|
| Jan. 26 | E. | 7 18 | 16.19 | 121 41 | 8.9 | |
| 31 | F. | | 16.17 | | 9.2 | |
| Mar. 31 | F. | | 16.24 | | 12.2 | |
| Dec. 31 | P. | | 16.42 | | 3.9 | |
| Mean | | 7 18 | 16.255 | 121 41 | 8.55 | |
| Div., Flex., etc. | | | | | + | 1.73 |

B. A. C. 2452.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|--------|-------|------|
| Jan. 21 | P. | 7 18 | 48.32 | 121 57 | 45.8 | |
| 29 | P. | | 48.34 | | 45.1 | |
| Mean | | 7 18 | 48.330 | 121 57 | 45.45 | |
| Div., Flex., etc. | | | | | + | 1.71 |

B. A. C. 2462.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-------|-------|------|
| May 20 | P. | 7 20 | 25.47 | 81 27 | 45.7 | |
| 29 | E. | | 25.50 | | 46.3 | |
| June 1 | P. | | 25.63 | | 44.4 | |
| Mean | | 7 20 | 25.533 | 81 27 | 45.47 | |
| Div., Flex., etc. | | | | | + | 1.87 |

ANONYMOUS.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-------|------|------|
| Feb. 10 | P. | 7 20 | 36.07 | 63 53 | 2.2 | |
| Mar. 21 | P. | | 36.04 | | 5.3 | |
| 22 | E. | | 36.21 | | 7.0 | |
| 23 | F. | | 36.27 | | 0.4 | |
| Mean | | 7 20 | 36.148 | 63 53 | 3.72 | |
| Div., Flex., etc. | | | | | + | 1.63 |

B. A. C. 2468.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-------|-------|------|
| Nov. 28 | P. | 7 21 | 24.66 | 80 49 | 30.0 | |
| Dec. 3 | E. | | 24.69 | | 27.6 | |
| 5 | S. | | 24.65 | | 30.1 | |
| Mean | | 7 21 | 24.667 | 80 49 | 29.23 | |
| Div., Flex., etc. | | | | | + | 1.87 |

B. A. C. 2471.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|--------|-------|------|
| Jan. 21 | P. | 7 22 | 5.79 | 123 53 | 33.8 | |
| Mar. 29 | P. | | 5.84 | | 31.7 | |
| Dec. 31 | E. | | 6.04 | | 31.9 | |
| Mean | | 7 22 | 5.890 | 123 53 | 32.47 | |
| Div., Flex., etc. | | | | | + | 1.60 |

B. A. C. 2473.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-------|-------|------|
| Nov. 28 | P. | 7 22 | 53.60 | 77 44 | 19.4 | |
| Dec. 5 | S. | | 53.93 | | 17.4 | |
| 12 | F. | | 53.60 | | 18.5 | |
| Mean | | 7 22 | 53.610 | 77 44 | 18.43 | |
| Div., Flex., etc. | | | | | + | 1.75 |

B. A. C. 2477¹.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|------|--------|------|------|
| Jan. 26 | E. | 7 24 | 5.35 | 121 35 | 35.3 | |
| Div., Flex., etc. | | | | | + | 1.73 |

B. A. C. 2477².

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|------|--------|------|------|
| Jan. 26 | E. | 7 24 | 5.99 | 121 35 | 29.0 | |
| Div., Flex., etc. | | | | | + | 1.73 |

B. A. C. 2478.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|--------|-----|------|
| Mar. 29 | P. | 7 24 | 17.68 | 121 12 | 4.0 | |
| Div., Flex., etc. | | | | | + | 1.75 |

B. A. C. 2486.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-------|-------|------|
| Nov. 28 | P. | 7 26 | 31.85 | 73 54 | 30.3 | |
| Dec. 5 | S. | | 31.79 | | 29.1 | |
| 12 | F. | | 31.77 | | 28.7 | |
| Mean | | 7 26 | 31.803 | 73 54 | 29.37 | |
| Div., Flex., etc. | | | | | + | 1.65 |

a¹ GEMINORUM.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-------|-------|------|
| Jan. 25 | P. | 7 26 | 40.84 | 57 50 | 33.0 | |
| May 20 | P. | | 40.91 | | 34.8 | |
| June 2 | E. | | 40.69 | | 31.6 | |
| Oct. 9 | P. | | 40.72 | | 32.3 | |
| Nov. 8 | P. | | 40.80 | | 32.6 | |
| Dec. 3 | E. | | 40.70 | | 31.1 | |
| 31 | E. | | 40.66 | | 31.5 | |
| Mean | | 7 26 | 40.760 | 57 50 | 32.41 | |
| Div., Flex., etc. | | | | | + | 1.49 |

DURCH. 26°, 1602.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-------|-------|------|
| Jan. 31 | F. | 7 27 | 51.53 | 63 45 | 28.2 | |
| Mar. 22 | E. | | 51.29 | | 31.9 | |
| 23 | F. | | 51.47 | | 30.2 | |
| 27 | F. | | 51.36 | | 30.2 | |
| Mean | | 7 27 | 51.412 | 63 45 | 30.12 | |
| Div., Flex., etc. | | | | | + | 1.62 |

ANONYMOUS.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|-------|-------|------|
| Jan. 31 | F. | 7 28 | 0.95 | 63 45 | 28.2 | |
| Mar. 22 | E. | | 0.85 | | 28.3 | |
| 23 (10.5) | F. | | 0.89 | | 32.9 | |
| 27 | F. | | 0.89 | | 32.4 | |
| Mean | | 7 28 | 0.895 | 63 45 | 30.45 | |
| Div., Flex., etc. | | | | | + | 1.62 |

B. A. C. 2502.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-------|-------|------|
| Jan. 21 | P. | 7 29 | 21.73 | 126 4 | 12.9 | |
| Feb. 5 | S. | | 21.99 | | 10.7 | |
| 10 | P. | | 21.90 | | 9.4 | |
| Mean | | 7 29 | 21.873 | 126 4 | 11.00 | |
| Div., Flex., etc. | | | | | + | 1.53 |

B. A. C. 2536.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|--------|-------|------|
| Jan. 21 | P. | 7 34 | 14.22 | 126 12 | 53.9 | |
| Feb. 5 | S. | | 14.31 | | 50.1 | |
| 10 | P. | | 14.24 | | 51.4 | |
| Mean | | 7 34 | 14.257 | 126 12 | 51.80 | |
| Div., Flex., etc. | | | | | + | 1.52 |

B. A. C. 2547.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|--------|------|------|
| Feb. 2 | P. | 7 35 | 32.52 | 127 17 | 36.4 | |
| Div., Flex., etc. | | | | | + | 1.48 |

B. A. C. 2551.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-------|-------|------|
| Nov. 28 | P. | 7 36 | 57.58 | 65 18 | 22.8 | |
| Dec. 5 | S. | | 57.55 | | 21.0 | |
| 12 | F. | | 57.60 | | 21.6 | |
| Mean | | 7 36 | 57.577 | 65 18 | 21.80 | |
| Div., Flex., etc. | | | | | + | 1.65 |

B. A. C. 2561.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|--------|-------|------|
| Jan. 21 | P. | 7 38 | 39.64 | 125 45 | 24.2 | |
| 25 | P. | | 39.69 | | 23.8 | |
| 26 | E. | | 39.74 | | 22.0 | |
| Mean | | 7 38 | 39.690 | 125 45 | 23.33 | |
| Div., Flex., etc. | | | | | + | 1.54 |

B. A. C. 2519.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|------|-------|------|
| Mar. 23 | F. | 7 32 | 18.88 | 72 2 | 40.4 | |
| 27 | F. | | 18.76 | | 41.0 | |
| 31 | F. | | 18.96 | | 39.9 | |
| Mean | | 7 32 | 18.867 | 72 2 | 40.43 | |
| Div., Flex., etc. | | | | | + | 1.62 |

B. A. C. 2572.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|--------|------|------|
| Jan. 21 | P. | 7 39 | 37.77 | 125 46 | 7.1 | |
| 25 | P. | | 37.82 | | 5.4 | |
| 26 | E. | | 37.91 | | 5.8 | |
| Mean | | 7 39 | 37.833 | 125 46 | 6.10 | |
| Div., Flex., etc. | | | | | + | 1.54 |

B. A. C. 2591.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|------|--------|-----|------|
| Feb. 2 | P. | 7 42 | 7.65 | 127 28 | 3.4 | |
| Div., Flex., etc. | | | | | + | 1.47 |

B. A. C. 2604.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|--------|------|------|
| Jan. 25 | P. | 7 43 | 54.14 | 130 20 | 36.2 | |
| Div., Flex., etc. | | | | | + | 1.47 |

B. A. C. 2614.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|--------|------|------|
| Jan. 25 | P. | 7 44 | 59.91 | 130 23 | 26.4 | |
| Div., Flex., etc. | | | | | + | 1.47 |

B. A. C. 2629.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|--------|-------|------|
| Jan. 21 | P. | 7 47 | 37.78 | 124 23 | 42.0 | |
| 26 | E. | | 37.93 | | 41.5 | |
| Mean | | 7 47 | 37.855 | 124 23 | 41.75 | |
| Div., Flex., etc. | | | | | + | 1.58 |

| B. A. C. 2634. | | | | |
|-------------------|-------|-------|--------|------|
| 1876. | h. m. | s. | ° | ' |
| Jan. 25 P. | 7 47 | 57.28 | 130 15 | 29.2 |
| Div., Flex., etc. | | | + | 1.48 |

| B. A. C. 2639. | | | | |
|-------------------|-------|--------|-------|-------|
| 1876. | h. m. | s. | ° | ' |
| April 1 S. | 7 49 | 57.00 | 73 52 | 46.5 |
| Nov. 28 P. | | 56.84 | | 48.1 |
| Dec. 5 S. | | 56.92 | | 47.6 |
| 12 F. | | 56.88 | | 45.7 |
| Mean | 7 49 | 56.910 | 73 52 | 46.98 |
| Div., Flex., etc. | | | + | 1.65 |

| B. A. C. 2646. | | | | |
|-------------------|-------|-------|--------|-------|
| 1876. | h. m. | s. | ° | ' |
| Jan. 21 P. | 7 50 | 0.07 | 124 31 | 15.4 |
| 26 E. | | 0.26 | | |
| Mean | 7 50 | 0.165 | 124 31 | 15.40 |
| Div., Flex., etc. | | | + | 1.58 |

| ω ¹ CANCRI. | | | | |
|------------------------|-------|--------|-------|------|
| 1876. | h. m. | s. | ° | ' |
| Feb. 10 P. | 7 53 | 25.57 | 64 16 | 9.6 |
| 12 F. | | 25.66 | | 9.3 |
| 16 F. | | 25.46 | | 9.6 |
| Mean | 7 53 | 25.563 | 64 16 | 9.50 |
| Div., Flex., etc. | | | + | 1.63 |

| B. A. C. 2664. | | | | |
|-------------------|-------|--------|-------|-------|
| 1876. | h. m. | s. | ° | ' |
| Mar. 23 F. | 7 54 | 26.07 | 73 12 | 13.1 |
| Nov. 28 P. | | 26.11 | | 15.4 |
| Dec. 5 S. | | 26.11 | | 15.4 |
| 12 F. | | 26.09 | | 15.8 |
| Mean | 7 54 | 26.095 | 73 12 | 14.92 |
| Div., Flex., etc. | | | + | 1.63 |

| B. A. C. 2671. | | | | |
|-------------------|-------|------|--------|------|
| 1876. | h. m. | s. | ° | ' |
| Jan. 26 E. | 7 55 | 5.73 | 128 57 | 27.5 |
| Div., Flex., etc. | | | + | 1.45 |

| B. A. C. 2685. | | | | |
|-------------------|-------|--------|--------|-------|
| 1876. | h. m. | s. | ° | ' |
| Jan. 20 S. | 7 57 | (5.10) | 126 56 | 25.4 |
| 25 P. | | 5.37 | | 23.9 |
| Feb. 10 P. | | 5.41 | | 23.9 |
| Mean | 7 57 | 5.390 | 126 56 | 24.40 |
| Div., Flex., etc. | | | + | 1.49 |

| B. A. C. 2717. | | | | |
|-------------------|-------|--------|--------|-------|
| 1876. | h. m. | s. | ° | ' |
| Jan. 25 P. | 8 0 | 16.66 | 123 14 | 22.1 |
| Feb. 10 P. | | 16.71 | | 22.4 |
| 12 F. | | 16.67 | | 20.2 |
| Nov. 8 P. | | 16.58 | | 22.7 |
| Mean | 8 0 | 16.655 | 123 14 | 21.85 |
| Div., Flex., etc. | | | + | 1.63 |

| B. A. C. 2719 ¹ . | | | | |
|------------------------------|-------|--------|--------|-------|
| 1876. | h. m. | s. | ° | ' |
| Jan. 25 P. | 8 0 | 57.76 | 123 12 | 56.6 |
| Feb. 10 P. | | 57.76 | | 54.5 |
| 12 F. | | 57.75 | | 56.5 |
| Nov. 8 P. | | 57.70 | | 56.3 |
| Mean | 8 0 | 57.742 | 123 12 | 54.98 |
| Div., Flex., etc. | | | + | 1.63 |

| B. A. C. 2719 ² . | | | | |
|------------------------------|-------|-------|--------|------|
| 1876. | h. m. | s. | ° | ' |
| Nov. 8 P. | 8 0 | 59.41 | 123 12 | 55.3 |
| Div., Flex., etc. | | | + | 1.63 |

| B. A. C. 2735. | | | | |
|-------------------|-------|---------|--------|------|
| 1876. | h. m. | s. | ° | ' |
| Jan. 20 S. | 8 3 | (18.35) | 124 51 | 1.5 |
| Feb. 2 P. | | 18.35 | | 59.6 |
| Mean | 8 3 | 18.35 | 124 51 | 0.55 |
| Div., Flex., etc. | | | + | 1.57 |

| B. A. C. 2758. | | | | |
|-------------------|-------|--------|--------|-------|
| 1876. | h. m. | s. | ° | ' |
| Feb. 2 P. | 8 6 | 26.91 | 126 55 | 29.4 |
| Mar. 21 P. | | 26.70 | | 29.5 |
| Mean | 8 6 | 26.805 | 126 55 | 29.45 |
| Div., Flex., etc. | | | + | 1.49 |

| B. A. C. 2774. | | | | |
|----------------|-------|-------|---|---|
| 1876. | h. m. | s. | ° | ' |
| Feb. 2 P. | 8 8 | 48.75 | | |

| B. A. C. 2778. | | | | |
|-------------------|-------|--------|-------|------|
| 1876. | h. m. | s. | ° | ' |
| Jan. 31 F. | 8 9 | 47.41 | 80 25 | 59.5 |
| Feb. 10 P. | | 47.44 | | 59.9 |
| 12 F. | | 47.36 | | 0.5 |
| Mar. 3 F. | | 47.43 | | 0.4 |
| 9 P. | | 47.24 | | 1.2 |
| Mean | 8 9 | 47.376 | 80 26 | 0.30 |
| Div., Flex., etc. | | | + | 1.86 |

| VIII, 2. | | | | |
|-------------------|-------|-------|--------|-------|
| 1876. | h. m. | s. | ° | ' |
| Jan. 31 F. | 8 13 | 4.77 | 125 40 | 59.5 |
| Mar. 5 P. | | 4.85 | | 0.5 |
| 9 P. | | 4.49 | | 59.1 |
| 21 P. | | 4.60 | | 58.7 |
| Mean | 8 13 | 4.678 | 125 40 | 59.45 |
| Div., Flex., etc. | | | + | 1.54 |

| B. A. C. 2789. | | | | |
|-------------------|-------|-------|-------|-------|
| 1876. | h. m. | s. | ° | ' |
| Mar. 23 F. | 8 13 | 9.63 | 65 35 | 18.4 |
| April 1 S. | | 9.74 | | 17.5 |
| Nov. 28 P. | | 9.62 | | 18.8 |
| Dec. 5 S. | | 9.56 | | 18.7 |
| Mean | 8 13 | 9.638 | 65 35 | 18.35 |
| Div., Flex., etc. | | | + | 1.64 |

| B. A. C. 2794. | | | | |
|-------------------|-------|-------|-------|------|
| 1876. | h. m. | s. | ° | ' |
| Jan. 25 P. | 8 13 | 33.40 | 125 3 | 57.6 |
| Div., Flex., etc. | | | + | 1.57 |

| ANONYMOUS. | | | | |
|-------------------|-------|--------|--------|-------|
| 1876. | h. m. | s. | ° | ' |
| Feb. 16 F. | 8 14 | | 125 42 | 27.5 |
| Mar. 3 F. | | 47.10 | | 24.4 |
| 9 P. | | 46.73 | | 27.0 |
| 21 P. | | 46.81 | | 25.0 |
| Mean | 8 14 | 46.880 | 125 42 | 25.98 |
| Div., Flex., etc. | | | + | 1.54 |

| B. A. C. 2805. | | | | |
|-------------------|-------|--------|-------|-------|
| 1876. | h. m. | s. | ° | ' |
| Jan. 21 P. | 8 16 | 39.99 | 126 5 | 25.8 |
| 25 P. | | 40.15 | | 27.4 |
| Mean | 8 16 | 40.070 | 126 5 | 26.60 |
| Div., Flex., etc. | | | + | 1.53 |

| B. A. C. 2809. | | | | |
|-------------------|-------|-------|--------|------|
| 1876. | h. m. | s. | ° | ' |
| Feb. 2 P. | 8 16 | 55.03 | 129 13 | 36.1 |
| Div., Flex., etc. | | | + | 1.46 |

| B. A. C. 2814. | | | | |
|-------------------|-------|--------|-------|------|
| 1876. | h. m. | s. | ° | ' |
| Dec. 5 S. | 8 18 | 24.12 | 93 20 | 58.2 |
| 12 F. | | 24.08 | | 0.8 |
| 20 F. | | 23.95 | | 1.4 |
| Mean | 8 18 | 24.050 | 93 21 | 0.13 |
| Div., Flex., etc. | | | + | 1.71 |

| B. A. C. 2820. | | | | |
|-------------------|-------|--------|--------|-------|
| 1876. | h. m. | s. | ° | ' |
| Jan. 20 S. | 8 18 | 41.84 | 127 53 | 15.7 |
| 21 P. | | 41.84 | | 14.9 |
| Mean | 8 18 | 41.840 | 127 53 | 15.30 |
| Div., Flex., etc. | | | + | 1.44 |

| B. A. C. 2817 ¹ . | | | | |
|------------------------------|-------|--------|-------|-------|
| 1876. | h. m. | s. | ° | ' |
| Feb. 10 P. | 8 19 | 16.98 | 62 39 | 42.4 |
| 12 F. | | 17.00 | | 42.5 |
| Mar. 5 P. | | 17.04 | | 43.5 |
| Mean | 8 19 | 17.007 | 62 39 | 42.80 |
| Div., Flex., etc. | | | + | 1.57 |

| B. A. C. 2817 ² . | | | | |
|------------------------------|-------|--------|-------|-------|
| 1876. | h. m. | s. | ° | ' |
| Feb. 10 P. | 8 19 | 17.23 | 62 39 | 38.8 |
| 12 F. | | 17.22 | | 38.8 |
| Mar. 5 P. | | 17.26 | | 40.1 |
| Mean | 8 19 | 17.237 | 62 39 | 39.23 |
| Div., Flex., etc. | | | + | 1.57 |

| B. A. C. 2825. | | | | |
|-------------------|-------|--------|-------|------|
| 1876. | h. m. | s. | ° | ' |
| Dec. 5 S. | 8 19 | 27.84 | 93 30 | 9.4 |
| 12 F. | | 27.73 | | 9.6 |
| 20 F. | | 27.78 | | 10.9 |
| Mean | 8 19 | 27.783 | 93 30 | 9.97 |
| Div., Flex., etc. | | | + | 1.69 |

| LALANDE 16596. | | | | |
|-------------------|-------|-------|-------|------|
| 1876. | h. m. | s. | ° | ' |
| Feb. 12 F. | 8 21 | 0.29 | 73 17 | 0.6 |
| Mar. 3 F. | | 0.36 | | 0.0 |
| 21 (8.5) P. | | 0.27 | | 1.2 |
| Mean | 8 21 | 0.307 | 73 17 | 0.60 |
| Div., Flex., etc. | | | + | 1.63 |

| WEISSE (2) 477. | | | | |
|-------------------|-------|--------|-------|-------|
| 1876. | h. m. | s. | ° | ' |
| Feb. 12 F. | 8 21 | 48.39 | 73 15 | 54.2 |
| Mar. 3 F. | | 48.42 | | 54.5 |
| 21 P. | | 48.38 | | 55.5 |
| Mean | 8 21 | 48.397 | 73 15 | 54.73 |
| Div., Flex., etc. | | | + | 1.63 |

| B. A. C. 2853. | | | | |
|-------------------|-------|--------|-------|-------|
| 1876. | h. m. | s. | ° | ' |
| Nov. 28 P. | 8 24 | 31.36 | 71 29 | 15.6 |
| Dec. 5 S. | | 31.45 | | 15.8 |
| 12 F. | | | | 15.9 |
| 13 S. | | 31.45 | | 14.5 |
| 20 F. | | 31.37 | | 18.4 |
| Mean | 8 24 | 31.408 | 71 29 | 16.04 |
| Div., Flex., etc. | | | + | 1.61 |

VIII, 6.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|----|-------|--------|-----|----|------|
| Jan. | 21 | P. | 8 25 | 47.11 | 120 | 43 | 5.9 |
| Feb. | 2 | P. | | 47.10 | | | 3.2 |
| | 10 | P. | | 47.11 | | | 3.5 |
| Mean | | | 8 25 | 47.107 | 120 | 43 | 4.20 |
| Div., Flex., etc. | | | | | | + | 1.77 |

LACAILLE 3373.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|----|-------|--------|-----|----|-------|
| Jan. | 25 | P. | 8 26 | 31.38 | 128 | 38 | 36.6 |
| Mar. | 9 | P. | | 31.25 | | | 35.8 |
| Nov. | 8 | P. | | 31.24 | | | 36.1 |
| Mean | | | 8 26 | 31.290 | 128 | 38 | 36.17 |
| Div., Flex., etc. | | | | | | + | 1.45 |

B. A. C. 2877.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|----|-------|--------|-----|----|-------|
| Jan. | 20 | S. | 8 26 | 49.89 | 128 | 38 | 46.6 |
| | 25 | P. | | 50.18 | | | 47.9 |
| Mar. | 9 | P. | | 49.97 | | | 46.5 |
| Nov. | 8 | P. | | 49.90 | | | 44.4 |
| Mean | | | 8 26 | 49.985 | 128 | 38 | 46.35 |
| Div., Flex., etc. | | | | | | + | 1.45 |

B. A. C. 2889¹.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|-------|----|-------|--------|----|----|-------|
| April | 2 (6) | P. | 8 29 | 15.42 | 82 | 56 | 53.8 |
| | 6 (6) | P. | | 15.40 | | | 53.7 |
| Nov. | 28 | P. | | 15.41 | | | 54.8 |
| Mean | | | 8 29 | 15.410 | 82 | 56 | 54.10 |
| Div., Flex., etc. | | | | | | + | 1.85 |

B. A. C. 2880².

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|-------|----|-------|--------|----|----|-------|
| April | 2 (8) | P. | 8 29 | 15.75 | 82 | 56 | 44.9 |
| | 6 (8) | P. | | 15.80 | | | 44.5 |
| Nov. | 28 | P. | | 15.70 | | | 44.5 |
| Mean | | | 8 29 | 15.750 | 82 | 56 | 44.63 |
| Div., Flex., etc. | | | | | | + | 1.85 |

B. A. C. 2911.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|----|-------|--------|----|----|-------|
| Jan. | 21 | P. | 8 32 | 16.48 | 86 | 13 | 27.5 |
| | 31 | F. | | 16.49 | | | 28.8 |
| Feb. | 2 | P. | | 16.46 | | | 28.8 |
| Mar. | 9 | P. | | 16.41 | | | 27.8 |
| Mean | | | 8 32 | 16.460 | 86 | 13 | 28.22 |
| Div., Flex., etc. | | | | | | + | 1.73 |

B. A. C. 2933.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|----|-------|--------|-----|----|-------|
| Jan. | 25 | P. | 8 34 | 37.37 | 126 | 10 | 18.0 |
| Feb. | 12 | F. | | 37.26 | | | 16.9 |
| Mean | | | 8 34 | 37.315 | 126 | 10 | 17.45 |
| Div., Flex., etc. | | | | | | + | 1.52 |

B. A. C. 2937.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|----|-------|-------|----|---|-------|
| April | 2 | P. | 8 36 | 6.49 | 68 | 5 | 12.7 |
| | 6 | P. | | 6.53 | | | 11.4 |
| | 10 | P. | | 6.63 | | | 13.2 |
| Mean | | | 8 36 | 6.550 | 68 | 5 | 12.43 |
| Div., Flex., etc. | | | | | | + | 1.60 |

B. A. C. 2945.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|----|-------|--------|----|---|-------|
| Jan. | 21 | P. | 8 36 | 44.48 | 86 | 9 | 26.0 |
| | 31 | F. | | 44.69 | | | 26.1 |
| Feb. | 2 | P. | | 44.52 | | | 26.3 |
| Mar. | 9 | P. | | 44.38 | | | 25.9 |
| Mean | | | 8 36 | 44.518 | 86 | 9 | 26.08 |
| Div., Flex., etc. | | | | | | + | 1.78 |

B. A. C. 2953.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|----|-------|--------|----|----|-------|
| April | 30 | P. | 8 37 | 38.10 | 71 | 23 | 28.2 |
| Nov. | 28 | P. | | 38.18 | | | 27.8 |
| Dec. | 5 | S. | | 38.17 | | | 27.2 |
| | 12 | F. | | 38.05 | | | 26.6 |
| | 13 | S. | | 38.26 | | | 27.0 |
| Mean | | | 8 37 | 38.150 | 71 | 23 | 27.36 |
| Div., Flex., etc. | | | | | | + | 1.61 |

B. A. C. 2970.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|----|-------|-------|----|----|-------|
| Mar. | 5 | P. | 8 40 | 8.17 | 77 | 26 | 10.9 |
| Dec. | 5 | S. | | 8.11 | | | 10.0 |
| | 13 | S. | | 8.10 | | | 9.7 |
| | 20 | F. | | 8.06 | | | 10.9 |
| Mean | | | 8 40 | 8.110 | 77 | 26 | 10.38 |
| Div., Flex., etc. | | | | | | + | 1.73 |

B. A. C. 2987.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|----|-------|-------|----|----|------|
| April | 6 | P. | 8 43 | 7.81 | 92 | 59 | 1.1 |
| | 10 | P. | | 7.81 | | | 1.6 |
| Dec. | 5 | S. | | 7.83 | | | 1.4 |
| Mean | | | 8 43 | 7.817 | 92 | 59 | 1.37 |
| Div., Flex., etc. | | | | | | + | 1.73 |

B. A. C. 2999.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|----|-------|--------|----|---|-------|
| Jan. | 21 | P. | 8 44 | 54.74 | 57 | 3 | 44.9 |
| | 31 | F. | | 54.74 | | | 44.4 |
| Feb. | 10 | P. | | 54.88 | | | 44.6 |
| Mar. | 3 | F. | | 54.91 | | | 44.4 |
| | 5 | P. | | 54.82 | | | 45.5 |
| Mean | | | 8 44 | 54.818 | 57 | 3 | 44.76 |
| Div., Flex., etc. | | | | | | + | 1.48 |

B. A. C. 3009.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|----|-------|------|-----|----|------|
| Jan. | 25 | P. | 8 45 | 2.06 | 129 | 51 | 29.8 |
| Div., Flex., etc. | | | | | | + | 1.43 |

B. A. C. 3013.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|-------|----|-------|--------|----|----|-------|
| April | 6 (7) | P. | 8 45 | 51.23 | 84 | 11 | 39.7 |
| | 10 | P. | | 51.26 | | | 41.4 |
| Mean | | | 8 45 | 51.245 | 84 | 11 | 40.85 |
| Div., Flex., etc. | | | | | | + | 1.82 |

B. A. C. 3026.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|----|-------|--------|----|----|------|
| Mar. | 5 | P. | 8 48 | 13.89 | 61 | 36 | 2.5 |
| | 9 | P. | | 13.76 | | | 0.5 |
| April | 10 | P. | | 13.90 | | | 1.2 |
| Mean | | | 8 48 | 13.850 | 61 | 36 | 1.40 |
| Div., Flex., etc. | | | | | | + | 1.56 |

B. A. C. 3056.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|----|-------|--------|----|---|------|
| Jan. | 21 | P. | 8 51 | 55.50 | 57 | 6 | 3.3 |
| | 31 | F. | | 55.58 | | | 3.0 |
| Feb. | 10 | P. | | 55.66 | | | 3.5 |
| Mar. | 3 | F. | | 55.57 | | | 2.1 |
| | 5 | P. | | 55.57 | | | 3.6 |
| | 9 | P. | | 55.38 | | | 2.7 |
| Mean | | | 8 51 | 55.543 | 57 | 6 | 3.03 |
| Div., Flex., etc. | | | | | | + | 1.48 |

B. A. C. 3068¹.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|----|-------|--------|----|----|-------|
| Feb. | 2 | P. | 8 53 | 47.71 | 57 | 15 | 52.8 |
| | 10 | P. | | 47.76 | | | 51.9 |
| | 16 | F. | | 47.62 | | | 53.7 |
| Mar. | 5 | P. | | 47.71 | | | 53.0 |
| | 9 | P. | | 47.58 | | | 52.0 |
| Mean | | | 8 53 | 47.674 | 57 | 15 | 52.68 |
| Div., Flex., etc. | | | | | | + | 1.48 |

B. A. C. 3081.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|----|-------|--------|-----|----|-------|
| Jan. | 20 | S. | 8 55 | 27.61 | 130 | 46 | 18.6 |
| April | 6 | P. | | 27.69 | | | 16.4 |
| Mean | | | 8 55 | 27.650 | 130 | 46 | 17.50 |
| Div., Flex., etc. | | | | | | + | 1.46 |

B. A. C. 3079.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|----|-------|-------|----|---|------|
| April | 29 | S. | 8 55 | 29.10 | 65 | 3 | 37.1 |
| Div., Flex., etc. | | | | | | + | 1.65 |

B. A. C. 3094.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|---|----|-------|--------|-----|----|-------|
| April | 1 | S. | 8 57 | 21.28 | 128 | 54 | 56.3 |
| | 6 | P. | | 21.38 | | | 55.3 |
| Mean | | | 8 57 | 21.330 | 128 | 54 | 55.80 |
| Div., Flex., etc. | | | | | | + | 1.45 |

B. A. C. 3117.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|----|-------|--------|----|----|-------|
| Mar. | 9 | P. | 9 2 | 13.62 | 67 | 27 | 14.6 |
| April | 1 | S. | | 13.76 | | | 14.5 |
| | 10 | P. | | 13.71 | | | 15.3 |
| | 29 | S. | | 13.62 | | | 14.4 |
| Dec. | 5 | S. | | 13.63 | | | 14.6 |
| Mean | | | 9 2 | 13.668 | 67 | 27 | 14.68 |
| Div., Flex., etc. | | | | | | + | 1.62 |

B. A. C. 3123.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|----|-------|--------|----|----|------|
| April | 10 | P. | 9 3 | 13.32 | 67 | 30 | 3.7 |
| | 29 | S. | | 13.28 | | | 3.9 |
| Dec. | 5 | S. | | 13.20 | | | 3.0 |
| Mean | | | 9 3 | 13.263 | 67 | 30 | 3.53 |
| Div., Flex., etc. | | | | | | + | 1.61 |

B. A. C. 3133.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|----|-------|--------|----|----|-------|
| Nov. | 28 | P. | 9 5 | 44.08 | 85 | 37 | 32.5 |
| Dec. | 5 | S. | | 44.25 | | | 31.0 |
| | 12 | F. | | 44.18 | | | 31.0 |
| Mean | | | 9 5 | 44.170 | 85 | 37 | 31.50 |
| Div., Flex., etc. | | | | | | + | 1.79 |

B. A. C. 3138.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|--------|
| Mar. 3 | F. | 9 6 | 32.21 | 68 | 12 | 24.6 |
| 6 | E. | | 32.19 | | | 25.6 |
| 9 | P. | | 32.17 | | | 26.0 |
| Mean | | 9 6 | 32.190 | 68 | 12 | 25.40 |
| Div., Flex., etc. | | | | | | + 1.60 |

B. A. C. 3144.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|--------|
| Mar. 9 | P. | 9 7 | 37.29 | 54 | 51 | 22.2 |
| April 10 | P. | | 37.33 | | | 21.4 |
| Dec. 5 | S. | | 37.22 | | | 20.5 |
| Mean | | 9 7 | 37.280 | 54 | 51 | 21.37 |
| Div., Flex., etc. | | | | | | + 1.36 |

B. A. C. 3146.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|---|--------|
| Mar. 3 | F. | 9 7 | 54.88 | 87 | 9 | 48.7 |
| 5 | P. | | 54.83 | | | 50.2 |
| 6 | E. | | 54.75 | | | 49.0 |
| Mean | | 9 7 | 54.820 | 87 | 9 | 49.30 |
| Div., Flex., etc. | | | | | | + 1.78 |

B. A. C. 3158.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|------|-----|---|--------|
| April 6 | P. | 9 10 | 0.49 | 127 | 5 | 16.0 |
| Div., Flex., etc. | | | | | | + 1.49 |

B. A. C. 3162¹.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|--|-------|------|----|----|--------|
| April 18(8)P. | | 9 11 | 7.15 | 52 | 40 | 27.1 |
| Div., Flex., etc. | | | | | | + 1.14 |

B. A. C. 3162².

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|----|----|--------|
| April 18(4.5)P. | | 9 11 | 7.40 | 52 | 40 | 25.6 |
| Oct. 11 | F. | | 7.49 | | | 24.2 |
| Mean | | 9 11 | 7.445 | 52 | 40 | 24.90 |
| Div., Flex., etc. | | | | | | + 1.14 |

B. A. C. 3171.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|----|----|--------|
| April 29 | S. | 9 12 | 3.45 | 71 | 46 | 11.9 |
| Nov. 28 | P. | | 3.50 | | | 12.4 |
| Dec. 12 | F. | | 3.48 | | | 11.9 |
| 13 | S. | | 3.49 | | | 11.8 |
| Mean | | 9 12 | 3.480 | 71 | 46 | 12.00 |
| Div., Flex., etc. | | | | | | + 1.62 |

B. A. C. 3204.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|--------|
| April 10 | P. | 9 17 | 25.84 | 63 | 17 | 6.1 |
| 26 | P. | | 25.73 | | | 6.1 |
| 29 | S. | | 25.78 | | | 7.3 |
| Mean | | 9 17 | 25.783 | 63 | 17 | 6.50 |
| Div., Flex., etc. | | | | | | + 1.59 |

B. A. C. 3227.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|--------|
| April 20(7)F. | | 9 21 | 48.97 | 80 | 24 | 14.2 |
| 26 | P. | | 48.83 | | | 14.4 |
| Dec. 5 | S. | | 48.91 | | | 14.2 |
| Mean | | 9 21 | 48.903 | 80 | 24 | 14.27 |
| Div., Flex., etc. | | | | | | + 1.86 |

B. A. C. 3238.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|--------|
| Mar. 5 | P. | 9 23 | 13.38 | 55 | 48 | 2.3 |
| 6 | E. | | 13.47 | | | 2.2 |
| April 1 | S. | | 13.44 | | | 1.6 |
| Mean | | 9 23 | 13.430 | 55 | 48 | 2.03 |
| Div., Flex., etc. | | | | | | + 1.44 |

B. A. C. 3250.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|---|--------|
| April 22 | P. | 9 25 | 15.66 | 78 | 9 | 7.7 |
| 26 | P. | | 15.55 | | | 7.4 |
| 30 | P. | | 15.67 | | | 5.7 |
| Mean | | 9 25 | 15.627 | 78 | 9 | 6.93 |
| Div., Flex., etc. | | | | | | + 1.77 |

B. A. C. 3252.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|--------|
| Mar. 6 | E. | 9 25 | 53.59 | 52 | 57 | 54.7 |
| April 20 | F. | | 53.49 | | | 51.2 |
| Nov. 28 | P. | | 53.33 | | | 52.9 |
| Dec. 13 | S. | | 53.41 | | | 50.5 |
| Mean | | 9 25 | 53.455 | 52 | 57 | 52.32 |
| Div., Flex., etc. | | | | | | + 1.19 |

B. A. C. 3261.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|---|--------|
| Mar. 6 | E. | 9 26 | 37.51 | 53 | 3 | 12.5 |
| April 20 | F. | | | | | 11.0 |
| Nov. 28 | P. | | 37.26 | | | 11.7 |
| Dec. 13 | S. | | 37.42 | | | 9.6 |
| Mean | | 9 26 | 37.397 | 53 | 3 | 11.20 |
| Div., Flex., etc. | | | | | | + 1.19 |

B. A. C. 3273.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|--------|
| April 26 | P. | 9 29 | 21.15 | 58 | 17 | 0.4 |
| 30 | P. | | 21.12 | | | 0.4 |
| May 1 | E. | | 21.15 | | | 0.9 |
| Mean | | 9 29 | 21.140 | 58 | 17 | 0.57 |
| Div., Flex., etc. | | | | | | + 1.50 |

B. A. C. 3285.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|--------|
| April 30 | P. | 9 30 | 44.01 | 64 | 46 | 24.3 |
| May 1 | E. | | 43.95 | | | 25.6 |
| Dec. 5 | S. | | 44.01 | | | 24.6 |
| 12 | F. | | 43.86 | | | 23.7 |
| Mean | | 9 30 | 43.958 | 64 | 46 | 24.55 |
| Div., Flex., etc. | | | | | | + 1.65 |

B. A. C. 3295.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|--------|
| April 20 | F. | 9 31 | 59.14 | 84 | 47 | 29.4 |
| 22 | P. | | 59.19 | | | 29.3 |
| 26 | P. | | 59.12 | | | 29.8 |
| Mean | | 9 31 | 59.150 | 84 | 47 | 29.50 |
| Div., Flex., etc. | | | | | | + 1.81 |

B. A. C. 3303.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|--------|
| Mar. 5 | P. | 9 33 | 31.48 | 90 | 34 | 51.0 |
| 9 | P. | | 31.29 | | | 48.6 |
| April 5 | S. | | 31.40 | | | 49.1 |
| Mean | | 9 33 | 31.390 | 90 | 34 | 49.57 |
| Div., Flex., etc. | | | | | | + 1.86 |

WEISSE 774.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|----|----|--------|
| Jan. 21 | P. | 9 36 | 34.81 | 91 | 40 | 30.1 |
| Div., Flex., etc. | | | | | | + 1.82 |

ANONYMOUS.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|----|----|--------|
| Jan. 21 | P. | 9 36 | 42.52 | 91 | 42 | 28.3 |
| Div., Flex., etc. | | | | | | + 1.82 |

B. A. C. 3321.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|--------|
| April 22 | P. | 9 36 | 58.61 | 75 | 24 | 43.3 |
| 29 | S. | | 58.56 | | | 42.1 |
| 30 | P. | | 58.62 | | | 41.7 |
| Mean | | 9 36 | 58.597 | 75 | 24 | 42.37 |
| Div., Flex., etc. | | | | | | + 1.67 |

B. A. C. 3336.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|--------|
| Mar. 5 | P. | 9 39 | 37.61 | 82 | 43 | 12.1 |
| Dec. 26 | P. | | 37.56 | | | 11.6 |
| Mean | | 9 39 | 37.585 | 82 | 43 | 11.85 |
| Div., Flex., etc. | | | | | | + 1.85 |

B. A. C. 3337.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|----|----|----|--------|
| Dec. 26 | P. | | | 77 | 37 | 10.1 |
| Div., Flex., etc. | | | | | | + 1.74 |

DURCH. 21°, 2106.

| 1876. | | h. m. | s. | ° | ' | " |
|---------|----|-------|-------|----|----|------|
| Jan. 25 | P. | 9 40 | 22.02 | 68 | 34 | 36.7 |

B. A. C. 3345.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|--------|
| April 26 | P. | 9 40 | 53.20 | 77 | 59 | |
| May 1 | E. | | 53.21 | | | 49.9 |
| Dec. 12 | F. | | | | | 46.0 |
| 13 | S. | | 53.26 | | | 45.9 |
| Mean | | 9 40 | 53.223 | 77 | 59 | 47.27 |
| Div., Flex., etc. | | | | | | + 1.76 |

IX, 8.

| 1876. | | h. m. | s. | ° | ' | " |
|--------|----|-------|-------|---|---|---|
| Mar. 6 | E. | 9 41 | 32.25 | | | |

B. A. C. 3366.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|---|--------|
| April 15 | E. | 9 44 | 50.58 | 65 | 1 | 8.9 |
| 19 | E. | | 50.51 | | | 9.3 |
| 20 | F. | | 50.54 | | | 7.6 |
| Mean | | 9 44 | 50.543 | 65 | 1 | 8.60 |
| Div., Flex., etc. | | | | | | + 1.65 |

LALANDE 19442.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|--------|
| April 9 | E. | 9 49 | 53.00 | 74 | 41 | 1.5 |
| 12 | F. | | 53.12 | | | 7.9 |
| Mean | | 9 49 | 53.060 | 74 | 41 | 4.70 |
| Div., Flex., etc. | | | | | | + 1.66 |

WEISSE (2) 1047.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|--|-------|-------|----|----|--------|
| April 26(9)P. | | 9 50 | 12.20 | 72 | 21 | 17.0 |
| Div., Flex., etc. | | | | | | + 1.62 |

B. A. C. 3406.

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|------|----------|-------------|
| April 22 | P. | 9 51 | 33.06 | 76 57 52.4 |
| May 1 | P. | | 33.09 | 53.4 |
| 4 | P. | | 33.11 | 53.3 |
| Mean | | 9 51 | 33.087 | 76 57 53.03 |
| Div., Flex., etc. | | | | + 1.71 |

B. A. C. 3407.

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|------|----------|------------|
| Mar. 5 | P. | 9 51 | 33.50 | 81 5 41.9 |
| 9 | P. | | 33.43 | 40.7 |
| April 5 | S. | | 33.40 | 39.6 |
| Mean | | 9 51 | 33.443 | 81 5 40.73 |
| Div., Flex., etc. | | | | + 1.87 |

DURCH. 17°, 2160.

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|------|----------|-----------|
| April 30 | P. | 9 51 | 49.51 | 72 43 1.5 |
| Div., Flex., etc. | | | | + 1.63 |

WEISSE (2) 1106 (?).

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|------|----------|-------------|
| April 26 (g) | P. | 9 53 | 26.63 | 71 56 47.9 |
| 30 | P. | | 26.71 | 46.7 |
| Mean | | 9 53 | 26.670 | 71 56 47.30 |
| Div., Flex., etc. | | | | + 1.62 |

B. A. C. 3417.

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|------|----------|--------------|
| Feb. 16 | F. | 9 53 | 33.06 | 125 17 50.2 |
| April 5 | S. | | 33.07 | 52.1 |
| Mean | | 9 53 | 33.065 | 125 17 51.15 |
| Div., Flex., etc. | | | | + 1.56 |

B. A. C. 3415.

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|------|----------|-------------|
| April 22 | P. | 9 53 | 39.54 | 81 21 41.7 |
| 29 | S. | | 39.62 | 40.2 |
| May 4 | P. | | 39.62 | 42.3 |
| Dec. 5 | S. | | 39.63 | 41.0 |
| Mean | | 9 53 | 39.602 | 81 21 41.30 |
| Div., Flex., etc. | | | | + 1.87 |

WEISSE (2) 1158.

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|------|----------|-----------|
| April 30 | P. | 9 55 | 32.70 | 72 58 2.0 |
| Div., Flex., etc. | | | | + 1.63 |

B. A. C. 3452.

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|------|----------|-------------|
| April 1 | S. | 10 0 | 12.49 | 120 17 17.2 |
| Div., Flex., etc. | | | | + 1.78 |

DURCH. 15°, 2166.

| 1876. | | | h. m. s. | ° ' " |
|------------------|----|------|----------|-------------|
| Mar. 21 (10) | P. | 10 0 | 16.32 | 74 39 36.0 |
| 22 (9.5) | E. | | 16.46 | 37.7 |
| April 6 (9.5) | P. | | 16.46 | 34.2 |
| 26 (9.6) | P. | | 16.41 | 36.1 |
| Mean | | 10 0 | 16.412 | 74 39 36.00 |
| Div., Flex. etc. | | | | + 1.66 |

ANONYMOUS.

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|------|----------|-------------|
| April 6 | P. | 10 0 | 24.54 | 74 38 33.0 |
| 22 (10.5) | P. | | 24.54 | 34.0 |
| 26 (10.5) | P. | | 24.43 | 35.1 |
| Mean | | 10 0 | 24.503 | 74 38 34.03 |
| Div., Flex., etc. | | | | + 1.66 |

B. A. C. 3453.

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|------|----------|------------|
| Sept. 28 | P. | 10 0 | 34.17 | 72 37 59.2 |
| Div., Flex., etc. | | | | + 1.63 |

WEISSE (2) 15.

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|------|----------|-------------|
| Mar. 5 | P. | 10 3 | 20.43 | 71 11 47.5 |
| April 26 (8) | P. | | 20.43 | 45.2 |
| May 4 | P. | | 20.48 | 46.8 |
| Mean | | 10 3 | 20.447 | 71 11 46.50 |
| Div., Flex., etc. | | | | + 1.61 |

WEISSE (2) 28.

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|------|----------|------------|
| Jan. 25 | P. | 10 3 | 44.20 | 70 29 5.8 |
| Dec. 26 | P. | | 44.25 | 6.9 |
| Mean | | 10 3 | 44.225 | 70 29 6.35 |
| Div., Flex., etc. | | | | + 1.61 |

LALANDE 19809.

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|------|----------|------------|
| Mar. 6 | E. | 10 4 | 15.01 | 74 54 26.7 |
| Div., Flex., etc. | | | | + 1.67 |

DURCH. 19°, 2312.

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|------|----------|-------------|
| Jan. 25 | P. | 10 5 | 9.85 | 70 26 54.2 |
| Dec. 26 | P. | | 9.88 | 55.9 |
| Mean | | 10 5 | 9.865 | 70 26 55.05 |
| Div., Flex., etc. | | | | + 1.61 |

WEISSE (2) 74.

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|------|----------|------------|
| April 30 | P. | 10 5 | 21.19 | 74 30 42.2 |
| Div., Flex., etc. | | | | + 1.66 |

B. A. C. 3494.

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|------|----------|--------------|
| Jan. 20 | S. | 10 7 | 56.21 | 122 25 12.7 |
| April 1 | S. | | 56.26 | 11.5 |
| 6 | P. | | 56.16 | 12.6 |
| Mean | | 10 7 | 56.210 | 122 25 12.27 |
| Div., Flex., etc. | | | | + 1.68 |

B. A. C. 3500.

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|------|----------|------------|
| April 2 | P. | 10 9 | 11.56 | 60 4 20.4 |
| 5 | S. | | 11.58 | 19.4 |
| 6 | P. | | 11.69 | 18.6 |
| Mean | | 10 9 | 11.610 | 60 4 19.47 |
| Div., Flex., etc. | | | | + 1.52 |

B. A. C. 3507.

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|------|----------|-------------|
| Jan. 25 | P. | 10 9 | 40.18 | 65 52 51.8 |
| Feb. 10 | P. | | 40.19 | 51.4 |
| April 18 (6) | P. | | 40.17 | 52.7 |
| Mean | | 10 9 | 40.180 | 65 52 51.97 |
| Div., Flex., etc. | | | | + 1.64 |

B. A. C. 3508.

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|------|----------|-------------|
| Jan. 25 | P. | 10 9 | 47.48 | 65 57 55.5 |
| Feb. 10 | P. | | 47.50 | 55.1 |
| April 18 (3.5) | P. | | 47.48 | 55.1 |
| Mean | | 10 9 | 47.487 | 65 57 55.23 |
| Div., Flex., etc. | | | | + 1.64 |

DURCH. 15°, 2184.

| 1876. | | | h. m. s. | ° ' " |
|----------|----|-------|----------|-----------|
| Mar. 3 | F. | 10 10 | | 75 2 43.7 |
| 4 | S. | | 16.71 | 43.9 |
| 5 (9.0) | P. | | 16.93 | 46.4 |
| 6 (9.0) | E. | | 16.86 | 45.6 |
| 9 (9.5) | P. | | 16.82 | 43.3 |
| 13 (9.0) | P. | | 16.84 | 46.1 |

| | | | | |
|-------------------|--|-------|--------|------------|
| Mean | | 10 10 | 16.832 | 75 2 44.83 |
| Div., Flex., etc. | | | | + 1.67 |

WEISSE 160.

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|-------|----------|------------|
| April 20 | F. | 10 11 | 8.21 | 74 31 2.1 |
| 26 (9) | P. | | 8.09 | 4.0 |
| 30 | P. | | 8.13 | |
| Mean | | 10 11 | 8.143 | 74 31 3.05 |
| Div., Flex., etc. | | | | + 1.66 |

LALANDE 19965.

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|-------|----------|------------|
| April 19 | E. | 10 11 | 18.48 | 45 19 19.6 |
| Div., Flex., etc. | | | | + 0.35 |

WEISSE 170.

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|-------|----------|-------------|
| April 20 | F. | 10 11 | 46.53 | 75 26 48.3 |
| 29 | S. | | 46.56 | 47.9 |
| May 4 | P. | | 46.57 | 49.6 |
| Mean | | 10 11 | 46.553 | 75 26 48.60 |
| Div., Flex., etc. | | | | + 1.67 |

WEISSE (2) 234.

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|-------|----------|------------|
| Dec. 5 | S. | 10 12 | 53.00 | 69 30 40.9 |
| Div., Flex., etc. | | | | + 1.61 |

B. A. C. 3522.

| 1876. | | | h. m. s. | ° ' " |
|-------------------|----|-------|----------|------------|
| Dec. 12 | F. | 10 12 | 59.01 | 69 54 0.6 |
| 13 | S. | | 59.06 | 1.2 |
| 26 | P. | | 59.08 | 2.9 |
| Mean | | 10 12 | 59.050 | 69 54 1.57 |
| Div., Flex., etc. | | | | + 1.61 |

γ² LEONIS.

| 1876. | | | h. m. s. | ° ' " |
|----------|----|-------|----------|------------|
| Jan. 25 | | 10 13 | 8.28 | 69 31 55.1 |
| 31 | | | 8.31 | 56.3 |
| Feb. 12 | | | 8.34 | 56.4 |
| Mar. 9 | | | 8.35 | 56.3 |
| 21 (4) | P. | | 8.31 | 56.5 |
| 22 (5.5) | E. | | 8.42 | 57.5 |
| 23 | F. | | 8.36 | 57.9 |
| April 2 | P. | | 8.35 | 57.5 |
| 5 | S. | | 8.32 | 55.5 |
| 6 (3.5) | P. | | 8.40 | 56.3 |
| 15 | P. | | 8.33 | 57.0 |
| 19 | E. | | 8.32 | 56.2 |
| 20 | F. | | 8.47 | 58.0 |
| 26 (5) | P. | | 8.32 | 56.9 |
| 30 | P. | | 8.31 | 55.7 |
| May 1 | E. | | | 59.2 |
| 3 | S. | | 8.30 | 57.1 |
| 10 | E. | | 8.36 | 57.6 |
| June 30 | E. | | 8.27 | 56.8 |
| July 6 | P. | | 8.27 | 56.7 |
| Oct. 11 | F. | | 8.26 | 55.5 |

| | | | | |
|-------------------|--|-------|-------|-------------|
| Mean | | 10 13 | 8.333 | 69 31 56.76 |
| Div., Flex., etc. | | | | + 1.61 |

B. A. C. 3532.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|---|-------|
| Dec. 12 | F. | 10 14 | 37.69 | 87 | 5 | 12.4 |
| 13 | S. | | 37.80 | | | 10.4 |
| Mean | | 10 14 | 37.745 | 87 | 5 | 11.40 |
| Div., Flex., etc. | | | | | + | 1.78 |

B. A. C. 3539.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|----|---|------|
| Dec. 26 | P. | 10 15 | 54.44 | 54 | 9 | 25.4 |
| Div., Flex., etc. | | | | | + | 1.29 |

B. A. C. 3553.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|---|-------|
| April 18 (7) P. | | 10 17 | 15.75 | 93 | 0 | 58.5 |
| May 4 | P. | | 15.75 | | 1 | 0.5 |
| Mean | | 10 17 | 15.750 | 93 | 0 | 59.50 |
| Div., Flex., etc. | | | | | + | 1.73 |

B. A. C. 3561.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|------|
| April 30 (6.5) P. | | 10 18 | 43.04 | 80 | 35 | 5.5 |
| Dec. 12 | F. | | 43.03 | | | 5.9 |
| 13 | S. | | 43.20 | | | |
| 26 | P. | | 43.04 | | | 6.6 |
| Mean | | 10 18 | 43.078 | 80 | 35 | 6.00 |
| Div., Flex., etc. | | | | | + | 1.87 |

ANONYMOUS.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|-------|
| Mar. 4 | S. | 10 20 | 20.15 | 75 | 31 | 44.9 |
| 5 (10) | P. | | 20.05 | | | 45.5 |
| 6 | F. | | 20.15 | | | 47.6 |
| 9 | P. | | 20.08 | | | 45.6 |
| 13 | P. | | 20.15 | | | 46.8 |
| April 8 | F. | | 20.21 | | | 45.0 |
| Mean | | 10 20 | 20.132 | 75 | 31 | 45.90 |
| Div., Flex., etc. | | | | | + | 1.68 |

WEISSE 331.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|---|------|
| April 20 | F. | 10 20 | 37.62 | 78 | 3 | 10.0 |
| 26 (7.5) P. | | | 37.59 | | | 9.2 |
| Mean | | 10 20 | 37.605 | 78 | 3 | 9.60 |
| Div., Flex., etc. | | | | | + | 1.76 |

B. A. C. 3575.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|----|----|-------|
| April 22 | P. | 10 21 | 5.89 | 79 | 36 | 20.8 |
| Dec 12 | F. | | | | | 22.0 |
| 26 | P. | | 5.87 | | | 21.6 |
| Mean | | 10 21 | 5.880 | 79 | 36 | 21.47 |
| Div., Flex., etc. | | | | | + | 1.84 |

WEISSE 361.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|-------|
| April 20 | F. | 10 21 | 53.81 | 77 | 52 | 39.3 |
| 26 (8.5) P. | | | 53.85 | | | 40.3 |
| Mean | | 10 21 | 53.830 | 77 | 52 | 39.80 |
| Div., Flex., etc. | | | | | + | 1.75 |

B. A. C. 3582.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|---|-------|
| April 29 | S. | 10 22 | 27.01 | 93 | 6 | 30.0 |
| 30 (7) P. | | | 26.98 | | | 27.9 |
| May 3 | S. | | 27.03 | | | 29.6 |
| 4 | P. | | 26.91 | | | 31.0 |
| Mean | | 10 22 | 26.982 | 93 | 6 | 29.62 |
| Div., Flex., etc. | | | | | + | 1.72 |

B. A. C. 3592.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|-------|
| April 29 | S. | 10 23 | 20.45 | 87 | 52 | 12.8 |
| 30 (7.5) P. | | | 20.44 | | | 12.5 |
| May 3 | S. | | 20.42 | | | 12.7 |
| 4 | P. | | 20.36 | | | 15.2 |
| Mean | | 10 23 | 20.418 | 87 | 52 | 13.30 |
| Div., Flex., etc. | | | | | + | 1.78 |

B. A. C. 3602.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|------|
| Dec. 12 | F. | 10 24 | 48.66 | 56 | 59 | 3.9 |
| 13 | S. | | | | | 3.1 |
| 26 | P. | | 48.77 | | | 5.4 |
| Mean | | 10 24 | 48.715 | 56 | 59 | 4.13 |
| Div., Flex., etc. | | | | | + | 1.48 |

B. A. C. 3606.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|-------|
| Jan. 25 | P. | 10 25 | 34.51 | 75 | 13 | 35.6 |
| Feb. 10 | P. | | 34.56 | | | 35.8 |
| April 8 | F. | | 34.51 | | | 36.3 |
| Mean | | 10 25 | 34.527 | 75 | 13 | 35.90 |
| Div., Flex., etc. | | | | | + | 1.67 |

WEISSE 520.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|--|-------|-------|-----|----|------|
| May 4 (6.5) P. | | 10 30 | 21.98 | 101 | 33 | 54.7 |
| Div., Flex., etc. | | | | | + | 1.68 |

B. A. C. 3663.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|----|---|-------|
| Mar. 5 | P. | 10 35 | 5.74 | 91 | 5 | 25.1 |
| 9 | P. | | 5.72 | | | 22.6 |
| 23 | F. | | 5.66 | | | 23.7 |
| Mean | | 10 35 | 5.707 | 91 | 5 | 23.80 |
| Div., Flex., etc. | | | | | + | 1.85 |

B. A. C. 3671.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|---|-------|
| Mar. 5 | P. | 10 36 | 40.36 | 66 | 9 | 46.2 |
| 9 | P. | | 40.31 | | | 45.5 |
| 23 | F. | | | | | 45.4 |
| April 1 | S. | | 40.35 | | | 44.9 |
| Mean | | 10 36 | 40.340 | 66 | 9 | 45.50 |
| Div., Flex., etc. | | | | | + | 1.64 |

B. A. C. 3693.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|---|------|
| April 18 | P. | 10 39 | 51.25 | 75 | 9 | 3.5 |
| 20 (6) F. | | | 51.13 | | | 4.0 |
| 22 (6) P. | | | 51.17 | | | 3.5 |
| Mean | | 10 39 | 51.183 | 75 | 9 | 3.67 |
| Div., Flex., etc. | | | | | + | 1.67 |

LANLANDE 21008.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|--|-------|-------|----|----|------|
| May 4 (9.0) P. | | 10 49 | 34.14 | 61 | 35 | 41.1 |
| Div., Flex., etc. | | | | | + | 1.56 |

B. A. C. 3763.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-----|---|-------|
| Mar. 21 | P. | 10 53 | 22.63 | 123 | 4 | 17.8 |
| April 1 | S. | | 22.81 | | | 17.3 |
| | | | 22.62 | | | 16.6 |
| Mean | | 10 53 | 22.687 | 123 | 4 | 17.23 |
| Div., Flex., etc. | | | | | + | 1.64 |

B. A. C. 3666.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|---|-------|
| Jan. 25 | P. | 10 36 | 13.19 | 63 | 1 | 25.8 |
| Feb. 10 | P. | | 13.31 | | | 25.5 |
| April 4 | F. | | 13.14 | | | 24.7 |
| Mean | | 10 36 | 13.213 | 63 | 1 | 25.33 |
| Div., Flex., etc. | | | | | + | 1.58 |

B. A. C. 3788.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|-------|
| Mar. 9 | P. | 10 58 | 37.19 | 81 | 59 | 37.6 |
| April 1 | S. | | 37.22 | | | 37.3 |
| 15 | P. | | 37.24 | | | 38.5 |
| Mean | | 10 58 | 37.217 | 81 | 59 | 37.80 |
| Div., Flex., etc. | | | | | + | 1.86 |

LANLANDE 21258.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|--|-------|-------|----|----|------|
| Mar. 21 (9) P. | | 10 59 | 18.67 | 45 | 50 | 12.3 |
| Div., Flex., etc. | | | | | + | 0.34 |

B. A. C. 3822.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-----|----|-------|
| Mar. 9 | P. | 11 3 | 55.92 | 121 | 41 | 38.1 |
| 21 | P. | | 56.01 | | | 38.9 |
| 22 | E. | | 56.09 | | | 39.3 |
| Mean | | 11 3 | 56.007 | 121 | 41 | 38.77 |
| Div., Flex., etc. | | | | | + | 1.73 |

* LANLANDE 21369.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|--|-------|-------|----|----|------|
| April 10 (9.5) P. | | 11 4 | 12.83 | 58 | 50 | 3.3 |
| Div., Flex., etc. | | | | | + | 1.51 |

LANLANDE 21368.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|--|-------|-------|----|----|------|
| April 10 (8.5) P. | | 11 4 | 16.28 | 58 | 52 | 27.3 |
| Div., Flex., etc. | | | | | + | 1.51 |

B. A. C. 3832.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|-------|
| April 22 | P. | 11 7 | 24.73 | 89 | 23 | 41.8 |
| Dec. 13 | S. | | 24.69 | | | 41.0 |
| 26 | P. | | 24.76 | | | 40.8 |
| Mean | | 11 7 | 24.727 | 89 | 23 | 41.20 |
| Div., Flex., etc. | | | | | + | 1.84 |

B. A. C. 3838.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|----|----|------|
| Mar. 21 | P. | 11 7 | 43.88 | 73 | 53 | 34.0 |
| Div., Flex., etc. | | | | | + | 1.65 |

B. A. C. 3842.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|-------|
| Mar. 5 | P. | 11 8 | 36.54 | 66 | 13 | 43.2 |
| 9 | P. | | 36.54 | | | 41.9 |
| April 6 | P. | | 36.53 | | | 43.3 |
| 29 | S. | | 36.44 | | | 44.1 |
| Mean | | 11 8 | 36.510 | 66 | 13 | 43.12 |
| Div., Flex., etc. | | | | | + | 1.64 |

B. A. C. 3850.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|-------|
| May 4 (5) P. | | 11 10 | 54.53 | 87 | 18 | 29.4 |
| Dec. 13 | S. | | 54.50 | | | 27.3 |
| 26 | P. | | 54.54 | | | 28.0 |
| Mean | | 11 10 | 54.523 | 87 | 18 | 28.23 |
| Div., Flex., etc. | | | | | + | 1.78 |

B. A. C. 3851.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|--------------|-------------|
| Mar. 5 | P. | 11 11 34.07 | 57 46 24.6 |
| 9 | P. | 33.97 | 24.8 |
| April 5 | S. | 33.92 | 24.4 |
| Mean | | 11 11 33.987 | 57 46 24.60 |
| Div., Flex., etc. | | | + 1.49 |

B. A. C. 3877¹.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|--------------|-------------|
| April 22 (5.5) P. | | 11 17 27.61 | 78 47 16.5 |
| May 4 (4) P. | | 27.64 | 17.3 |
| Dec. 12 | F. | 27.55 | 14.4 |
| 13 | S. | 27.53 | 15.1 |
| 26 | P. | 27.64 | 15.3 |
| Mean | | 11 17 27.594 | 78 47 15.72 |
| Div., Flex., etc. | | | + 1.80 |

WEISSE (2) 240.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|-------------|-------------|
| April 29 | S. | 11 14 3.75 | 57 35 10.5 |
| May 10 | E. | 3.79 | 12.4 |
| Mean | | 11 14 3.770 | 57 35 11.45 |
| Div., Flex., etc. | | | + 1.49 |

WEISSE (2) 273.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|--------------|-------------|
| April 29 | S. | 11 16 12.27 | 57 29 29.6 |
| May 10 | E. | 12.37 | 30.3 |
| Mean | | 11 16 12.320 | 57 29 29.95 |
| Div., Flex., etc. | | | + 1.48 |

WEISSE (2) 316.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|--------------|-------------|
| April 29 | S. | 11 18 17.29 | 57 29 36.7 |
| May 10 | E. | 17.32 | 37.8 |
| Mean | | 11 18 17.305 | 57 29 37.25 |
| Div., Flex., etc. | | | + 1.48 |

BONN. + 32°, 2156.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|-------------|------------|
| April 29 | S. | 11 26 27.99 | 57 33 57.4 |
| Div., Flex., etc. | | | + 1.49 |

WEISSE (2) 609.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|--------------|-------------|
| April 29 | S. | 11 32 32.26 | 57 33 10.2 |
| May 10 | E. | 32.35 | 11.5 |
| Mean | | 11 32 32.305 | 57 33 10.85 |
| Div., Flex., etc. | | | + 1.49 |

WEISSE (2) 661.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|-------------|------------|
| April 29 | S. | 11 35 6.84 | 57 34 1.4 |
| May 10 | E. | 6.94 | 3.3 |
| Mean | | 11 35 6.890 | 57 34 2.35 |
| Div., Flex., etc. | | | + 1.49 |

WEISSE (2) 703.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|------------|------------|
| May 10 | E. | 11 37 1.46 | 57 32 56.2 |
| Div., Flex., etc. | | | + 1.49 |

WEISSE (2) 707.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|-------------|------------|
| May 10 | E. | 11 37 19.34 | 57 33 12.8 |
| Div., Flex., etc. | | | + 1.49 |

B. A. C. 3877².

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|--------------|-------------|
| April 22 (8.5) P. | | 11 17 27.82 | 78 47 15.0 |
| May 4 (8.5) P. | | 27.80 | 15.7 |
| Dec. 26 | P. | 27.79 | 13.7 |
| Mean | | 11 17 27.803 | 78 47 14.80 |
| Div., Flex., etc. | | | + 1.80 |

B. A. C. 3891.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|--------------|-------------|
| April 1 | S. | 11 19 33.19 | 127 3 52.7 |
| 5 | S. | 32.96 | 55.3 |
| 10 | P. | 33.10 | 57.7 |
| Mean | | 11 19 33.083 | 127 3 55.23 |
| Div., Flex., etc. | | | + 1.49 |

LAL. (F.) 1882.

| 1876. | | h. m. s. | ° ' " |
|-------------------|--|-------------|------------|
| April 10 (5.5) P. | | 11 21 58.96 | 27 32 48.6 |
| Div., Flex., etc. | | | + 0.83 |

B. A. C. 3919¹.

| 1876. | | h. m. s. | ° ' " |
|-------------------|--|--------------|-------------|
| April 18 (9.5) P. | | 11 25 20.12 | 74 56 28.8 |
| 20 (9.0) F. | | 20.15 | 29.0 |
| 22 (9.5) P. | | 20.08 | 29.9 |
| Mean | | 11 25 20.117 | 74 56 29.23 |
| Div., Flex., etc. | | | + 1.67 |

B. A. C. 3919².

| 1876. | | h. m. s. | ° ' " |
|-------------------|--|--------------|-------------|
| April 18 (6) P. | | 11 25 20.72 | 74 56 41.2 |
| 20 (6) F. | | 20.68 | 43.4 |
| 22 (6.5) P. | | 20.68 | 42.4 |
| Mean | | 11 25 20.693 | 74 56 42.33 |
| Div., Flex., etc. | | | + 1.67 |

B. A. C. 3934.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|--------------|--------------|
| Jan. 14 | E. | 11 28 28.22 | 122 10 26.6 |
| April 1 | S. | 28.12 | 26.9 |
| 5 | S. | 28.15 | 24.8 |
| Mean | | 11 28 28.163 | 122 10 26.10 |
| Div., Flex., etc. | | | + 1.70 |

B. A. C. 3945.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|--------------|--------------|
| April 8 | F. | 11 30 25.93 | 122 52 58.3 |
| 10 | P. | 26.16 | 55.5 |
| 26 | P. | 26.09 | 57.6 |
| Mean | | 11 30 26.060 | 122 52 57.13 |
| Div., Flex., etc. | | | + 1.65 |

B. A. C. 3948.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|--------------|--------------|
| Jan. 14 | E. | 11 30 52.49 | 122 17 56.9 |
| April 1 | S. | 52.49 | 54.5 |
| 5 | S. | 52.28 | 53.4 |
| Mean | | 11 30 52.420 | 122 17 54.93 |
| Div., Flex., etc. | | | + 1.69 |

B. A. C. 3964.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|--------------|-------------|
| April 18 | P. | 11 34 20.15 | 67 57 29.4 |
| 20 (6) F. | | 20.05 | 29.9 |
| 22 | P. | 20.07 | 30.8 |
| Mean | | 11 34 20.090 | 67 57 30.03 |
| Div., Flex., etc. | | | + 1.60 |

GROOMBRIDGE 1822.

| 1876. | | h. m. s. | ° ' " |
|-------------------|--|------------|-----------|
| Mar. 9 (8.5) P. | | 11 39 2.72 | 41 38 3.5 |
| Div., Flex., etc. | | | + 0.56 |

B. A. C. 3982.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|--------------|-------------|
| Dec. 12 | F. | 11 39 29.15 | 82 46 32.9 |
| 13 | S. | 28.96 | 31.7 |
| 26 | P. | 29.22 | 32.5 |
| Mean | | 11 39 29.110 | 82 46 32.37 |
| Div., Flex., etc. | | | + 1.85 |

B. A. C. 4002.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|--------------|-------------|
| April 10 | P. | 11 44 14.19 | 87 32 11.1 |
| 18 | P. | 14.24 | 11.5 |
| 22 (4) P. | | 14.25 | 11.8 |
| Mean | | 11 44 14.227 | 87 32 11.47 |
| Div., Flex., etc. | | | + 1.78 |

B. A. C. 4027.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|--------------|-------------|
| Mar. 5 | P. | 11 48 41.56 | 80 51 59.2 |
| 9 | P. | 41.46 | 58.1 |
| April 18 | P. | 41.47 | 59.1 |
| 20 (5.5) F. | | 41.45 | 58.2 |
| Mean | | 11 48 41.485 | 80 51 58.65 |
| Div., Flex., etc. | | | + 1.87 |

B. A. C. 4049.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|--------------|-------------|
| April 20 (5.5) F. | | 11 53 35.75 | 86 38 14.9 |
| 22 (6) P. | | 35.82 | 14.0 |
| May 3 | S. | 36.16 | 14.1 |
| Mean | | 11 53 35.910 | 86 38 14.33 |
| Div., Flex., etc. | | | + 1.78 |

B. A. C. 4052.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|--------------|-------------|
| Dec. 12 | F. | 11 54 31.06 | 82 41 36.9 |
| 13 | S. | 31.15 | 37.3 |
| 26 | P. | 31.19 | 38.0 |
| Mean | | 11 54 31.133 | 82 41 37.40 |
| Div., Flex., etc. | | | + 1.85 |

LALANDE 22304.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|-------------|-----------|
| May 10 | E. | 11 42 17.24 | 58 6 21.3 |
| Div., Flex., etc. | | | + 1.49 |

DURCH. 32°. 2199.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|-------------|----------|
| May 10 | E. | 11 47 26.11 | 58 5 2.2 |
| Div., Flex., etc. | | | + 1.49 |

LALANDE 22472.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|-------------|-----------|
| May 10 | E. | 11 49 37.16 | 58 6 11.5 |
| Div., Flex., etc. | | | + 1.49 |

LALANDE 22543.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|------------|------------|
| May 10 | E. | 11 52 9.19 | 57 58 20.1 |
| Div., Flex., etc. | | | + 1.49 |

LALANDE 22622.

| 1876. | | h. m. s. | ° ' " |
|-------------------|----|-------------|-----------|
| May 10 | E. | 11 55 47.05 | 58 3 35.4 |
| Div., Flex., etc. | | | + 1.49 |

LALANDE 22703.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|------|----|---|------|
| May 10 | E. | 11 59 | 2.89 | 58 | 5 | 57.1 |
| Div., Flex., etc. | | | | | + | 1.49 |

B. A. C. 4056.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|-------|
| Mar. 5 | P. | 11 55 | 23.27 | 67 | 12 | 53.4 |
| 9 | P. | | 23.23 | | | 52.0 |
| 31 | F. | | 23.18 | | | 52.6 |
| Mean | | 11 55 | 23.227 | 67 | 12 | 52.67 |
| Div., Flex., etc. | | | | | + | 1.62 |

D'AGELET 2808.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|----|----|------|
| April 10(7) | P. | 11 56 | 11.52 | 46 | 12 | 28.7 |
| Div., Flex., etc. | | | | | + | 0.37 |

B. A. C. 4066¹.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|------|
| May 23 | S. | 11 57 | 55.14 | 67 | 51 | 2.4 |
| June 1 | P. | | 55.33 | | | 2.8 |
| Dec. 12 | F. | | 55.26 | | | 1.4 |
| 13 | S. | | 55.33 | | | 2.1 |
| 26 | P. | | 55.35 | | | 2.0 |
| Mean | | 11 57 | 55.282 | 67 | 51 | 2.14 |
| Div., Flex., etc. | | | | | + | 1.60 |

B. A. C. 4066².

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|-------|
| May 23 | S. | 11 57 | 55.29 | 67 | 50 | 59.4 |
| June 1 | P. | | 55.57 | | | 59.9 |
| Dec. 12 | F. | | 55.49 | | | 57.8 |
| 13 | S. | | 55.64 | | | 57.8 |
| 26 | P. | | 55.63 | | | 59.9 |
| Mean | | 11 57 | 55.524 | 67 | 50 | 58.96 |
| Div., Flex., etc. | | | | | + | 1.60 |

B. A. C. 4079.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|----|----|------|
| May 3 | S. | 12 0 | 50.79 | 79 | 38 | 45.3 |
| Div., Flex., etc. | | | | | + | 1.84 |

B. A. C. 4092.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-----|----|-------|
| Mar. 9 | P. | 12 2 | 30.06 | 130 | 32 | 28.8 |
| April 10 | P. | | 30.13 | | | 28.3 |
| 19 | E. | | 30.27 | | | 29.3 |
| Mean | | 12 2 | 30.153 | 130 | 32 | 28.80 |
| Div., Flex., etc. | | | | | + | 1.47 |

LALANDE 22810.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|----|---|------|
| April 25(8) | S. | 12 3 | 23.62 | 49 | 3 | 21.9 |
| Div., Flex., etc. | | | | | + | 0.73 |

B. A. C. 4113.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-----|----|-------|
| Feb. 16 | F. | 12 6 | 58.31 | 128 | 14 | 22.4 |
| April 5 | S. | | 58.28 | | | 17.9 |
| 6 | P. | | 58.34 | | | 18.9 |
| Mean | | 12 6 | 58.310 | 128 | 14 | 19.73 |
| Div., Flex., etc. | | | | | + | 1.44 |

B. A. C. 4124.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-----|----|-------|
| Feb. 16 | F. | 12 9 | | 106 | 51 | 11.2 |
| April 6 | P. | | 25.90 | | | 10.5 |
| 10 | P. | | 25.90 | | | 11.3 |
| 19 | E. | | 25.88 | | | 12.5 |
| 22(3) | P. | | 25.85 | | | 11.3 |
| June 1 | P. | | 25.78 | | | 11.7 |
| Oct. 31 | E. | | 25.91 | | | |
| Nov. 3 | P. | | 25.80 | | | 9.1 |
| Mean | | 12 9 | 25.860 | 106 | 51 | 11.09 |
| Div., Flex., etc. | | | | | + | 1.83 |

B. A. C. 4174.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|-----|----|-------|
| April 19 | E. | 12 17 | 4.47 | 124 | 43 | 32.4 |
| May 3 | S. | | 4.59 | | | 27.9 |
| Mean | | 12 17 | 4.530 | 124 | 43 | 30.15 |
| Div., Flex., etc. | | | | | + | 1.58 |

B. A. C. 4185.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|------|----|----|------|
| June 1 | P. | 12 19 | 6.98 | 32 | 32 | 4.2 |
| Div., Flex., etc. | | | | | + | 0.70 |

B. A. C. 4200.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|----|----|------|
| May 4(7) | P. | 12 21 | 29.92 | 93 | 55 | 43.5 |
| Div., Flex., etc. | | | | | + | 1.67 |

B. A. C. 4210.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|-----|---|-------|
| April 19 | P. | 12 23 | 19.91 | 131 | 2 | 58.1 |
| 22 | P. | | 19.83 | | 3 | 0.3 |
| Mean | | 12 23 | 19.87 | 131 | 2 | 59.20 |
| Div., Flex., etc. | | | | | + | 1.46 |

B. A. C. 4211.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|-----|----|------|
| Nov. 3 | P. | 12 23 | 27.01 | 105 | 49 | 26.9 |
| Div., Flex., etc. | | | | | + | 1.75 |

B. A. C. 4225.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|----|----|------|
| May 4(6.5) | P. | 12 25 | 16.25 | 94 | 22 | 5.8 |
| Div., Flex., etc. | | | | | + | 1.64 |

B. A. C. 4227.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|-----|----|------|
| April 22 | P. | 12 26 | 49.15 | 130 | 43 | 46.3 |
| Div., Flex., etc. | | | | | + | 1.47 |

f VIRGINIS.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|----|---|------|
| May 4(6.5) | P. | 12 30 | 24.20 | 95 | 8 | 52.5 |
| Div., Flex., etc. | | | | | + | 1.60 |

WEISSE 498.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|----|----|------|
| June 1(9) | P. | 12 31 | 10.18 | 92 | 53 | 13.0 |
| Div., Flex., etc. | | | | | + | 1.74 |

LALANDE 23951.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-----|----|-------|
| April 25(8.2) | S. | 12 44 | 58.37 | 102 | 48 | 16.8 |
| May 4 | P. | | 58.36 | | | 16.7 |
| 23(8) | S. | | 58.36 | | | 14.3 |
| Mean | | 12 44 | 58.363 | 102 | 48 | 15.93 |
| Div., Flex., etc. | | | | | + | 1.70 |

B. A. C. 4321.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-----|----|-------|
| April 6 | P. | 12 46 | 34.48 | 129 | 30 | 13.5 |
| 22 | P. | | 34.47 | | | 15.4 |
| 26 | P. | | 34.27 | | | 16.3 |
| May 3 | S. | | 34.60 | | | 14.0 |
| Mean | | 12 46 | 34.455 | 129 | 30 | 14.80 |
| Div., Flex., etc. | | | | | + | 1.47 |

LALANDE 23995.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|-----|----|------|
| May 4 | P. | 12 46 | 39.62 | 107 | 49 | 13.4 |
| Div., Flex., etc. | | | | | + | 1.90 |

32¹ CAMELOPARDALIS.

| 1876. | | h. m. | s. | ° | ' | " |
|---------|----|-------|------|---|----|------|
| May 1 | E. | 12 48 | 6.26 | 5 | 54 | 28.0 |
| 29 | E. | | 7.34 | | | 27.0 |
| June 2 | E. | | 6.70 | | | 26.2 |
| Dec. 26 | P. | | 6.72 | | | 27.3 |

| | | | | | | |
|-------------------|--|-------|-------|---|----|-------|
| Mean | | 12 48 | 6.755 | 5 | 54 | 27.12 |
| Div., Flex., etc. | | | | | + | 0.37 |

32¹ CAMELOPARDALIS, S. P.

| 1876. | | h. m. | s. | ° | ' | " |
|---------------|----|-------|------|-----|---|------|
| Sept. 29(5.8) | P. | 12 48 | 6.29 | 354 | 5 | 30.8 |
| Oct. 3 | P. | | 5.53 | | | 31.4 |
| Nov. 29 | E. | | 6.04 | | | 30.7 |
| Dec. 15 | E. | | 6.03 | | | 32.4 |
| 19 | E. | | 5.81 | | | 32.7 |

| | | | | | | |
|-------------------|--|-------|-------|-----|---|-------|
| Mean | | 12 42 | 5.940 | 354 | 5 | 31.60 |
| Div., Flex., etc. | | | | | + | 0.51 |

12¹ CANUM VENATICORUM.

| 1876. | | h. m. | s. | ° | ' | " |
|---------|----|-------|-------|----|---|------|
| Mar. 9 | P. | 12 50 | 12.35 | 51 | 0 | 55.2 |
| 13 | P. | | 12.34 | | | 54.7 |
| April 6 | P. | | 12.29 | | | 54.5 |
| 9 | S. | | 12.26 | | | 55.2 |
| 10 | P. | | 12.48 | | | 54.5 |
| 22 | P. | | 12.31 | | | 54.5 |
| 26(7) | P. | | 12.21 | | | 54.8 |
| May 4 | P. | | 12.33 | | | 54.4 |
| 23 | S. | | 12.04 | | | 53.3 |
| 31 | S. | | 12.28 | | | 53.6 |
| June 1 | P. | | 12.30 | | | 54.6 |

| | | | | | | |
|-------------------|--|-------|--------|----|---|-------|
| Mean | | 12 50 | 12.290 | 51 | 0 | 54.48 |
| Div., Flex., etc. | | | | | + | 0.90 |

B. A. C. 4355¹.

| 1876. | | h. m. | s. | ° | ' | " |
|----------|----|-------|-------|-----|----|------|
| Feb. 12 | F. | 12 53 | 45.37 | 122 | 50 | 0.5 |
| April 10 | P. | | 45.60 | | 49 | 58.5 |
| 19 | E. | | 45.58 | | | |
| 22 | P. | | 45.53 | | 50 | 1.8 |

| | | | | | | |
|-------------------|--|-------|--------|-----|----|------|
| Mean | | 12 53 | 45.520 | 122 | 50 | 0.27 |
| Div., Flex., etc. | | | | | + | 1.65 |

B. A. C. 4357¹.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------|----|-------|-------|-----|----|------|
| April 19(8) | E. | 12 54 | 14.60 | 122 | 57 | 16.7 |
| 22(8.5) | P. | | 14.64 | | | 19.0 |

| | | | | | | |
|-------------------|--|-------|--------|-----|----|-------|
| Mean | | 12 54 | 14.620 | 122 | 57 | 17.85 |
| Div., Flex., etc. | | | | | + | 1.64 |

B. A. C. 4357².

| 1876. | | h. m. | s. | ° | ' | " |
|----------|----|-------|-------|-----|----|------|
| April 10 | P. | 12 54 | 15.12 | 122 | 57 | 12.9 |
| 19(6) | E. | | 15.14 | | | 12.8 |
| 22 | P. | | 15.15 | | | 16.3 |

| | | | | | | |
|-------------------|--|-------|--------|-----|----|-------|
| Mean | | 12 54 | 15.137 | 122 | 57 | 14.00 |
| Div., Flex., etc. | | | | | + | 1.64 |

B. A. C. 4367.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|----|----|-------|
| Mar. 9 | P. | 12 56 | 0.32 | 78 | 22 | 26.1 |
| April 25 | S. | | 0.30 | | | 26.7 |
| 26(3.5) P. | | | 0.23 | | | 25.2 |
| May 4(2.5) P. | | | 0.25 | | | 26.4 |
| Oct. 26 | P. | | 0.19 | | | . |
| Nov. 3 | P. | | 0.23 | | | 24.0 |
| 8 | E. | | 0.20 | | | 25.0 |
| Mean | | 12 56 | 0.246 | 78 | 22 | 25.57 |
| Div., Flex., etc. | | | . | | + | 1.78 |

B. A. C. 4374.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-----|----|-------|
| April 6 | P. | 12 57 | 49.50 | 130 | 31 | 46.6 |
| 26 | P. | | 49.41 | | | 49.5 |
| Mean | | 12 57 | 49.455 | 130 | 31 | 48.05 |
| Div., Flex., etc. | | | . | | + | 1.47 |

B. A. C. 4389.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|---|------|
| May 4 | P. | 13 0 | 17.48 | 44 | 4 | 4.2 |
| 23 | S. | | 17.25 | | | 2.6 |
| Mean | | 13 0 | 17.365 | 44 | 4 | 3.40 |
| Div., Flex., etc. | | | . | | + | 0.40 |

LACAILLE 5410.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|-----|----|-------|
| Feb. 12 | F. | 13 2 | 8.94 | 122 | 50 | 19.9 |
| April 10 | P. | | 9.31 | | | 18.5 |
| 19 | E. | | 9.21 | | | 18.6 |
| 22 | P. | | 9.24 | | | 20.0 |
| Mean | | 13 2 | 9.175 | 122 | 50 | 19.22 |
| Div., Flex., etc. | | | . | | + | 1.65 |

50 VIRGINIS.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|----|----|------|
| June 1 | P. | 13 3 | 15.92 | 99 | 40 | 2.4 |
| Div., Flex., etc. | | | . | | + | 1.68 |

B. A. C. 4416.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|-------|
| April 26 | P. | 13 4 | 27.59 | 32 | 30 | 25.6 |
| May 4 | P. | | 27.67 | | | 26.3 |
| 23 | S. | | 27.28 | | | 24.6 |
| Mean | | 13 4 | 27.513 | 32 | 30 | 25.50 |
| Div., Flex., etc. | | | . | | + | 0.70 |

B. A. C. 4417.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|-----|---|-------|
| Feb. 16 | F. | 13 5 | 8.67 | 127 | 8 | 40.0 |
| April 6 | P. | | 8.57 | | | 40.5 |
| 10 | P. | | 8.67 | | | 39.8 |
| Mean | | 13 5 | 8.637 | 127 | 8 | 40.10 |
| Div., Flex., etc. | | | . | | + | 1.48 |

B. A. C. 4482.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-----|---|-------|
| April 6 | P. | 13 18 | 56.88 | 129 | 6 | 23.7 |
| June 1 | P. | | 56.70 | | | 25.8 |
| Mean | | 13 18 | 56.790 | 129 | 6 | 24.75 |
| Div., Flex., etc. | | | . | | + | 1.45 |

B. A. C. 4489.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-----|----|------|
| April 6 | P. | 13 19 | 43.68 | 130 | 51 | 7.5 |
| June 1 | P. | | 43.51 | | | 8.9 |
| Mean | | 13 19 | 43.595 | 130 | 51 | 8.20 |
| Div., Flex., etc. | | | . | | + | 1.46 |

B. A. C. 4509.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|--|-------|------|----|----|------|
| April 26(8.5) P. | | 13 24 | 1.54 | 70 | 18 | 1.1 |
| Div., Flex., etc. | | | . | | + | 1.61 |

B. A. C. 4518.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-----|------|-------|
| Mar. 9 | P. | 13 25 | 48.10 | 129 | 20 | 0.7 |
| 13 | P. | | 47.97 | | | 0.8 |
| April 10 | P. | | 48.11 | 19 | 56.2 | |
| Mean | | 13 25 | 48.060 | 129 | 19 | 59.23 |
| Div., Flex., etc. | | | . | | + | 1.46 |

B. A. C. 4522.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-----|----|-------|
| Mar. 9 | P. | 13 26 | 34.59 | 129 | 18 | 31.4 |
| 13 | P. | | 34.40 | | | 32.6 |
| April 10 | P. | | 34.53 | | | 27.8 |
| Mean | | 13 26 | 34.507 | 129 | 18 | 30.60 |
| Div., Flex., etc. | | | . | | + | 1.46 |

B. A. C. 4545.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|--|-------|-------|----|----|------|
| June 1(7) P. | | 13 29 | 57.25 | 45 | 10 | 6.8 |
| Div., Flex., etc. | | | . | | + | 0.35 |

B. A. C. 4553.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|----|----|-------|
| April 26 | P. | 13 32 | 9.26 | 66 | 50 | 14.9 |
| May 23 | S. | | 9.04 | | | 13.4 |
| Mean | | 13 32 | 9.150 | 66 | 50 | 14.15 |
| Div., Flex., etc. | | | . | | + | 1.63 |

B. A. C. 4563.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|-------|
| April 26 | P. | 13 34 | 45.52 | 69 | 21 | 29.5 |
| May 4(7) P. | | | 45.63 | | | 29.8 |
| Mean | | 13 34 | 45.575 | 69 | 21 | 29.65 |
| Div., Flex., etc. | | | . | | + | 1.60 |

B. A. C. 4595.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|-------|
| April 26 | P. | 13 40 | 56.69 | 50 | 52 | 30.9 |
| May 29 | E. | | 56.96 | | | 30.5 |
| Mean | | 13 40 | 56.825 | 50 | 52 | 30.70 |
| Div., Flex., etc. | | | . | | + | 0.89 |

B. A. C. 4600.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|-------|
| April 26 | P. | 13 41 | 38.75 | 50 | 50 | 12.6 |
| May 29 | E. | | 39.08 | | | 11.6 |
| Mean | | 13 41 | 38.965 | 50 | 50 | 12.10 |
| Div., Flex., etc. | | | . | | + | 0.88 |

B. A. C. 4601.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|-----|---|------|
| April 6 | P. | 13 42 | 4.47 | 131 | 4 | 5.8 |
| 10 | P. | | 4.35 | | | 7.5 |
| 22 | P. | | 4.46 | | | 7.1 |
| 25 | S. | | 4.70 | | | 7.2 |
| Mean | | 13 42 | 4.495 | 131 | 4 | 6.90 |
| Div., Flex., etc. | | | . | | + | 1.46 |

B. A. C. 4627.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|-------|
| April 26 | P. | 13 45 | 36.20 | 54 | 36 | 45.5 |
| May 23 | S. | | 35.91 | | | 43.2 |
| Mean | | 13 45 | 36.055 | 54 | 36 | 44.35 |
| Div., Flex., etc. | | | . | | + | 1.33 |

B. A. C. 4629¹.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|-----|----|------|
| Mar. 21 | P. | 13 46 | 4.45 | 121 | 19 | 6.6 |
| April 6(9.5) P. | | | 4.50 | | | 4.5 |
| 22(9.5) P. | | | 4.47 | | | 6.8 |
| Mean | | 13 46 | 4.473 | 121 | 19 | 5.97 |
| Div., Flex., etc. | | | . | | + | 1.74 |

B. A. C. 4629².

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|-----|----|-------|
| Mar. 21 | P. | 13 46 | 4.53 | 121 | 18 | 51.6 |
| April 6 | P. | | 4.65 | | | 50.3 |
| 10 | P. | | 4.50 | | | 49.4 |
| 22 | P. | | 4.57 | | | 51.6 |
| Mean | | 13 46 | 4.562 | 121 | 18 | 50.72 |
| Div., Flex., etc. | | | . | | + | 1.74 |

B. A. C. 4649.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|----|----|------|
| May 23 | S. | 13 49 | 17.08 | 35 | 39 | 37.2 |
| Div., Flex., etc. | | | . | | + | 0.61 |

B. A. C. 4681.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-----|----|------|
| April 6 | P. | 13 58 | 28.96 | 130 | 35 | 3.4 |
| 10 | P. | | 28.87 | | | 4.5 |
| Mean | | 13 58 | 28.915 | 130 | 35 | 3.95 |
| Div., Flex., etc. | | | . | | + | 1.47 |

B. A. C. 4686.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-----|----|-------|
| April 6 | P. | 13 59 | 23.61 | 125 | 45 | 30.6 |
| 10 | P. | | 23.46 | | | 31.1 |
| May 3 | S. | | 23.48 | | | 31.4 |
| Mean | | 13 59 | 23.517 | 125 | 45 | 31.03 |
| Div., Flex., etc. | | | . | | + | 1.54 |

B. A. C. 4737.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|---|-------|
| May 4(6) P. | | 14 11 | 32.76 | 74 | 9 | 42.3 |
| 23 | S. | | 32.70 | | | 40.1 |
| Mean | | 14 11 | 32.730 | 74 | 9 | 41.20 |
| Div., Flex., etc. | | | . | | + | 1.65 |

B. A. C. 4758.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|------|
| Mar. 21 | P. | 14 14 | 42.32 | 50 | 38 | 7.2 |
| May 4(6.5) P. | | | 42.35 | | | 7.7 |
| Mean | | 14 14 | 42.335 | 50 | 38 | 7.45 |
| Div., Flex., etc. | | | . | | + | 0.86 |

B. A. C. 4759.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|-----|----|------|
| April 6 | P. | 14 15 | 24.20 | 128 | 56 | 37.6 |
| Div., Flex., etc. | | | . | | + | 1.45 |

B. A. C. 4778.

| 1876. | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|----|----|-------|
| April 26 | P. | 14 18 | 20.44 | 52 | 13 | 52.8 |
| May 23 | S. | | 20.57 | | | 51.0 |
| Mean | | 14 18 | 20.505 | 52 | 13 | 51.90 |
| Div., Flex., etc. | | | . | | + | 1.07 |

| | | | | | | | | | | | | | |
|-------------------|----|-------|-------|--------------|------------------------------|----|-------|----------------|--------|-------------------|------|--------|-------|
| B. A. C. 4812. | | | | 34 H BOOTIS. | | | | B. A. C. 5026. | | | | | |
| 1876. | | h. m. | s. | | 1876. | | h. m. | s. | | 1876. | | h. m. | s. |
| Mar. 21 | P. | 14 27 | 5 12 | 51 8 | April 22 | P. | 14 45 | 36.04 | 52 13 | May 4(6)P. | 15 8 | 52.31 | 51 16 |
| April 6 | P. | | 5.19 | | Div., Flex., etc. | | | | + | 23 | S. | 52.09 | |
| | | | 4.95 | | | | | | | July 27 | P. | 52.31 | |
| Oct. 3 | P. | | 5.08 | | | | | | | Mean . . . | 15 8 | 52.237 | 51 16 |
| | P. | | 4.99 | | | | | | | Div., Flex., etc. | | | + |
| Mean . . . | | 14 27 | 5.066 | 51 8 | B. A. C. 4917. | | | | | | | | |
| Div., Flex., etc. | | | | + | 1876. | | h. m. | s. | | | | | |
| | | | | | May 23 | S. | 14 47 | 40.84 | 43 0 | | | | |
| | | | | | | | | 41.01 | | | | | |
| | | | | | June 1 (6.5) P. | | | 41.28 | | | | | |
| | | | | | Mean . . . | | 14 47 | 41.043 | 43 0 | | | | |
| | | | | | Div., Flex., etc. | | | | + | | | | |
| | | | | | | | | | + | | | | |
| | | | | | LALANDE 27173 ¹ . | | | | | | | | |
| | | | | | 1876. | | h. m. | s. | | | | | |
| | | | | | Mar. 21 | P. | 14 50 | 12.73 | 110 51 | | | | |
| | | | | | Div., Flex., etc. | | | | + | | | | |
| | | | | | | | | | + | | | | |
| | | | | | LALANDE 27173 ² . | | | | | | | | |
| | | | | | 1876. | | h. m. | s. | | | | | |
| | | | | | Mar. 21 | P. | 14 50 | 13.68 | 110 51 | | | | |
| | | | | | Div., Flex., etc. | | | | + | | | | |
| | | | | | | | | | + | | | | |
| | | | | | LALANDE (F.) 2545. | | | | | | | | |
| | | | | | 1876. | | h. m. | s. | | | | | |
| | | | | | June 1 (5.8) P. | | 14 52 | 16.40 | 39 51 | | | | |
| | | | | | Div., Flex., etc. | | | | + | | | | |
| | | | | | | | | | + | | | | |
| | | | | | B. A. C. 4954. | | | | | | | | |
| | | | | | 1876. | | h. m. | s. | | | | | |
| | | | | | April 6 | P. | 14 57 | 15.99 | 130 34 | | | | |
| | | | | | | | | 16.04 | | | | | |
| | | | | | May 22 | P. | | 16.06 | | | | | |
| | | | | | May 13 | E. | | | 55.2 | | | | |
| | | | | | Mean . . . | | 14 57 | 16.030 | 130 34 | | | | |
| | | | | | Div., Flex., etc. | | | | + | | | | |
| | | | | | | | | | + | | | | |
| | | | | | B. A. C. 4961. | | | | | | | | |
| | | | | | 1876. | | h. m. | s. | | | | | |
| | | | | | May 4(5) P. | | 14 58 | 9.07 | 54 18 | | | | |
| | | | | | | | | 8.85 | | | | | |
| | | | | | 23 | S. | | 9.06 | | | | | |
| | | | | | 27 | S. | | | 26.9 | | | | |
| | | | | | Mean . . . | | 14 58 | 8.993 | 54 18 | | | | |
| | | | | | Div., Flex., etc. | | | | + | | | | |
| | | | | | | | | | + | | | | |
| | | | | | B. A. C. 4967. | | | | | | | | |
| | | | | | 1876. | | h. m. | s. | | | | | |
| | | | | | June 1 (6) P. | | 14 58 | 33.20 | 29 18 | | | | |
| | | | | | Div., Flex., etc. | | | | + | | | | |
| | | | | | | | | | + | | | | |
| | | | | | XV, 2. | | | | | | | | |
| | | | | | 1876. | | h. m. | s. | | | | | |
| | | | | | April 6 (9) P. | | 15 1 | 34.71 | 120 12 | | | | |
| | | | | | | | | 34.56 | | | | | |
| | | | | | 18(9.5) P. | | | 34.68 | | | | | |
| | | | | | 22(9.2) P. | | | | 11.5 | | | | |
| | | | | | Mean . . . | | 15 1 | 34.650 | 120 12 | | | | |
| | | | | | Div., Flex., etc. | | | | + | | | | |
| | | | | | | | | | + | | | | |
| | | | | | B. A. C. 4996. | | | | | | | | |
| | | | | | 1876. | | h. m. | s. | | | | | |
| | | | | | Mar. 21 | P. | 15 5 | 18.73 | 125 37 | | | | |
| | | | | | April 6 | P. | | 18.81 | | | | | |
| | | | | | | | | 18.76 | | | | | |
| | | | | | May 4 | P. | | 18.76 | | | | | |
| | | | | | Mean . . . | | 15 5 | 18.765 | 125 37 | | | | |
| | | | | | Div., Flex., etc. | | | | + | | | | |
| | | | | | | | | | + | | | | |
| | | | | | B. A. C. 5017. | | | | | | | | |
| | | | | | 1876. | | h. m. | s. | | | | | |
| | | | | | April 18(5) P. | | 15 7 | 55.01 | 131 1 | | | | |
| | | | | | May 13 | E. | | 55.13 | | | | | |
| | | | | | Mean . . . | | 15 7 | 55.070 | 131 1 | | | | |
| | | | | | Div., Flex., etc. | | | | + | | | | |
| | | | | | | | | | + | | | | |
| | | | | | B. A. C. 50165. | | | | | | | | |
| | | | | | 1876. | | h. m. | s. | | | | | |
| | | | | | Mar. 21 (7.5) P. | | 15 21 | 27.11 | 98 54 | | | | |
| | | | | | Div., Flex., etc. | | | | + | | | | |
| | | | | | | | | | + | | | | |

B. A. C. 5118.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| April 6 P. | 15 26 53.02 | 130 44 54.2 |
| Div., Flex., etc. | | + 1.47 |

XV, 16.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|-------------|
| Mar. 21 (8.0) P. | 15 29 40.20 | 116 4 45.9 |
| April 6 (8.0) P. | 40.32 | 48.0 |
| 22 (7) P. | 40.30 | 48.6 |
| Mean . . . | 15 29 40.273 | 116 4 47.50 |
| Div., Flex., etc. | | + 1.91 |

B. A. C. 5199.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| April 6 P. | 15 38 49.32 | 124 17 31.8 |
| Div., Flex., etc. | | + 1.59 |

LALANDE 28167.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|------------|
| Mar. 21 (8.3) P. | 15 21 29.69 | 98 54 45.5 |
| Div., Flex., etc. | | + 1.69 |

ANONYMOUS.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|------------|
| June 1 P. | 15 40 16.05 | 100 57 5.1 |
| Div., Flex., etc. | | + 1.67 |

B. A. C. 5216.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|-------------|
| April 6 P. | 15 40 28.10 | 74 11 18.7 |
| Oct. 19 P. | 28.00 | 18.5 |
| Nov. 4 P. | 27.90 | 18.0 |
| Dec. 5 P. | 27.94 | 18.7 |
| Mean . . . | 15 40 27.985 | 74 11 18.48 |
| Div., Flex., etc. | | + 1.65 |

B. A. C. 5216 (Ref.).

| 1876. | h. m. s. | ° ' " |
|-------------------|----------|------------|
| April 22 P. | | 74 11 21.8 |
| Div., Flex., etc. | | + 0.27 |

B. A. C. 5230.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|-----------|
| Dec. 5 P. | 15 43 9.01 | 93 2 56.5 |
| Div., Flex., etc. | | + 1.73 |

O. ARG. N. 15653.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|------------|
| June 1 (6) P. | 15 43 37.35 | 34 8 39.8 |
| July 18 S. | 37.26 | 39.4 |
| Mean . . . | 15 43 37.305 | 34 8 39.60 |
| Div., Flex., etc. | | + 0.64 |

O. ARG. N. 15662.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|------------|
| June 1 (9) P. | 15 44 14.02 | 34 13 34.1 |
| Div., Flex., etc. | | + 0.64 |

B. A. C. 5248.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|-------------|
| April 26 P. | 15 44 38.32 | 34 14 33.2 |
| June 1 (5.5) P. | 38.61 | 34.2 |
| July 18 S. | 38.31 | 33.2 |
| Mean . . . | 15 44 38.413 | 34 14 33.53 |
| Div., Flex., etc. | | + 0.64 |

XV, 25.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|--------------|
| Mar. 21 P. | 15 49 36.10 | 119 37 52.1 |
| April 6 P. | 36.13 | 53.4 |
| July 22 S. | 35.92 | 53.0 |
| Mean . . . | 15 49 36.050 | 119 37 52.83 |
| Div., Flex., etc. | | + 1.80 |

B. A. C. 5284.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|-------------|
| Nov. 8 P. | 15 50 43.59 | 73 55 57.0 |
| Dec. 5 P. | 43.60 | 56.9 |
| Mean . . . | 15 50 43.595 | 73 55 56.95 |
| Div., Flex., etc. | | + 1.65 |

ANONYMOUS.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| April 6 (10.5) P. | 15 51 17.64 | 119 37 34.8 |
| Div., Flex., etc. | | + 1.80 |

ANONYMOUS.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|-------------|
| Mar. 21 (9) P. | 15 51 31.20 | 119 37 8.7 |
| April 6 (9.5) P. | 31.50 | 9.1 |
| July 22 S. | 31.44 | 9.9 |
| Mean . . . | 15 51 31.383 | 119 37 9.23 |
| Div., Flex., etc. | | + 1.80 |

B. A. C. 5316.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|-------------|
| April 26 (7) P. | 15 55 33.33 | 39 45 53.6 |
| May 4 P. | 33.40 | 53.3 |
| June 1 (6) P. | 33.33 | 53.4 |
| July 27 P. | 33.35 | 53.4 |
| Mean . . . | 15 55 33.352 | 39 45 53.42 |
| Div., Flex., etc. | | + 0.58 |

β² SCORPII.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|--------------|
| May 23 S. | 15 58 14.25 | 109 27 36.4 |
| 27 S. | 14.15 | 36.3 |
| 29 E. | 14.21 | 37.2 |
| 31 S. | 14.11 | 37.3 |
| Mean . . . | 15 58 14.180 | 109 27 36.80 |
| Div., Flex., etc. | | + 1.96 |

B. A. C. 5341.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|-------------|
| April 26 (6.5) P. | 15 58 55.86 | 36 44 20.2 |
| June 1 (5.5) P. | 55.89 | 20.1 |
| July 27 P. | 55.87 | 20.4 |
| Mean . . . | 15 58 55.873 | 36 44 20.23 |
| Div., Flex., etc. | | + 0.58 |

WEISSE 47.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|------------|
| May 4 (8.5) P. | 16 4 36.41 | 102 8 8.5 |
| June 1 (9) P. | 36.40 | 7.7 |
| 26 E. | 36.36 | 9.8 |
| Mean . . . | 16 4 36.390 | 102 8 8.67 |
| Div., Flex., etc. | | + 1.68 |

B. A. C. 5399.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|------------|
| July 22 S. | 16 6 21.41 | 66 10 58.3 |
| Div., Flex., etc. | | + 1.64 |

B. A. C. 5395.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| July 26 S. | 16 6 23.32 | 111 4 53.7 |
| 27 (6.7) P. | 23.14 | 50.6 |
| Mean . . . | 16 6 23.225 | 111 4 52.15 |
| Div., Flex., etc. | | + 1.97 |

B. A. C. 5432¹.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| April 13 S. | 16 10 1.98 | 55 49 33.5 |
| May 4 (7.5) P. | 2.01 | 36.4 |
| June 26 (8.5) E. | 1.88 | 33.7 |
| Mean . . . | 16 10 1.957 | 55 49 34.53 |
| Div., Flex., etc. | | + 1.44 |

B. A. C. 5432².

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| April 13 S. | 16 10 2.09 | 55 49 33.1 |
| May 4 (5.5) P. | 2.17 | 32.6 |
| June 26 (7) E. | 1.99 | 37.5 |
| Mean . . . | 16 10 2.083 | 55 49 34.40 |
| Div., Flex., etc. | | + 1.44 |

WEISSE 180.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|--------------|
| April 26 (9) P. | 16 11 17.10 | 102 37 31.9 |
| June 1 (9) P. | 17.09 | 34.3 |
| July 5 (9.7) P. | 17.10 | 34.2 |
| 27 (9.2) P. | 17.16 | 34.4 |
| Mean . . . | 16 11 17.112 | 102 37 33.70 |
| Div., Flex., etc. | | + 1.69 |

B. A. C. 5437.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|-------------|
| Oct. 19 P. | 16 11 45.70 | 94 23 17.7 |
| Nov. 4 P. | 45.64 | 18.6 |
| 8 P. | 45.69 | 18.8 |
| Mean . . . | 16 11 45.677 | 94 23 18.37 |
| Div., Flex., etc. | | + 1.64 |

σ SCORPII.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|--------------|
| May 21 P. | 16 13 39.14 | 115 17 34.6 |
| April 6 P. | 39.19 | 35.3 |
| 13 S. | 39.32 | 34.3 |
| Mean . . . | 16 13 39.217 | 115 17 34.73 |
| Div., Flex., etc. | | + 1.90 |

B. A. C. 5451.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|------------|
| April 22 P. | 16 14 53.13 | 127 7 42.4 |
| Div., Flex., etc. | | + 1.48 |

B. A. C. 5457.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| May 4 P. | 16 16 15.80 | 127 16 28.0 |
| Div., Flex., etc. | | + 1.48 |

B. A. C. 5466.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|-------------|
| Oct. 19 P. | 16 16 27.04 | 70 33 14.5 |
| Nov. 4 P. | 26.97 | 15.0 |
| Mean . . . | 16 16 27.005 | 70 33 14.75 |
| Div., Flex., etc. | | + 1.61 |

O. ARG. N. 16196.

| 1876. | h. m. s. | ° ' " |
|------------|-------------|-------|
| July 18 S. | 16 20 31.96 | . . |

B. A. C. 5499.

| 1876. | h. m. s. | ° ' " |
|-----------------|-------------|------------|
| May 4 P. | 16 21 21.98 | 37 25 37.4 |
| 29 E. | 22.11 | 39.1 |
| June 1 (6.5) P. | 21.94 | 37.6 |

| | | |
|-------------------|--------------|-------------|
| Mean . . . | 16 21 22.010 | 37 25 38.03 |
| Div., Flex., etc. | | + 0.54 |

B. A. C. 5514.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|------------|
| July 27 (5.3) P. | 16 22 6.33 | 20 36 13.4 |
| Div., Flex., etc. | | + 0.88 |

B. A. C. 5523.

| 1876. | h. m. s. | ° ' " |
|---------------|-------------|------------|
| June 1 (5) P. | 16 24 34.34 | 47 50 40.7 |
| July 18 S. | 34.16 | 40.6 |
| 27 (4.5) P. | 34.33 | 40.9 |

| | | |
|-------------------|--------------|-------------|
| Mean . . . | 16 24 34.277 | 47 50 40.73 |
| Div., Flex., etc. | | + 0.60 |

B. A. C. 5525.

| 1876. | h. m. s. | ° ' " |
|------------|-------------|------------|
| Oct. 19 P. | 16 24 53.41 | 68 14 19.3 |
| Nov. 4 P. | 53.35 | 19.4 |
| 8 P. | 53.37 | 19.9 |

| | | |
|-------------------|--------------|-------------|
| Mean . . . | 16 24 53.377 | 68 14 19.53 |
| Div., Flex., etc. | | + 1.60 |

B. A. C. 5522.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|------------|
| April 26 (7) P. | 16 25 7.48 | 121 17 7.1 |
| Div., Flex., etc. | | + 1.75 |

B. A. C. 5559.

| 1876. | h. m. s. | ° ' " |
|------------|-------------|------------|
| May 29 E. | 16 30 57.81 | 37 30 17.7 |
| June 1 P. | 57.66 | 17.5 |
| July 18 S. | 57.36 | 18.4 |

| | | |
|-------------------|--------------|-------------|
| Mean . . . | 16 30 57.610 | 37 30 17.87 |
| Div., Flex., etc. | | + 0.55 |

B. A. C. 5583.

| 1876. | h. m. s. | ° ' " |
|------------|------------|-------------|
| April 6 P. | 16 35 9.74 | 130 52 51.8 |
| 26 P. | 9.72 | 50.8 |

| | | |
|-------------------|-------------|--------------|
| Mean . . . | 16 35 9.730 | 130 52 51.30 |
| Div., Flex., etc. | | + 1.46 |

B. A. C. 5584.

| 1876. | h. m. s. | ° ' " |
|------------|-------------|-------------|
| April 6 P. | 16 35 18.06 | 130 52 33.1 |
| 26 P. | 18.01 | 32.0 |

| | | |
|-------------------|--------------|--------------|
| Mean . . . | 16 35 18.035 | 130 52 32.55 |
| Div., Flex., etc. | | + 1.46 |

B. A. C. 5599.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|------------|
| July 18 S. | 16 35 30.17 | 33 44 28.0 |
| Div., Flex., etc. | | + 0.65 |

XVI, 18.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| July 27 (9) P. | 16 37 29.85 | 123 36 56.0 |
| Div., Flex., etc. | | + 1.61 |

XVI, 19.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| July 27 (9.2) P. | 16 39 38.84 | 109 52 18.0 |
| Div., Flex., etc. | | + 1.97 |

XVI, 20.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| July 27 (9.6) P. | 16 40 29.04 | 120 58 45.0 |
| Div., Flex., etc. | | + 1.76 |

O. ARG. S. 15973.

| 1876. | h. m. s. | ° ' " |
|------------|-------------|------------|
| May 29 E. | 16 41 17.82 | 115 17 8.1 |
| July 18 S. | 17.80 | 7.5 |

| | | |
|-------------------|--------------|-------------|
| Mean . . . | 16 41 17.810 | 115 17 7.80 |
| Div., Flex., etc. | | + 1.90 |

O. ARG. S. 15981.

| 1876. | h. m. s. | ° ' " |
|----------------|-------------|-------------|
| July 17 (9) F. | 16 41 43.57 | 115 20 13.8 |
| 18 S. | 43.80 | 13.7 |

| | | |
|-------------------|--------------|--------------|
| Mean . . . | 16 41 43.685 | 115 20 13.75 |
| Div., Flex., etc. | | + 1.90 |

B. A. C. 5686.

| 1876. | h. m. s. | ° ' " |
|-----------------|-------------|-----------|
| April 26 (8) P. | 16 47 44.01 | 74 23 8.6 |
| May 4 (7) P. | 43.95 | 8.5 |
| July 21 F. | 43.85 | 6.3 |

| | | |
|-------------------|--------------|------------|
| Mean . . . | 16 47 43.937 | 74 23 7.80 |
| Div., Flex., etc. | | + 1.65 |

B. A. C. 5686 (Ref.).

| 1876. | h. m. s. | ° ' " |
|-------------------|----------|------------|
| May 4 P. | . . . | 74 23 10.1 |
| Div., Flex., etc. | | + 0.27 |

ANONYMOUS.

| 1876. | h. m. s. | ° ' " |
|--------------|-------------|------------|
| July 18 S. | 16 50 47.97 | 114 9 26.4 |
| 21 F. | 47.71 | . . |
| 27 (10.2) P. | 47.92 | 27.5 |

| | | |
|-------------------|--------------|-------------|
| Mean . . . | 16 50 47.867 | 114 9 26.95 |
| Div., Flex., etc. | | + 1.88 |

O. ARG. S. 16183¹.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|------------|
| July 27 (9.8) P. | 16 52 24.09 | 114 0 46.5 |
| Div., Flex., etc. | | + 1.88 |

O. ARG. S. 16183².

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|------------|
| July 27 (10.3) P. | 16 52 24.48 | 114 0 40.8 |
| Div., Flex., etc. | | + 1.88 |

B. A. C. 5718.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| April 13 S. | 16 53 51.72 | 121 57 23.3 |
| Div., Flex., etc. | | + 1.71 |

B. A. C. 5734.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|------------|
| June 1 (6.5) P. | 16 55 6.50 | 27 26 22.9 |
| Div., Flex., etc. | | + 0.84 |

B. A. C. 5731.

| 1876. | h. m. s. | ° ' " |
|-----------|-------------|------------|
| Nov. 4 P. | 16 55 32.79 | 58 53 23.3 |
| 8 P. | 32.75 | 23.0 |

| | | |
|-------------------|--------------|-------------|
| Mean . . . | 16 55 32.770 | 58 53 23.45 |
| Div., Flex., etc. | | + 1.51 |

B. A. C. 5753.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-----------|
| July 21 F. | 16 57 57.48 | 76 13 1.3 |
| Div., Flex., etc. | | + 1.68 |

B. A. C. 5757.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-----------|
| July 21 F. | 16 58 15.71 | 76 15 9.1 |
| Div., Flex., etc. | | + 1.68 |

B. A. C. 5785¹.

| 1876. | h. m. s. | ° ' " |
|---------------|------------|------------|
| April 13 S. | 17 2 45.87 | 35 21 54.2 |
| June 1 (6) P. | 46.06 | 55.0 |
| July 18 S. | 45.82 | 55.0 |
| 21 F. | . . | 57.7 |
| 27 (6.4) P. | 46.24 | 55.2 |

| | | |
|-------------------|-------------|-------------|
| Mean . . . | 17 2 45.998 | 35 21 55.42 |
| Div., Flex., etc. | | + 0.61 |

B. A. C. 5785².

| 1876. | h. m. s. | ° ' " |
|-----------------|------------|------------|
| April 13 S. | 17 2 46.04 | 35 21 55.9 |
| June 1 (6.2) P. | 46.06 | 57.9 |
| July 18 S. | 45.89 | 57.0 |
| 21 F. | . . | 54.3 |
| 27 (6.6) P. | 46.25 | 58.1 |

| | | |
|-------------------|-------------|-------------|
| Mean . . . | 17 2 46.060 | 35 21 56.64 |
| Div., Flex., etc. | | + 0.61 |

α² HERCULIS.

| 1876. | h. m. s. | ° ' " |
|-------------------|-----------|-----------|
| July 27 (6) P. | 17 9 0.01 | 75 28 1.9 |
| Div., Flex., etc. | | + 1.67 |

B. A. C. 5834.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|----------|
| Nov. 4 P. | 17 10 43.71 | 53 3 0.2 |
| Div., Flex., etc. | | + 1.19 |

B. A. C. 5841.

| 1876. | h. m. s. | ° ' " |
|-----------------|-------------|------------|
| May 4 P. | 17 12 47.16 | 78 59 57.4 |
| June 1 (4.5) P. | 47.24 | 57.4 |
| 26 E. | 47.12 | 58.2 |

| | | |
|-------------------|--------------|-------------|
| Mean . . . | 17 12 47.173 | 78 59 57.67 |
| Div., Flex., etc. | | + 1.81 |

B. A. C. 5886¹.

| 1876. | h. m. s. | ° ' " |
|-----------------|-------------|------------|
| May 4 (6.5) P. | 17 19 24.06 | 52 44 17.0 |
| June 1 (5.5) P. | 24.13 | 16.7 |
| 26 (8) E. | 23.95 | 17.8 |
| July 18 S. | 23.90 | 15.8 |
| 21 F. | 23.98 | 16.6 |

| | | |
|-------------------|--------------|-------------|
| Mean . . . | 17 19 24.004 | 52 44 16.78 |
| Div., Flex., etc. | | + 1.15 |

B. A. C. 5886².

| 1876. | h. m. s. | ° ' " |
|-----------------|-------------|------------|
| May 4 (4.5) P. | 17 19 24.33 | 52 44 20.2 |
| June 1 (4.5) P. | 24.38 | 19.9 |
| 26 (6.5) E. | 24.27 | 20.7 |
| July 18 S. | 24.19 | 20.0 |
| 21 F. | 24.32 | 19.5 |

| | | |
|-------------------|--------------|-------------|
| Mean . . . | 17 19 24.298 | 52 44 20.06 |
| Div., Flex., etc. | | + 1.15 |

LALANDE 31762.

| 1876. | h. m. s. | ° ' " |
|------------------|-------------|------------|
| July 27 (6.5) P. | 17 19 53.29 | 52 57 49.4 |
| Aug. 26 F. | 53.30 | 48.0 |

| | | |
|-------------------|--------------|-------------|
| Mean . . . | 17 19 53.295 | 52 57 48.70 |
| Div., Flex., etc. | | + 1.18 |

B. A. C. 5895.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|-------------|
| July 27 (5.8) P. | 17 20 9.51 | 52 56 11.7 |
| Aug. 26 F. | | 9.9 |
| Mean . . . | 17 20 9.51 | 52 56 10.80 |
| Div., Flex., etc. | | + 1.18 |

B. A. C. 5902.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|------------|
| May 4 (6.5) P. | 17 21 14.05 | 32 52 31.8 |
| Div., Flex., etc. | | + 0.68 |

XVII, 9.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|-------------|
| June 26 E. | 17 24 5.46 | 121 27 12.2 |
| Div., Flex., etc. | | + 1.74 |

XVII, 10.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|--------------|
| June 26 E. | 17 29 51.52 | 120 49 49.2 |
| July 27 (8.5) P. | 51.56 | 48.7 |
| Mean . . . | 17 29 51.540 | 120 49 48.95 |
| Div., Flex., etc. | | + 1.77 |

O. ARG. S. 17123.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|--------------|
| May 4 (9.5) P. | 17 36 27.26 | 117 23 51.8 |
| June 26 E. | 27.22 | 54.5 |
| July 18 S. | 27.44 | 51.2 |
| 21 F. | 27.53 | 53.3 |
| Mean . . . | 17 36 27.362 | 117 23 52.70 |
| Div., Flex., etc. | | + 1.86 |

O. ARG. S. 17137.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|--------------|
| July 17 F. | 17 36 59.77 | 117 10 16.4 |
| 27 (8) P. | 59.78 | 15.8 |
| Mean . . . | 17 36 59.775 | 117 10 16.10 |
| Div., Flex., etc. | | + 1.87 |

TRANSIT ZONES 36, 67.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|--------------|
| May 4 (10) P. | 17 37 20.52 | 117 24 9.6 |
| June 26 E. | 20.45 | 13.1 |
| July 18 S. | 20.67 | 10.2 |
| 21 F. | 20.69 | 14.4 |
| Mean . . . | 17 37 20.582 | 117 24 11.82 |
| Div., Flex., etc. | | + 1.86 |

B. A. C. 5996.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|-------------|
| Jan. 13 E. | 17 37 20.90 | 85 22 44.8 |
| Feb. 19 E. | 20.79 | 43.1 |
| April 6 P. | | 44.6 |
| Nov. 8 P. | 20.91 | 44.7 |
| Mean . . . | 17 37 20.867 | 85 22 44.30 |
| Div., Flex., etc. | | + 1.79 |

B. A. C. 5996 (Ref.).

| 1876. | h. m. s. | ° ' " |
|-------------------|----------|------------|
| April 6 P. | | 85 22 45.7 |
| Div., Flex., etc. | | + 0.27 |

O. ARG. S. 17166.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| July 17 F. | 17 38 4.49 | 117 9 43.3 |
| 27 (8.5) P. | 4.51 | 42.3 |
| Mean . . . | 17 38 4.500 | 117 9 42.80 |
| Div., Flex., etc. | | + 1.87 |

O. ARG. S. 17177.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|-------------|
| May 4 (9) P. | 17 38 44.07 | 117 23 9.1 |
| June 26 (8.5) E. | 44.04 | 10.4 |
| July 18 S. | 44.21 | 8.6 |
| 21 F. | 44.33 | 10.5 |
| Mean . . . | 17 38 44.162 | 117 23 9.65 |
| Div., Flex., etc. | | + 1.86 |

XVII, 18.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| July 27 (8) P. | 17 40 49.80 | 128 56 20.6 |
| Div., Flex., etc. | | + 1.45 |

 ψ^2 DRACONIS, S. P.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|-------------|
| Oct. 27 (6) P. | 17 44 10.30 | 342 13 2.4 |
| Nov. 28 P. | 10.51 | 2.3 |
| Dec. 6 P. | 10.72 | 1.2 |
| 19 E. | 10.42 | 1.0 |
| 27 E. | 11.31 | 1.4 |
| Mean . . . | 17 44 10.652 | 342 13 1.66 |
| Div., Flex., etc. | | + 0.21 |

ANONYMOUS.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|------------|
| July 17 F. | 17 45 13.65 | 118 50 1.0 |
| 27 (9) P. | 13.55 | |
| Mean . . . | 17 45 13.600 | 118 50 1.0 |
| Div., Flex., etc. | | + 1.81 |

ANONYMOUS.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|-------------|
| July 17 F. | 17 45 18.45 | 118 50 10.2 |
| 27 (10) P. | 18.38 | |
| Mean . . . | 17 45 18.415 | 118 50 10.2 |
| Div., Flex., etc. | | + 1.81 |

O. ARG. S. 17313.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|--------------|
| July 17 F. | 17 45 48.22 | 118 49 19.1 |
| 27 (8.5) P. | 48.21 | 19.6 |
| Mean . . . | 17 45 48.215 | 118 49 19.35 |
| Div., Flex., etc. | | + 1.81 |

B. A. C. 6072.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|--------------|
| May 4 (6.5) P. | 17 50 47.05 | 118 44 33.7 |
| June 1 (6.5) P. | 46.99 | 34.7 |
| Aug. 26 F. | 47.04 | 33.1 |
| Mean . . . | 17 50 47.027 | 118 44 33.83 |
| Div., Flex., etc. | | + 1.82 |

B. A. C. 6082.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|------------|
| Jan. 19 S. | 17 52 0.13 | 52 43 54.1 |
| Div., Flex., etc. | | + 1.15 |

HERSCHEL and SOUTH 379¹.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|-------------|
| May 4 (10.5) P. | 17 54 51.44 | 113 1 44.4 |
| July 27 (10) P. | 51.57 | 45.3 |
| Aug. 16 (9.5) E. | 51.55 | 43.9 |
| 26 F. | 51.49 | 42.5 |
| Mean . . . | 17 54 51.512 | 113 1 44.02 |
| Div., Flex., etc. | | + 1.87 |

HERSCHEL and SOUTH 379².

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|-------------|
| May 4 (9) P. | 17 54 51.88 | 113 1 35.9 |
| July 27 (8.8) P. | 51.97 | 36.1 |
| Aug. 16 (8.5) E. | 52.05 | 35.4 |
| 26 F. | 51.88 | 33.4 |
| Mean . . . | 17 54 51.945 | 113 1 35.20 |
| Div., Flex., etc. | | + 1.87 |

LALANIE 32974.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|--------------|
| July 17 (7.5) F. | 17 55 5.70 | 117 49 23.9 |
| 21 F. | 5.73 | 24.3 |
| Mean . . . | 17 55 5.715 | 117 49 24.10 |
| Div., Flex., etc. | | + 1.84 |

XVIII, 4.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|--------------|
| May 4 P. | 18 6 1.21 | 119 33 58.5 |
| July 17 F. | 1.27 | 55.1 |
| 21 F. | 1.46 | 54.5 |
| Mean . . . | 18 6 1.313 | 119 33 56.03 |
| Div., Flex., etc. | | + 1.82 |

B. A. C. 6184.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| July 27 (6.8) P. | 18 7 49.98 | 33 45 38.8 |
| Aug. 26 F. | 49.96 | 38.0 |
| Mean . . . | 18 7 49.970 | 33 45 38.40 |
| Div., Flex., etc. | | + 0.65 |

XVIII, 7.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|-------------|
| May 4 (9.5) P. | 18 10 12.27 | 127 16 2.6 |
| Aug. 9 E. | 12.32 | 1.8 |
| 26 F. | 12.29 | 4.6 |
| Mean . . . | 18 10 12.293 | 127 16 3.00 |
| Div., Flex., etc. | | + 1.48 |

ANONYMOUS.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| June 1 (11.5) P. | 18 14 16.11 | 107 14 11.6 |
| Div., Flex., etc. | | + 1.86 |

ANONYMOUS.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|------------|
| June 1 (11.5) P. | 18 14 41.43 | 107 12 3.3 |
| Div., Flex., etc. | | + 1.86 |

B. A. C. 6252.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|-----------|
| Aug. 16 E. | 18 18 0.82 | 40 20 2.6 |
| Div., Flex., etc. | | + 0.59 |

B. A. C. 6288.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|------------|
| July 22 S. | 18 21 1.67 | 18 32 36.9 |
| Div., Flex., etc. | | + 0.82 |

B. A. C. 6275.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|------------|
| May 4 P. | 18 21 53.14 | 123 7 33.3 |
| Div., Flex., etc. | | + 1.63 |

B. A. C. 6285.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-----------|
| May 4 P. | 18 22 56.76 | 123 4 7.1 |
| Div., Flex., etc. | | + 1.64 |

| | | | | | | | | | | | |
|------------------------------|--------------|--------------|------|------------------------------|--------------|--------------|------|------------------------------------|--------------|-------------|------|
| MAYER 729. | | | | ANONYMOUS. | | | | B. A. C. 6579 ² . | | | |
| 1876. | h. m. s. | ° ' " | | 1876. | h. m. s. | ° ' " | | 1876. | h. m. s. | ° ' " | |
| April 14 P. | 18 24 2.58 | 108 59 6.0 | | Aug. 26 F. | 18 48 50.64 | 118 57 36.4 | | May 4 (6.5) P. | 19 8 53.10 | 40 22 28.7 | |
| Div., Flex., etc. | | + | 1.96 | Div., Flex., etc. | | + | 1.81 | Aug. 11 F. | 53.18 | 29.0 | |
| | | | | | | | | 15 F. | 53.05 | 27.8 | |
| B. A. C. 6298 ¹ . | | | | MURAL ZONES 47, 23. | | | | Mean . . . | 19 8 53.110 | 40 22 28.50 | |
| 1876. | h. m. s. | ° ' " | | 1876. | h. m. s. | ° ' " | | Div., Flex., etc. | | + | 0 59 |
| June 1 (7) P. | 18 24 49.97 | | | July 17 F. | 18 50 24.06 | 118 54 52.0 | | | | | |
| | | | | Aug. 26 F. | 24.07 | 51.7 | | | | | |
| B. A. C. 6298 ² . | | | | Mean . . . | 18 50 24.065 | 118 54 51.85 | | B. A. C. 6593. | | | |
| 1876. | h. m. s. | ° ' " | | Div., Flex., etc. | | + | 1.81 | 1876. | h. m. s. | ° ' " | |
| June 1 (6.5) P. | 18 24 49.94 | | | | | | | May 4 (6.5) P. | 19 11 36.48 | 49 51 22.7 | |
| | | | | B. A. C. 6477. | | | | Div., Flex., etc. | | + | 0.80 |
| B. A. C. 6317. | | | | 1876. | h. m. s. | ° ' " | | | | | |
| 1876. | h. m. s. | ° ' " | | May 4 (6) P. | 18 51 37.47 | 32 40 12.4 | | B. A. C. 6624. | | | |
| May 4 P. | 18 27 19.04 | 122 59 6.6 | | July 21 F. | 37.27 | 12.3 | | 1876. | h. m. s. | ° ' " | |
| Div., Flex., etc. | | + | 1.64 | Mean . . . | 18 51 37.370 | 32 40 12.35 | | May 4 (6.5) P. | 19 14 49.49 | 49 52 1.2 | |
| | | | | Div., Flex., etc. | | + | 0.69 | Div., Flex., etc. | | + | 0.80 |
| O. ARG. S. 18436. | | | | B. A. C. 6487. | | | | B. A. C. 6659. | | | |
| 1876. | h. m. s. | ° ' " | | 1876. | h. m. s. | ° ' " | | 1876. | h. m. s. | ° ' " | |
| July 17 F. | 18 29 . . . | 117 49 43.2 | | Dec. 6 P. | 18 53 59.66 | 75 5 54.8 | | May 4 (5.5) P. | 19 20 8.94 | 30 58 12.7 | |
| 27 (9.8) P. | 11.02 | 41.7 | | Div., Flex., etc. | | + | 1.67 | Aug. 15 F. | 8.89 | 12.7 | |
| Aug. 9 E. | 10.97 | 42.8 | | | | | | Mean . . . | 19 20 8.915 | 39 58 12.70 | |
| Mean . . . | 18 29 10.995 | 117 49 42.57 | | B. A. C. 6491. | | | | Div., Flex., etc. | | + | 0.59 |
| Div., Flex., etc. | | + | 1.84 | 1876. | h. m. s. | ° ' " | | O. ARG. N. 19238. | | | |
| ANONYMOUS. | | | | Jan. 25 E. | 18 54 18.23 | 57 28 45.2 | | 1876. | h. m. s. | ° ' " | |
| 1876. | h. m. s. | ° ' " | | April 14 P. | 18.34 | 45.1 | | May 4 (5) P. | 19 21 17.56 | 40 0 7.4 | |
| July 7 (10) P. | 18 29 30.00 | 117 23 21.8 | | July 5 P. | | 45.3 | | Aug. 15 F. | 17.72 | 7.3 | |
| Div., Flex., etc. | | + | 1.86 | 7 P. | 18.34 | 45.4 | | Mean . . . | 19 21 17.640 | 40 0 7.35 | |
| | | | | Mean . . . | 18 54 18.303 | 57 28 45.25 | | Div., Flex., etc. | | + | 0.59 |
| B. A. C. 6344. | | | | Div., Flex., etc. | | + | 1.48 | B. A. C. 6690 ¹ . | | | |
| 1876. | h. m. s. | ° ' " | | B. A. C. 6491 (Ref.). | | | | 1876. | h. m. s. | ° ' " | |
| May 4 P. | 18 31 22.71 | 123 6 1.3 | | 1876. | h. m. s. | ° ' " | | Feb. 18 E. | 19 25 43.27 | 62 17 55.8 | |
| Div., Flex., etc. | | + | 1.63 | July 5 P. | | 57 28 45.7 | | 22 E. | 43.30 | 58.7 | |
| | | | | Div., Flex., etc. | | + | 0.91 | July 5 P. | | 58.0 | |
| MURAL ZONES 45, 21. | | | | B. A. C. 6495. | | | | 7 (3) P. | 43.18 | 57.3 | |
| 1876. | h. m. s. | ° ' " | | 1876. | h. m. s. | ° ' " | | Mean . . . | 19 25 43.250 | 62 17 57.45 | |
| Aug. 26 F. | 18 32 47.60 | 117 39 4.6 | | May 4 (6.5) P. | 18 55 1.88 | 50 57 10.0 | | Div., Flex., etc. | | + | 1.57 |
| Div., Flex., etc. | | + | 1.85 | June 1 (7) P. | 1.92 | 9.6 | | B. A. C. 6690 ¹ (Ref.). | | | |
| XVIII, 18. | | | | July 22 S. | 1.93 | | | 1876. | h. m. s. | ° ' " | |
| 1876. | h. m. s. | ° ' " | | Aug. 9 E. | 1.88 | 10.6 | | July 5 P. | | 62 17 58.2 | |
| June 1 (10) P. | 18 36 36.87 | 121 31 17.5 | | 11 F. | 1.93 | 9.0 | | Div., Flex., etc. | | + | 0.65 |
| July 5 P. | 36.95 | 19.1 | | Mean . . . | 18 55 1.908 | 50 57 9.80 | | B. A. C. 6690 ² . | | | |
| 26 S. | 36.97 | 16.2 | | Div., Flex., etc. | | + | 0.90 | 1876. | h. m. s. | ° ' " | |
| Mean . . . | 18 36 36.930 | 121 31 17.60 | | B. A. C. 6514. | | | | July 7 (6) P. | 19 25 45.39 | 62 17 37.7 | |
| Div., Flex., etc. | | + | 1.73 | 1876. | h. m. s. | ° ' " | | Div., Flex., etc. | | + | 1.57 |
| B. A. C. 6378. | | | | July 27 (8.2) P. | 18 56 6.16 | 16 4 36.0 | | B. A. C. 6693. | | | |
| 1876. | h. m. s. | ° ' " | | Div., Flex., etc. | | + | 0.63 | 1876. | h. m. s. | ° ' " | |
| May 4 P. | 18 39 4.38 | 130 32 13.3 | | B. A. C. 6516. | | | | Oct. 2 S. | 19 27 9.58 | 121 52 26.0 | |
| Div., Flex., etc. | | + | 1.47 | 1876. | h. m. s. | ° ' " | | Div., Flex., etc. | | + | 1.72 |
| MURAL ZONES 47, 21. | | | | July 21 F. | 18 57 43.10 | 42 8 24.8 | | ANONYMOUS. | | | |
| 1876. | h. m. s. | ° ' " | | Aug. 11 F. | 43.18 | 24.3 | | 1876. | h. m. s. | ° ' " | |
| Aug. 26 F. | 18 42 32.01 | 118 44 46.0 | | 26 F. | 43.18 | 24.3 | | July 17 F. | 19 27 52.37 | 116 40 0.1 | |
| Div., Flex., etc. | | + | 1.82 | Mean . . . | 18 57 43.153 | 42 8 24.47 | | Aug. 11 F. | 52.33 | 1.8 | |
| B. A. C. 6422. | | | | Div., Flex., etc. | | + | 0.53 | 15 F. | 52.41 | 0.9 | |
| 1876. | h. m. s. | ° ' " | | B. A. C. 6579 ¹ . | | | | Mean . . . | 19 27 52.370 | 116 40 0.93 | |
| July 26 S. | 18 45 21.15 | 117 54 15.0 | | 1876. | h. m. s. | ° ' " | | Div., Flex., etc. | | + | 1.89 |
| Div., Flex., etc. | | + | 1.83 | May 4 (6.5) P. | 19 8 52.53 | 40 22 36.5 | | | | | |
| B. A. C. 6469. | | | | Aug. 11 F. | 52.59 | 36.1 | | | | | |
| 1876. | h. m. s. | ° ' " | | 15 F. | 52.46 | 35.6 | | | | | |
| July 27 (5.5) P. | 18 48 51.89 | | | Mean . . . | 19 8 52.527 | 40 22 36.17 | | | | | |
| | | | | Div., Flex., etc. | | + | 0.59 | | | | |

MURAL ZONES 176, 77.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|--------|--------|---|---|
| July 17 | F. | 19 28 | 16.45 | 116 34 | 11.6 | | |
| Aug. 11 | F. | | 16.55 | | (15.5) | | |
| 15 | F. | | 16.51 | | 10.5 | | |
| Mean | | 19 28 | 16.503 | 116 34 | 11.05 | | |
| Div., Flex., etc. | | | | | + 1.89 | | |

MURAL ZONES 176, 78.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|--------|--------|---|---|
| July 17 | F. | 19 28 | 54.95 | 116 35 | 31.8 | | |
| Aug. 11 | F. | | 54.98 | | (37.8) | | |
| 15 | F. | | 55.17 | | 32.4 | | |
| Mean | | 19 28 | 55.033 | 116 35 | 32.10 | | |
| Div., Flex., etc. | | | | | + 1.89 | | |

TRANSIT ZONES 52, 24.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|--------|--------|---|---|
| Sept. 27 | F. | 19 29 | 16.53 | 117 46 | 20.5 | | |
| Div., Flex., etc. | | | | | + 1.84 | | |

ANONYMOUS.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|--------|--------|---|---|
| July 22 | S. | 19 29 | 58.14 | 116 31 | 14.9 | | |
| Div., Flex., etc. | | | | | + 1.89 | | |

MURAL ZONES 119, 60.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|--------|--------|---|---|
| Sept. 4 | S. | 19 30 | 42.82 | 117 38 | 5.9 | | |
| Div., Flex., etc. | | | | | + 1.85 | | |

ANONYMOUS.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|--------|--------|---|---|
| July 22 | S. | 19 30 | 48.90 | 116 38 | 23.6 | | |
| Div., Flex., etc. | | | | | + 1.89 | | |

O. ARG. S. 19809.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|--------|--------|---|---|
| Sept. 4 | S. | 19 31 | 16.40 | 117 38 | 54.4 | | |
| 27 | F. | | 16.44 | | 56.4 | | |
| Mean | | 19 31 | 16.420 | 117 38 | 55.40 | | |
| Div., Flex., etc. | | | | | + 1.85 | | |

B. A. C. 6763.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|-------|--------|---|---|
| May 4 | P. | 19 38 | 31.19 | 39 45 | 41.8 | | |
| Div., Flex., etc. | | | | | + 0.58 | | |

B. A. C. 6764.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|-------|--------|---|---|
| May 4 | P. | 19 38 | 33.91 | 39 46 | 8.7 | | |
| Div., Flex., etc. | | | | | + 0.58 | | |

B. A. C. 6799.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|-------|--------|---|---|
| July 5 | P. | | | 42 23 | 54.6 | | |
| Div., Flex., etc. | | | | | + 0.52 | | |

B. A. C. 6799 (Ref.).

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|--|-------|-------|--------|---|---|
| July 5 | P. | | | 42 23 | 53.8 | | |
| Div., Flex., etc. | | | | | + 0.52 | | |

B. A. C. 6876.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|-------|--------|---|---|
| May 4 | P. | 19 55 | 26.82 | 44 33 | 54.2 | | |
| Div., Flex., etc. | | | | | + 0.37 | | |

B. A. C. 6881.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|-------|--------|---|---|
| Sept. 20 | S. | 19 55 | 58.18 | 38 16 | 57.7 | | |
| Div., Flex., etc. | | | | | + 0.54 | | |

B. A. C. 6913.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|------|--------|-------|--------|---|---|
| Sept. 4 | S. | 20 0 | 56.88 | 25 42 | 54.8 | | |
| 20 | S. | | 57.41 | | 53.1 | | |
| 28 | S. | | 57.57 | | 53.4 | | |
| Mean | | 20 0 | 57.287 | 25 42 | 53.77 | | |
| Div., Flex., etc. | | | | | + 0.87 | | |

B. A. C. 6918.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|------|-------|-------|--------|---|---|
| Oct. 2 | S. | 20 1 | 45.21 | 38 30 | 56.4 | | |
| Div., Flex., etc. | | | | | + 0.54 | | |

B. A. C. 6934.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|------|--------|-------|--------|---|---|
| Feb. 15 | F. | 20 4 | 54.46 | 91 11 | 13.8 | | |
| 18 | E. | | 54.45 | | 14.4 | | |
| May 4 | P. | | 54.35 | | 15.5 | | |
| Mean | | 20 4 | 54.420 | 91 11 | 14.57 | | |
| Div., Flex., etc. | | | | | + 1.85 | | |

B. A. C. 6948.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|------|-------|--------|--------|---|---|
| Sept. 4 | S. | 20 8 | 8.28 | 120 22 | 53.1 | | |
| 28 | S. | | 8.19 | | 51.7 | | |
| Oct. 2 | S. | | 8.24 | | 51.9 | | |
| Mean | | 20 8 | 8.237 | 120 22 | 52.23 | | |
| Div., Flex., etc. | | | | | + 1.78 | | |

α² CEPHEI, S. P.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|--------|--------|---|---|
| Nov. 8 | P. | 20 12 | 3.92 | 347 20 | 7.8 | | |
| Div., Flex., etc. | | | | | + 0.37 | | |

B. A. C. 6985.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|------|--------|---|---|
| Oct. 2 | S. | 20 12 | 6.96 | 40 8 | 52.2 | | |
| Div., Flex., etc. | | | | | + 0.59 | | |

WEISSE (2) 538.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-------|--------|---|---|
| Aug. 21 | E. | 20 15 | 56.22 | 70 43 | 48.4 | | |
| Sept. 4 | S. | | 56.19 | | 49.1 | | |
| 20 (8.5) | S. | | 56.19 | | 47.5 | | |
| Mean | | 20 15 | 56.200 | 70 43 | 48.33 | | |
| Div., Flex., etc. | | | | | + 1.61 | | |

B. A. C. 7022.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|------|--------|---|---|
| Feb. 18 | E. | 20 17 | 46.87 | 50 8 | 20.0 | | |
| 23 | F. | | 46.72 | | 21.1 | | |
| May 4 | P. | | 46.72 | | 21.0 | | |
| Mean | | 20 17 | 46.770 | 50 8 | 20.70 | | |
| Div., Flex., etc. | | | | | + 0.82 | | |

B. A. C. 7025.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|--------|--------|---|---|
| Oct. 24 | E. | 20 18 | 50.77 | 127 48 | 7.7 | | |
| Div., Flex., etc. | | | | | + 1.45 | | |

B. A. C. 7035.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-------|--------|---|---|
| Sept. 20 | S. | 20 19 | 49.05 | 35 43 | 33.4 | | |
| 28 | S. | | 49.17 | | 35.6 | | |
| Oct. 2 | S. | | 49.13 | | 35.2 | | |
| Mean | | 20 19 | 49.117 | 35 43 | 34.73 | | |
| Div., Flex., etc. | | | | | + 0.61 | | |

B. A. C. 7055.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-------|--------|---|---|
| Sept. 20 | S. | 20 22 | 19.54 | 35 43 | 14.8 | | |
| 28 | S. | | 19.65 | | 15.1 | | |
| Oct. 2 | S. | | 19.78 | | 16.2 | | |
| Mean | | 20 22 | 19.657 | 35 43 | 15.37 | | |
| Div., Flex., etc. | | | | | + 0.61 | | |

O. ARG. S. 20578.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|--------|--------|---|---|
| July 22 | S. | 20 24 | 55.95 | 115 17 | 13.2 | | |
| Sept. 28 | S. | | 55.86 | | | | |
| Mean | | 20 24 | 55.905 | 115 17 | 13.2 | | |
| Div., Flex., etc. | | | | | + 1.90 | | |

B. A. C. 7077.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|--------|--------|---|---|
| Aug. 26 | F. | 20 25 | 29.24 | 115 21 | 39.7 | | |
| Oct. 12 (5) | P. | | 29.20 | | 37.4 | | |
| Mean | | 20 25 | 29.220 | 115 21 | 38.55 | | |
| Div., Flex., etc. | | | | | + 1.90 | | |

ANONYMOUS.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|--------|--------|---|---|
| Oct. 12 (9.5) | P. | 20 25 | 45.34 | 115 24 | 31.8 | | |
| Div., Flex., etc. | | | | | + 1.90 | | |

ANONYMOUS.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|--------|--------|---|---|
| Aug. 26 | F. | 20 26 | 49.31 | 115 27 | 44.2 | | |
| Oct. 12 (9.5) | P. | | 49.33 | | 41.7 | | |
| Mean | | 20 26 | 49.320 | 115 27 | 42.95 | | |
| Div., Flex., etc. | | | | | + 1.90 | | |

MURAL ZONES 64, 16.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|--------|--------|---|---|
| Aug. 9 | E. | 20 28 | 28.11 | 114 47 | 55.6 | | |
| Div., Flex., etc. | | | | | + 1.90 | | |

B. A. C. 7149.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-------|--------|---|---|
| Feb. 11 | F. | 20 33 | 52.70 | 74 31 | 24.6 | | |
| 18 | E. | | 52.83 | | 25.9 | | |
| 23 | E. | | 52.79 | | 21.0 | | |
| Mar. 8 | P. | | 52.66 | | 27.8 | | |
| May 4 | P. | | 52.62 | | 26.5 | | |
| Mean | | 20 33 | 52.720 | 74 31 | 25.76 | | |
| Div., Flex., etc. | | | | | + 1.66 | | |

B. A. C. 7174.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|-------|--------|---|---|
| Sept. 28 | S. | 20 37 | 27.82 | 48 43 | 35.5 | | |
| Div., Flex., etc. | | | | | + 0.70 | | |

B. A. C. 7175.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|--------|--------|---|---|
| Sept. 4 | S. | 20 38 | 14.79 | 129 38 | 51.1 | | |
| Div., Flex., etc. | | | | | + 1.47 | | |

B. A. C. 7189.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|-------|------|--------|---|---|
| Sept. 29 | P. | 20 39 | 12.21 | 33 3 | 36.8 | | |
| Div., Flex., etc. | | | | | + 0.67 | | |

γ¹ DELPHINI.

| 1876. | | | h. m. | s. | ° | ' | " |
|-------------------|----|-------|--------|-------|--------|---|---|
| Mar. 8 | P. | 20 40 | 54.22 | 74 19 | 17.5 | | |
| Dec. 19 | E. | | 54.30 | | 17.4 | | |
| Mean | | 20 40 | 54.260 | 74 19 | 17.45 | | |
| Div., Flex., etc. | | | | | + 1.66 | | |

| | | | | | | | | | | | | | | |
|------------------------|----|--------------|--------------|------|-----------------------|----|--------------|--------------|------|---------------------------------|----|--------------|-------------|------|
| B. A. C. 7234. | | | | | O. ARG. S. 21237. | | | | | B. A. C. 7483. | | | | |
| 1876. | | h. m. s. | ° ' " | | 1876. | | h. m. s. | ° ' " | | 1876. | | h. m. s. | ° ' " | |
| Sept. 28 | S. | 20 45 35.63 | 130 16 18.3 | | April 26 | F. | 21 7 54.50 | 110 34 56.1 | | Sept. 4 | S. | 21 26 12.79 | 37 35 12.7 | |
| Oct. 2 | S. | 35.76 | 19.3 | | Sept. 4 | S. | 54.53 | 56.9 | | Div., Flex., etc. | | | + | 0.55 |
| | | | | | 20 | S. | 54.53 | 56.6 | | | | | | |
| Mean | | 20 45 35.695 | 130 16 18.80 | | Mean | | 21 7 54.520 | 110 34 56.53 | | | | | | |
| Div., Flex., etc. | | | + | 1.47 | Div., Flex., etc. | | | + | 1.97 | | | | | |
| B. A. C. 7237. | | | | | TRANSIT ZONES 176, 4. | | | | | ANONYMOUS. | | | | |
| 1876. | | h. m. s. | ° ' " | | 1876. | | h. m. s. | ° ' " | | 1876. | | h. m. s. | ° ' " | |
| July 22 | S. | 20 45 44.60 | 114 14 46.7 | | Oct. 17 | F. | 21 7 56.90 | 112 19 34.6 | | Aug. 21 | E. | 21 27 36.10 | 100 2 56.2 | |
| Aug. 26 | F. | 44.66 | 46.0 | | Div., Flex., etc. | | | + | 1.90 | 26 | F. | 36.22 | 54.5 | |
| Sept. 4 | S. | 44.69 | 46.2 | | | | | | | Sept. 13 (10.8) | P. | 36.05 | 54.1 | |
| Mean | | 20 45 44.650 | 114 14 46.30 | | | | | | | 20 | S. | 36.11 | 51.6 | |
| Div., Flex., etc. | | | + | 1.88 | | | | | | Mean | | 21 27 36.120 | 100 2 54.10 | |
| B. A. C. 7260. | | | | | O. ARG. S. 21249. | | | | | Div., Flex., etc. | | | + | 1.68 |
| 1876. | | h. m. s. | ° ' " | | 1876. | | h. m. s. | ° ' " | | O. ARG. S. 21542 ¹ . | | | | |
| July 7 (6.5) P. | | 20 49 44.47 | 49 46 4.7 | | Oct. 2 | S. | 21 8 47.20 | 111 57 9.3 | | 1876. | | h. m. s. | ° ' " | |
| Sept. 20 | S. | 44.39 | 2.6 | | Div., Flex., etc. | | | + | 1.91 | Aug. 6 | F. | 21 32 11.68 | 106 0 18.0 | |
| Oct. 2 | S. | 44.48 | 4.8 | | | | | | | Sept. 4 | S. | 11.60 | 19.3 | |
| Mean | | 20 49 44.447 | 49 46 4.03 | | B. A. C. 7387. | | | | | 28 | S. | 11.58 | 19.2 | |
| Div., Flex., etc. | | | + | 0.79 | 1876. | | h. m. s. | ° ' " | | Oct. 12 (9) P. | | 11.57 | 19.0 | |
| B. A. C. 7286. | | | | | Aug. 6 | F. | 21 9 38.11 | 30 24 . . | | Mean | | 21 32 11.605 | 106 0 18.83 | |
| 1876. | | h. m. s. | ° ' " | | Oct. 11 | F. | 37.83 | . . | | Div., Flex., etc. | | | + | 1.76 |
| Sept. 28 | S. | 20 54 29.60 | 129 0 36.3 | | 12 (6.5) P. | | 37.86 | 47.3 | | | | | | |
| Oct. 2 | S. | 29.60 | 36.0 | | Mean | | 21 9 37.933 | 30 24 47.3 | | | | | | |
| Mean | | 20 54 29.600 | 120 0 36.15 | | Div., Flex., etc. | | | + | 0.79 | | | | | |
| Div., Flex., etc. | | | + | 1.45 | ANONYMOUS. | | | | | 1876. | | h. m. s. | ° ' " | |
| B. A. C. 7292. | | | | | 1876. | | h. m. s. | ° ' " | | Sept. 29 (5.5) P. | | 21 35 19.23 | 47 17 17.8 | |
| 1876. | | h. m. s. | ° ' " | | Sept. 29 (11) P. | | 21 10 4.79 | 113 58 34.3 | | Oct. 2 | S. | 19.25 | 19.1 | |
| Sept. 28 | S. | 20 55 2.12 | 129 6 49.5 | | Div., Flex., etc. | | | + | 1.88 | 11 | F. | 19.21 | 20.0 | |
| Oct. 2 | S. | 2.06 | 50.1 | | | | | | | Mean | | 21 35 19.230 | 47 17 18.97 | |
| Mean | | 20 55 2.090 | 129 6 49.80 | | ANONYMOUS. | | | | | Div., Flex., etc. | | | + | 0.52 |
| Div., Flex., etc. | | | + | 1.45 | 1876. | | h. m. s. | ° ' " | | B. A. C. 7544. | | | | |
| B. A. C. 7316. | | | | | Sept. 29 (11) P. | | 21 10 12.88 | 113 56 42.5 | | 1876. | | h. m. s. | ° ' " | |
| 1876. | | h. m. s. | ° ' " | | Div., Flex., etc. | | | + | 1.88 | Sept. 29 (5.5) P. | | 21 35 19.23 | 47 17 17.8 | |
| Sept. 20 | S. | 20 58 31.69 | 120 36 54.0 | | | | | | | Oct. 2 | S. | 19.25 | 19.1 | |
| Div., Flex., etc. | | | + | 1.77 | B. A. C. 7398. | | | | | 11 | F. | 19.21 | 20.0 | |
| 61 ² CYGNI. | | | | | 1876. | | h. m. s. | ° ' " | | Mean | | 21 35 19.230 | 47 17 18.97 | |
| 1876. | | h. m. s. | ° ' " | | Feb. 18 | E. | 21 12 32.92 | 51 7 26.1 | | Div., Flex., etc. | | | + | 0.52 |
| July 17 | F. | 21 1 21.93 | 51 51 37.5 | | Mar. 8 | P. | 32.83 | 26.7 | | B. A. C. 7564. | | | | |
| Sept. 25 | P. | 22.18 | 39.6 | | Mean | | 21 12 32.875 | 51 7 26.40 | | 1876. | | h. m. s. | ° ' " | |
| Oct. 17 | F. | 22.13 | 40.7 | | Div., Flex., etc. | | | + | 0.92 | Oct. 17 | F. | 21 37 26.02 | 19 15 3.7 | |
| Mean | | 21 1 22.080 | 51 51 39.27 | | | | | | | Div., Flex., etc. | | | + | 0.86 |
| Div., Flex., etc. | | | + | 1.03 | B. A. C. 7399. | | | | | | | | | |
| MURAL ZONES 187, 66. | | | | | 1876. | | h. m. s. | ° ' " | | B. A. C. 7588. | | | | |
| 1876. | | h. m. s. | ° ' " | | April 18 | P. | 21 12 49.22 | 55 37 22.4 | | 1876. | | h. m. s. | ° ' " | |
| Aug. 26 | F. | 21 6 54.84 | 110 35 52.1 | | Div., Flex., etc. | | | + | 1.42 | Oct. 17 | F. | 21 40 6.23 | 19 15 33.3 | |
| Sept. 4 | S. | 54.90 | 51.7 | | | | | | | 18 | S. | 5.89 | 33.1 | |
| 20 | S. | 54.78 | 51.9 | | ANONYMOUS. | | | | | Mean | | 21 40 6.060 | 19 15 33.20 | |
| Mean | | 21 6 54.840 | 110 35 51.90 | | 1876. | | h. m. s. | ° ' " | | Div., Flex., etc. | | | + | 0.86 |
| Div., Flex., etc. | | | + | 1.97 | Sept. 27 | F. | 21 19 7.91 | 111 9 57.4 | | B. A. C. 7589. | | | | |
| ANONYMOUS. | | | | | Oct. 3 | P. | 7.90 | 56.5 | | 1876. | | h. m. s. | ° ' " | |
| 1876. | | h. m. s. | ° ' " | | 11 | F. | 7.82 | 57.3 | | July 7 (6) P. | | 21 40 50.86 | 38 18 11.7 | |
| Oct. 17 | F. | 21 7 45.33 | 112 19 56.4 | | 12 (9.5) P. | | 7.77 | 56.2 | | Sept. 4 | S. | 50.84 | 8.3 | |
| Div., Flex., etc. | | | + | 1.90 | 13 | F. | 7.91 | 57.0 | | 28 | S. | 50.66 | 9.9 | |
| B. A. C. 7447. | | | | | Mean | | 21 19 7.862 | 111 9 56.88 | | Mean | | 21 40 50.787 | 38 18 9.97 | |
| 1876. | | h. m. s. | ° ' " | | Div., Flex., etc. | | | + | 1.96 | Div., Flex., etc. | | | + | 0.54 |
| Aug. 6 | F. | 21 20 12.76 | 111 43 50.3 | | B. A. C. 7477. | | | | | B. A. C. 7589 (Ref.). | | | | |
| Sept. 21 | E. | 12.98 | 52.0 | | 1876. | | h. m. s. | ° ' " | | 1876. | | h. m. s. | ° ' " | |
| Sept. 4 | S. | 12.90 | 52.8 | | Aug. 6 | F. | 21 20 12.76 | 111 43 50.3 | | July 7 | P. | . . . | 38 18 11.0 | |
| Oct. 2 | S. | 12.90 | 51.6 | | 21 | E. | 12.98 | 52.0 | | Div., Flex., etc. | | | + | 1.40 |
| Mean | | 21 20 12.885 | 111 43 51.68 | | Mean | | 21 20 12.885 | 111 43 51.68 | | B. A. C. 7593. | | | | |
| Div., Flex., etc. | | | + | 1.93 | Div., Flex., etc. | | | + | 1.93 | 1876. | | h. m. s. | ° ' " | |
| B. A. C. 7477. | | | | | 1876. | | h. m. s. | ° ' " | | Oct. 2 | S. | 21 41 21.21 | 47 30 43.8 | |
| 1876. | | h. m. s. | ° ' " | | Sept. 28 | S. | 21 24 33.08 | 46 12 13.1 | | Div., Flex., etc. | | | + | 0.55 |
| Oct. 17 | F. | 21 7 45.33 | 112 19 56.4 | | Div., Flex., etc. | | | + | 0.37 | B. A. C. 7612. | | | | |
| Div., Flex., etc. | | | + | 1.90 | | | | | | 1876. | | h. m. s. | ° ' " | |

B. A. C. 7612 (Ref.).

| | | |
|-------------------|------------|-------|
| 1876. | h. m. s. | ° ' " |
| Oct. 27 P. | 37 52 52.1 | |
| Div., Flex., etc. | + 1.39 | |

B. A. C. 7646.

| | | |
|----------------|------------|------------|
| 1876. | h. m. s. | ° ' " |
| Sept. 28 S. | 21 51 9.13 | 37 20 39.4 |
| Oct. 12 (6) P. | 9.18 | 41.1 |
| 27 P. | 9.23 | 40.5 |

| | | |
|-------------------|-------------|-------------|
| Mean . . . | 21 51 9.180 | 37 20 40.35 |
| Div., Flex., etc. | | + 0.56 |

B. A. C. 7646 (Ref.).

| | | |
|-------------------|------------|-------|
| 1876. | h. m. s. | ° ' " |
| Oct. 12 P. | 37 20 39.4 | |
| Div., Flex., etc. | + 1.38 | |

WEISSE 1314.

| | | |
|------------------|------------|-------------|
| 1876. | h. m. s. | ° ' " |
| Sept. 13 (10) P. | 21 58 3.09 | 101 28 59.4 |
| 20 S. | 3.04 | 56.6 |
| 27 (10) F. | 3.07 | 57.6 |
| 29 P. | 3.09 | 57.2 |

| | | |
|-------------------|-------------|--------------|
| Mean . . . | 21 58 3.072 | 101 28 57.70 |
| Div., Flex., etc. | | + 1.67 |

ANONYMOUS.

| | | |
|--------------------|-------------|-------------|
| 1876. | h. m. s. | ° ' " |
| Sept. 13 (10.6) P. | 21 59 17.02 | 101 24 15.2 |
| 20 S. | 17.02 | 16.5 |
| 27 F. | | 15.8 |
| 29 P. | 16.95 | 15.7 |

| | | |
|-------------------|--------------|--------------|
| Mean . . . | 21 59 16.997 | 101 24 15.80 |
| Div., Flex., etc. | | + 1.67 |

ANONYMOUS.

| | | |
|------------|-------------|-------------|
| 1876. | h. m. s. | ° ' " |
| Aug. 28 E. | 21 59 49.27 | 107 15 10.2 |
| Sept. 2 F. | 49.02 | 12.1 |

| | | |
|-------------------|--------------|--------------|
| Mean . . . | 21 59 49.145 | 107 15 11.15 |
| Div., Flex., etc. | | + 1.86 |

ANONYMOUS.

| | | |
|-------------------|------------|------------|
| 1876. | h. m. s. | ° ' " |
| Sept. 2 F. | 22 1 22.05 | 107 9 18.4 |
| Div., Flex., etc. | | + 1.85 |

MURAL ZONES 207, 63.

| | | |
|-------------------|------------|------------|
| 1876. | h. m. s. | ° ' " |
| Aug. 28 E. | 22 1 40.60 | 107 8 53.2 |
| Div., Flex., etc. | | + 1.85 |

ANONYMOUS.

| | | |
|-------------------|------------|-------------|
| 1876. | h. m. s. | ° ' " |
| Aug. 28 E. | 22 1 46.35 | 107 12 59.5 |
| Div., Flex., etc. | | + 1.85 |

B. A. C. 7732.

| | | |
|------------|------------|-----------|
| 1876. | h. m. s. | ° ' " |
| Oct. 17 F. | 22 2 34.16 | 7 43 39.1 |
| 18 S. | 33.53 | 37.8 |
| 24 E. | 35.10 | 39.5 |

| | | |
|-------------------|-------------|------------|
| Mean . . . | 22 2 34.295 | 7 43 38.80 |
| Div., Flex., etc. | | + 0.46 |

B. A. C. 7735.

| | | |
|------------|------------|-----------|
| 1876. | h. m. s. | ° ' " |
| Oct. 17 F. | 22 2 40.91 | 7 43 37.4 |
| 18 S. | 40.36 | 36.5 |
| 24 E. | 41.33 | 35.9 |

| | | |
|-------------------|-------------|------------|
| Mean . . . | 22 2 40.867 | 7 43 36.60 |
| Div., Flex., etc. | | + 0.46 |

B. A. C. 7718.

| | | |
|-------------------|------------|------------|
| 1876. | h. m. s. | ° ' " |
| Sept. 28 S. | 22 2 59.14 | 31 45 47.7 |
| Div., Flex., etc. | | + 0.74 |

B. A. C. 7743.

| | | |
|-------------------|------------|------------|
| 1876. | h. m. s. | ° ' " |
| July 7 (6) P. | 22 5 54.46 | 47 34 43.3 |
| Div., Flex., etc. | | + 0.56 |

B. A. C. 7770.

| | | |
|-------------------|------------|------------|
| 1876. | h. m. s. | ° ' " |
| July 7 (5.5) P. | 22 9 31.74 | 47 39 38.5 |
| Div., Flex., etc. | | + 0.57 |

42 AQUARI.

| | | |
|-------------------|------------|-------------|
| 1876. | h. m. s. | ° ' " |
| Sept. 29 (6) P. | 22 10 9.68 | 103 26 54.7 |
| Div., Flex., etc. | | + 1.70 |

B. A. C. 7779¹.

| | | |
|-------------------|-------------|-----------|
| 1876. | h. m. s. | ° ' " |
| Oct. 27 P. | 22 10 36.25 | 17 18 1.0 |
| Div., Flex., etc. | | + 0.73 |

B. A. C. 7779².

| | | |
|------------|-------------|------------|
| 1876. | h. m. s. | ° ' " |
| Oct. 17 F. | 22 10 37.69 | 17 18 28.8 |
| 27 P. | 37.55 | 29.8 |

| | | |
|-------------------|--------------|-------------|
| Mean . . . | 22 10 37.620 | 17 18 29.30 |
| Div., Flex., etc. | | + 0.73 |

MURAL ZONES 207, 70.

| | | |
|------------|-------------|-------------|
| 1876. | h. m. s. | ° ' " |
| Sept. 2 F. | 22 10 39.29 | 106 39 20.5 |
| 28 S. | 39.29 | 19.6 |
| Oct. 2 S. | 39.38 | 20.4 |

| | | |
|-------------------|--------------|--------------|
| Mean . . . | 22 10 39.335 | 106 39 20.17 |
| Div., Flex., etc. | | + 1.82 |

MURAL ZONES 207, 71.

| | | |
|------------|-------------|-------------|
| 1876. | h. m. s. | ° ' " |
| Sept. 2 F. | 22 10 44.19 | 106 35 50.7 |
| 28 S. | 44.19 | 50.0 |
| Oct. 2 S. | 44.11 | 50.9 |

| | | |
|-------------------|--------------|--------------|
| Mean . . . | 22 10 44.150 | 106 35 50.53 |
| Div., Flex., etc. | | + 1.81 |

TRANSIT ZONES 205, 40.

| | | |
|------------|-------------|-------------|
| 1876. | h. m. s. | ° ' " |
| July 7 P. | 22 16 40.80 | 105 34 15.4 |
| Aug. 6 F. | 40.59 | 11.5 |
| Sept. 4 S. | 40.68 | 15.9 |

| | | |
|-------------------|--------------|--------------|
| Mean . . . | 22 16 40.690 | 105 34 14.27 |
| Div., Flex., etc. | | + 1.74 |

TRANSIT ZONES 204, 17.

| | | |
|------------|-------------|-------------|
| 1876. | h. m. s. | ° ' " |
| July 7 P. | 22 19 20.19 | 105 34 49.1 |
| Aug. 6 F. | 19.94 | 48.2 |
| Sept. 4 F. | 20.08 | 49.0 |

| | | |
|-------------------|--------------|--------------|
| Mean . . . | 22 19 20.070 | 105 34 48.77 |
| Div., Flex., etc. | | + 1.74 |

B. A. C. 7857.

| | | |
|------------|-------------|------------|
| 1876. | h. m. s. | ° ' " |
| Oct. 17 F. | 22 25 45.24 | 11 50 51.8 |
| 18 S. | 45.45 | |
| 24 E. | 45.75 | (51 0.5) |

| | | |
|-------------------|--------------|------------|
| Mean . . . | 22 25 45.480 | 11 50 51.8 |
| Div., Flex., etc. | | + 0.51 |

B. A. C. 7874.

| | | |
|------------|-------------|------------|
| 1876. | h. m. s. | ° ' " |
| Oct. 17 F. | 22 28 46.06 | 11 48 45.0 |
| 18 S. | 46.09 | |

| | | |
|-------------------|--------------|------------|
| Mean . . . | 22 28 46.075 | 11 48 45.0 |
| Div., Flex., etc. | | + 0.51 |

WEISSE 604.

| | | |
|-------------------|-------------|------------|
| 1876. | h. m. s. | ° ' " |
| Sept. 27 F. | 22 30 11.88 | 103 1 22.5 |
| Div., Flex., etc. | | + 1.70 |

64 AQUARI.

| | | |
|-------------------|-------------|-------------|
| 1876. | h. m. s. | ° ' " |
| Oct. 27 (6.5) P. | 22 32 44.42 | 100 40 18.3 |
| Div., Flex., etc. | | + 1.67 |

B. A. C. 7923.

| | | |
|------------|-------------|------------|
| 1876. | h. m. s. | ° ' " |
| April 5 P. | 22 37 11.49 | 60 25 34.6 |
| 9 P. | 11.43 | 35.2 |
| 18 P. | 11.49 | 31.0 |

| | | |
|-------------------|--------------|-------------|
| Mean . . . | 22 37 11.470 | 60 25 33.60 |
| Div., Flex., etc. | | + 1.53 |

B. A. C. 7931.

| | | |
|-------------------|-------------|-----------|
| 1876. | h. m. s. | ° ' " |
| Oct. 2 S. | 22 38 29.56 | 51 11 2.1 |
| Div., Flex., etc. | | + 0.93 |

B. A. C. 7962.

| | | |
|-------------|-------------|-----------|
| 1876. | h. m. s. | ° ' " |
| Sept. 28 S. | 22 44 46.37 | 48 42 8.8 |
| Oct. 2 S. | 46.47 | 9.5 |

| | | |
|-------------------|--------------|------------|
| Mean . . . | 22 44 46.420 | 48 42 9.15 |
| Div., Flex., etc. | | + 0.70 |

B. A. C. 7987.

| | | |
|-------------------|------------|------------|
| 1876. | h. m. s. | ° ' " |
| Oct. 2 S. | 22 49 4.58 | 123 12 5.9 |
| Div., Flex., etc. | | + 1.59 |

B. A. C. 8013.

| | | |
|-------------|------------|------------|
| 1876. | h. m. s. | ° ' " |
| Sept. 28 S. | 22 54 4.61 | 30 50 56.8 |
| Oct. 2 S. | 4.74 | 51 0.1 |

| | | |
|-------------------|-------------|-------------|
| Mean . . . | 22 54 4.675 | 30 50 58.45 |
| Div., Flex., etc. | | + 0.78 |

B. A. C. 8026.

| | | |
|-------------------|-------------|----------|
| 1876. | h. m. s. | ° ' " |
| Oct. 17 F. | 22 55 20.21 | 6 19 2.7 |
| Div., Flex., etc. | | + 0.39 |

B. A. C. 8032.

| | | |
|------------|-------------|------------|
| 1876. | h. m. s. | ° ' " |
| April 5 P. | 22 57 45.94 | 62 35 22.6 |
| 9 P. | 45.94 | 21.0 |

| | | |
|-------------------|--------------|-------------|
| Mean . . . | 22 57 45.940 | 62 35 21.80 |
| Div., Flex., etc. | | + 1.57 |

B. A. C. 8054.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|------------|
| Sept. 28 S. | 23 1 22.58 | 31 14 59.8 |
| Oct. 2 S. | 22.75 | 15 1.4 |
| Mean . . . | 23 1 22.665 | 31 15 0.60 |
| Div., Flex., etc. | | + 0.77 |

B. A. C. 8058.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|------------|
| Oct. 27 P. | 23 1 59.28 | 44 16 55.2 |
| Div., Flex., etc. | | + 0.39 |

WEISSE 221.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| Sept. 29(9) P. | 23 3 40.23 | 98 44 26.9 |
| Oct. 3(9) P. | 40.04 | 25.9 |
| Mean . . . | 23 3 40.135 | 98 44 26.40 |
| Div., Flex., etc. | | + 1.69 |

WEISSE 222.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| Sept. 29(9.5) P. | 23 3 40.15 | 98 44 21.0 |
| Oct. 3(9.8) P. | 40.22 | 20.1 |
| Mean . . . | 23 3 40.185 | 98 44 20.55 |
| Div., Flex., etc. | | + 1.69 |

WEISSE 23.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| Sept. 29(9) P. | 23 3 40.29 | 98 49 36.5 |
| Oct. 3(9) P. | 40.26 | 36.9 |
| Mean . . . | 23 3 40.275 | 98 49 36.70 |
| Div., Flex., etc. | | + 1.69 |

B. A. C. 8074.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|------------|
| Oct. 17 F. | 23 3 58.23 | 15 16 55.7 |
| Div., Flex., etc. | | + 0.57 |

WEISSE 103.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| Oct. 12 (8.5) P. | 23 7 36.03 | 99 35 50.7 |
| 13 F. | 35.92 | 50.2 |
| 18 S. | 36.05 | . |
| Nov. 22 F. | 35.98 | 49.4 |
| Mean . . . | 23 7 35.995 | 99 35 50.10 |
| Div., Flex., etc. | | + 1.68 |

WEISSE 104.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| Oct. 12 (9) P. | 23 7 36.19 | 99 36 14.8 |
| 13 F. | 35.98 | 15.7 |
| 18 S. | 36.15 | . |
| Nov. 22 F. | 36.04 | 14.6 |
| Mean . . . | 23 7 36.090 | 99 36 15.03 |
| Div., Flex., etc. | | + 1.68 |

WEISSE 109.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| Oct. 12 (10) P. | 23 7 44.54 | 99 36 43.6 |
| 13 F. | 44.37 | 43.6 |
| 18 S. | 44.64 | . |
| Nov. 22 F. | 44.47 | 43.9 |
| Mean . . . | 23 7 44.505 | 99 36 43.70 |
| Div., Flex., etc. | | + 1.68 |

ψ¹ AQUARI.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| Oct. 3 P. | 23 9 23.70 | 99 45 46.7 |
| 11 F. | 23.65 | 46.3 |
| Mean . . . | 23 9 23.675 | 99 45 46.50 |
| Div., Flex., etc. | | + 1.68 |

B. A. C. 8102.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-----------|
| Oct. 11 F. | 23 10 25.25 | 98 24 9.5 |
| Div., Flex., etc. | | + 1.68 |

B. A. C. 8107.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|------------|
| Sept. 28 S. | 23 11 3.46 | 37 27 15.9 |
| Div., Flex., etc. | | + 0.55 |

ANONYMOUS.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|------------|
| Aug. 28 (10.5) E. | 23 20 7.63 | 97 34 49.7 |
| Div., Flex., etc. | | + 1.66 |

B. A. C. 8184.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-------------|
| Aug. 6 F. | 23 23 7.42 | 95 12 26.2 |
| Sept. 2 F. | 7.34 | 26.0 |
| Oct. 11 F. | 7.38 | 26.7 |
| 13 F. | 7.29 | 25.7 |
| Mean . . . | 23 23 7.358 | 95 12 26.15 |
| Div., Flex., etc. | | + 1.60 |

ANONYMOUS.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|-----------|
| Aug. 6 F. | 23 41 16.74 | 95 9 2.5 |
| Oct. 12 (8.5) P. | 16.79 | 2.2 |
| Nov. 24 S. | 16.86 | 2.8 |
| 27 S. | 16.96 | 3.4 |
| Mean . . . | 23 41 16.838 | 95 9 2.72 |
| Div., Flex., etc. | | + 1.60 |

ANONYMOUS.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|-----------|
| Oct. 17 F. | 23 41 27.46 | 95 37 5.9 |
| Div., Flex., etc. | | + 1.60 |

WEISSE 839.

| 1876. | h. m. s. | ° ' " |
|-------------------|------------|------------|
| Oct. 11 F. | 23 42 5.93 | 95 22 20.4 |
| Div., Flex., etc. | | + 1.60 |

WEISSE 848.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|------------|
| Aug. 6 F. | 23 42 23.14 | 95 7 27.5 |
| Oct. 12 (9) P. | 23.19 | 27.5 |
| Nov. 24 S. | 23.25 | . |
| 27 S. | . | 28.3 |
| Mean . . . | 23 42 23.193 | 95 7.27.77 |
| Div., Flex., etc. | | + 1.60 |

B. A. C. 8277¹.

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|------------|
| Oct. 2 (7) S. | 23 42 38.66 | 25 48 43.9 |
| Div., Flex., etc. | | + 0.87 |

B. A. C. 8277².

| 1876. | h. m. s. | ° ' " |
|-------------------|-------------|------------|
| Oct. 2 (8.7) S. | 23 42 39.44 | 25 47 53.9 |
| Div., Flex., etc. | | + 0.87 |

B. A. C. 8316.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|-------------|
| Oct. 12 (6) P. | 23 49 17.85 | 37 57 17.9 |
| 18 S. | 17.93 | 18.1 |
| Mean . . . | 23 49 17.890 | 37 57 18.00 |
| Div., Flex., etc. | | + 0.53 |

B. A. C. 8326.

| 1876. | h. m. s. | ° ' " |
|-------------------|--------------|------------|
| Oct. 2 S. | 23 51 50.83 | 40 15 4.6 |
| 18 S. | 50.66 | 3.7 |
| Mean . . . | 23 51 50.745 | 40 15 4.15 |
| Div., Flex., etc. | | + 0.59 |

MEAN RIGHT ASCENSIONS FOR 1876.0

OF

STARS OBSERVED

WITH THE

TRANSIT INSTRUMENT.

1876.

MEAN RIGHT ASCENSIONS FOR 1876.0,

OF

STARS OBSERVED WITH THE TRANSIT INSTRUMENT.

| B. A. C. 8374, +28° 19'. | | | | 36 PISCUM, +7° 33'. | | | | O. ARG. S. 169, -24° 8'. | | | | κ CASSIOPEÆ, +62° 14'. | | | |
|--------------------------|-----------------|------|--|--------------------------|------------------|------|--|---------------------------|------------------|------|--|-------------------------|------------------|------|--|
| 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | |
| Sept. 26 | . . . 0 10.85 | | | Dec. 7 | . . . 0 10 11.85 | 6.0 | | Dec. 12 | . . . 0 18 34.52 | | | Oct. 31 | . . . 0 26 57.91 | | |
| Oct. 18 | . . . 10.81 | 5.5 | | | | | | | | | | | | | |
| LACAILLE 9723, -36° 48'. | | | | LANLANDE 231, +39° 6'. | | | | LANLANDE 509, +36° 6'. | | | | 16 CASSIOPEÆ, +66° 2'. | | | |
| Nov. 1 | . . . 0 19.41 | 7.0 | | Dec. 13 | . . . 0 10 26.46 | | | Dec. 7 | . . . 0 19 5.00 | 8.2 | | Dec. 5 | . . . 0 27 12.77 | | |
| 7 | . . . 19.40 | 7.0 | | | | | | | | | | 13 | . . . 12.57 | | |
| B. A. C. 8375, -39° 36'. | | | | θ ANDROMEDÆ, +37° 59'. | | | | B. A. C. 91, +19° 28'. | | | | 21 | . . . 12.94 | 7.0 | |
| Dec. 5 | . . . 0 34.30 | | | Nov. 7 | . . . 0 10 36.86 | | | Dec. 16 | . . . 0 19 36.82 | | | (*)+65° 56'. | | | |
| 4 CETI, -3° 15'. | | | | Dec. 19 | . . . 37.06 | | | (*)+0° 27'. | | | | Dec. 13 | . . . 0 27 19.20 | | |
| Oct. 31 | . . . 0 1 22.86 | 6.0 | | WEISSE 164, -0° 23'. | | | | Oct. 31 | . . . 0 19 50.80 | 8.2 | | WEISSE 446, +3° 42'. | | | |
| LACAILLE 9737, -35° 28'. | | | | Nov. 1 | . . . 0 11 7.54 | 7.5 | | Nov. 1 | . . . 50.94 | 7.7 | | Dec. 7 | . . . 0 28 34.00 | 8.3 | |
| Dec. 5 | . . . 0 2 27.67 | | | σ ANDROMEDÆ, +36° 6'. | | | | B. A. C. 92, +55° 56'. | | | | (*)+2° 37'. | | | |
| 13 | . . . 27.70 | | | Dec. 15 | . . . 0 11 51.23 | 5.5 | | Dec. 19 | . . . 0 19 53.03 | 6.5 | | Dec. 15 | . . . 0 28 50.43 | | |
| B. A. C. 17, -5° 55'. | | | | LANLANDE 330, +36° 17'. | | | | 26 | . . . 52.88 | | | LANLANDE 863, +35° 53'. | | | |
| Dec. 16 | . . . 0 3 57.86 | | | Dec. 15 | . . . 0 13 17.30 | | | α PHENICIS, -42° 58'. | | | | Dec. 12 | . . . 0 28 56.40 | 7.5 | |
| (*)+4° 23'. | | | | LANLANDE 335, +37° 31'. | | | | Dec. 13 | . . . 0 20 8.97 | | | (*)+2° 39'. | | | |
| Oct. 18 | . . . 0 4 28.90 | 8.5 | | Oct. 31 | . . . 0 13 31.43 | 6.5 | | 48 PISCUM, +15° 46'. | | | | Nov. 1 | . . . 0 29 15.21 | 8.0 | |
| Nov. 1 | . . . 28.91 | 7.5 | | Dec. 5 | . . . 31.20 | 7.0 | | Dec. 15 | . . . 0 21 46.33 | | | 22 | . . . 15.28 | | |
| θ SCULPTORIS, -35° 49'. | | | | LACAILLE 48, -24° 20'. | | | | 21 | . . . 46.23 | | | Dec. 15 | . . . 15.22 | | |
| Dec. 26 | . . . 0 5 25.56 | | | Nov. 22 | . . . 0 14 33.23 | 6.5 | | (*)+15° 22'. | | | | LANLANDE 884, +37° 34'. | | | |
| WEISSE 89, +6° 13'. | | | | Dec. 12 | . . . 33.04 | 7.0 | | Dec. 12 | . . . 0 22 38.99 | | | Dec. 19 | . . . 0 29 26.78 | | |
| Oct. 31 | . . . 0 6 39.91 | 8.5 | | LANLANDE 380, +37° 42'. | | | | B. A. C. 105, +76° 18'. | | | | B. A. C. 154, +81° 47'. | | | |
| γ PEGASI, +14° 30'. | | | | Oct. 18 | . . . 0 14 38.20 | | | Oct. 18 | . . . 0 22 60.00 | 6.0 | | Oct. 18 | . . . 0 30 29.18 | | |
| Sept. 26 | . . . 0 6 51.08 | | | LANLANDE 383, +35° 11'. | | | | Nov. 7 | . . . 59.40 | | | 31 | . . . 29.40 | 6.0 | |
| Nov. 7 | . . . 51.07 | | | Dec. 1 | . . . 0 14 39.07 | | | 22 | . . . 59.96 | | | Nov. 7 | . . . 29.09 | | |
| Dec. 1 | . . . 51.07 | | | WEISSE 245, +5° 10'. | | | | Dec. 1 | . . . 60.06 | | | LANLANDE 1003, +36° 6'. | | | |
| 5 | . . . 51.24 | | | Nov. 1 | . . . 0 15 29.02 | 8.2 | | B. A. C. 115, -24° 28'. | | | | Dec. 7 | . . . 0 32 55.12 | 8.0 | |
| 12 | . . . 51.11 | | | 7 | . . . 29.04 | 8.3 | | Dec. 7 | . . . 0 24 10.51 | 5.5 | | B. A. C. 175, +65° 27'. | | | |
| 13 | . . . 51.10 | | | LANLANDE 409, +37° 4'. | | | | 49 PISCUM, +15° 21'. | | | | Nov. 22 | . . . 0 34 41.08 | 5.5 | |
| 15 | . . . 51.15 | | | Dec. 7 | . . . 0 15 45.17 | | | Dec. 12 | . . . 0 24 20.78 | 7.0 | | Dec. 16 | . . . 41.03 | | |
| 16 | . . . 51.14 | | | 13 | . . . 44.90 | | | 19 | . . . 20.85 | | | WEISSE 583, +2° 55'. | | | |
| 19 | . . . 51.10 | | | 19 | . . . 44.95 | | | GROOMBRIDGE 73, +42° 40'. | | | | Dec. 13 | . . . 0 34 58.51 | 7.5 | |
| 21 | . . . 51.08 | | | 9 CETI, -12° 53'. | | | | Nov. 1 | . . . 0 24 22.73 | 8.0 | | WEISSE 588, +2° 53'. | | | |
| WEISSE 97, +6° 13'. | | | | Dec. 15 | . . . 0 16 30.29 | 6.5 | | Dec. 15 | . . . 22.84 | | | Dec. 13 | . . . 0 35 23.53 | 8.6 | |
| Oct. 18 | . . . 0 7 21.48 | 8.2 | | 2 | . . . (30.51) | | | 16 | . . . 22.76 | 7.0 | | 19 | . . . 23.49 | 9.0 | |
| 31 | . . . 21.48 | 8.2 | | O. ARG. S. 160, -24° 5'. | | | | B. A. C. 122, +15° 20'. | | | | (*)+1° 4'. | | | |
| Nov. 1 | . . . 21.52 | 8.2 | | Dec. 12 | . . . 0 17 58.73 | | | Dec. 12 | . . . 0 25 9.30 | 7.0 | | Oct. 31 | . . . 0 35 32.01 | 9.0 | |
| LANLANDE 181, +37° 22'. | | | | (*)+42° 44'. | | | | (*)+42° 44'. | | | | Nov. 1 | . . . 32.19 | 8.5 | |
| Nov. 22 | . . . 0 8 36.68 | | | | | | | Dec. 16 | . . . 0 25 46.00 | 6.0 | | | | | |

| | | | | | | | | | | | | | | | |
|------------------------------|----------|------------|-----|-----------------------------|----------|------------|-----|--------------------------|----------|------------|-----|-------------------------|----------|------------|-----|
| (*)+4° 3'. | | | | ϕ^3 CETI, -11° 55'. | | | | WEISSE 1078, +8° 43'. | | | | B. A. C. 466, -37° 31'. | | | |
| 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | |
| Dec. 5 | . . . | 0 35 56.72 | 9.0 | Dec. 7 | . . . | 0 49 48.35 | 5.5 | Oct. 31 | . . . | 1 1 58.39 | 9.0 | Nov. 7 | . . . | 1 27 23.10 | 5.0 |
| | | | | 15 | . . . | 48.21 | 5.5 | | | | | Dec. 16 | . . . | (22.53) | |
| β CETI, -18° 40'. | | | | B. A. C. 263, +26° 20'. | | | | 34 CETI, -2° 56'. | | | | 21 | . . . | 23.10 | |
| Oct. 18 | . . . | 0 37 21.92 | | Dec. 16 | . . . | 0 50 34.72 | | Oct. 31 | . . . | 1 5 24.92 | | LALANDE 2942, -18° 9'. | | | |
| Nov. 1 | . . . | 21.91 | | | | | | Nov. 1 | . . . | 25.17 | | Dec. 15 | . . . | 1 29 50.33 | 7.0 |
| 29 | . . . | 21.84 | | LALANDE 1627, +36° 30'. | | | | Dec. 19 | . . . | 25.09 | | 105 PISCUM, +15° 47'. | | | |
| Dec. 27 | . . . | 21.89 | | Dec. 27 | . . . | 0 51 11.96 | 7.5 | 21 | . . . | 25.23 | | Dec. 16 | . . . | 1 32 59.62 | |
| 58 PISCUM, +11° 17'. | | | | (*)+1° 50'. | | | | B. A. C. 366-35° 52'. | | | | WEISSE 557, +14° 36'. | | | |
| Dec. 7 | . . . | 0 40 33.48 | | Dec. 13 | . . . | 0 51 36.22 | 8.0 | Dec. 6 | . . . | 1 7 0.86 | | Nov. 1 | . . . | 1 33 15.16 | |
| WEISSE 694, +2° 20'. | | | | (*)+1° 55'. | | | | 13 | . . . | 0.81 | | Dec. 7 | . . . | 15.19 | |
| Oct. 31 | . . . | 0 41 16.30 | 8.5 | Nov. 1 | . . . | 0 52 1.32 | 9.0 | 15 | . . . | 0.54 | | 12 | . . . | 15.25 | 8.3 |
| ν CASSIOPEÆ, +50° 18'. | | | | (*)+1° 56'. | | | | WEISSE 89, +0° 49'. | | | | WEISSE 558, +14° 36'. | | | |
| Dec. 16 | . . . | 0 41 48.94 | 5.0 | Dec. 13 | . . . | 0 52 8.39 | 9.5 | Nov. 1 | . . . | 1 7 48.27 | 8.5 | Nov. 1 | . . . | 1 33 15.82 | |
| (*)+40° 24'. | | | | ϕ^4 CETI, -12° 3'. | | | | Dec. 7 | . . . | 48.24 | | Dec. 7 | . . . | 15.83 | |
| Dec. 27 | . . . | 0 42 26.66 | | Oct. 31 | . . . | 0 52 31.17 | | Dec. 19 | . . . | 19.09 | 8.0 | 12 | . . . | 15.73 | 8.0 |
| ν ANDROMEDÆ, +40° 24'. | | | | Nov. 29 | . . . | 31.12 | | (*)+5° 57'. | | | | (*)+13° 50'. | | | |
| Dec. 27 | . . . | 0 42 58.59 | | RUMKER, N. F., 451+3° 18'. | | | | Dec. 7 | . . . | 1 11 9.04 | | Dec. 13 | . . . | 1 33 34.22 | 8.5 |
| O. ARG. S. 443, -24° 1'. | | | | Nov. 7 | . . . | 0 53 15.14 | 8.5 | (*)+5° 57'. | | | | 15 | . . . | 34.24 | 8.5 |
| Nov. 1 | . . . | 0 43 15.11 | | B. A. C. 274, +5° 48'. | | | | Dec. 7 | . . . | 1 13 22.46 | | 19 | . . . | 34.35 | |
| Dec. 15 | . . . | 15.13 | 8.0 | Dec. 5 | . . . | 0 53 24.13 | | (*)+5° 58'. | | | | (*)+13° 53'. | | | |
| 19 | . . . | 15.38 | 8.5 | 7 | . . . | 24.08 | 6.0 | Dec. 27 | . . . | 1 14 14.69 | 8.0 | Dec. 13 | . . . | 1 33 42.79 | |
| 21 | . . . | 15.28 | 8.5 | ϵ PISCUM, +7° 13'. | | | | (*)+38° 24'. | | | | B. A. C. 514, +29° 26'. | | | |
| B. A. C. 225, +83° 0'. | | | | Oct. 3 | . . . | 0 56 30.46 | | Dec. 7 | . . . | 1 17 18.83 | 7.5 | Dec. 21 | . . . | 1 34 38.87 | 6.0 |
| Nov. 7 | . . . | 0 43 24.79 | 5.5 | Dec. 6 | . . . | 30.36 | | (*)+38° 22'. | | | | 109 PISCUM, +19° 28'. | | | |
| 22 | . . . | 24.96 | | 27 | . . . | 30.57 | | Dec. 7 | . . . | 1 17 23.73 | 7.0 | Dec. 16 | . . . | 1 38 9.62 | |
| Dec. 5 | . . . | 24.13 | | WEISSE 972, +9° 25'. | | | | B. A. C. 424, -32° 28'. | | | | τ CETI, -16° 38'. | | | |
| 12 | . . . | 24.37 | | Nov. 1 | . . . | 0 56 35.11 | 9.0 | Dec. 15 | . . . | 1 18 25.43 | 6.0 | Dec. 6 | . . . | 1 38 18.15 | 5.5 |
| O. ARG. S. 447-24° 3'. | | | | Dec. 13 | . . . | 35.18 | | 19 | . . . | 25.66 | 6.5 | 12 | . . . | 18.12 | 5.5 |
| Nov. 1 | . . . | 0 43 27.97 | 5.5 | 15 | . . . | 34.98 | | 27 | . . . | 25.70 | 7.0 | ϕ PISCUM, +8° 32'. | | | |
| Dec. 15 | . . . | 26.90 | 7.0 | 25 CETI, -5° 29'. | | | | (*)-13° 51'. | | | | Nov. 1 | . . . | 1 38 50.88 | |
| LALANDE 1443, +37° 52'. | | | | Dec. 16 | . . . | 0 56 46.14 | | Dec. 16 | . . . | 1 22 7.86 | | Dec. 7 | . . . | 50.83 | |
| Dec. 13 | . . . | 0 46 3.99 | 6.0 | 21 | . . . | 46.29 | | (*)-37° 31'. | | | | 13 | . . . | 50.88 | |
| 16 | . . . | 4.35 | | WEISSE 980, +9° 25'. | | | | Dec. 15 | . . . | 1 23 14.23 | 6.5 | 15 | . . . | 50.73 | |
| WEISSE (2) 1167, +29° 40'. | | | | Nov. 1 | . . . | 0 57 4.98 | 8.3 | B. A. C. 424, -32° 28'. | | | | 19 | . . . | 50.82 | |
| Dec. 7 | . . . | 0 46 25.92 | | 7 | . . . | 4.98 | 8.7 | (*)+15° 3'. | | | | 21 | . . . | 50.87 | |
| WEISSE (2) 1172, +36° 44'. | | | | Dec. 13 | . . . | 4.80 | 8.5 | η PISCUM, +14° 43'. | | | | (*)+7° 57'. | | | |
| Oct. 31 | . . . | 0 46 39.83 | 6.5 | 15 | . . . | 4.96 | | Sept. 26 | . . . | 1 24 50.94 | | Nov. 7 | . . . | 1 39 11.17 | |
| WEISSE 808, +6° 36'. | | | | μ CASSIOPEÆ, +54° 18'. | | | | Oct. 31 | . . . | 50.98 | | SANTINI 102, +7° 5'. | | | |
| Dec. 19 | . . . | 0 47 24.02 | | Nov. 4 | . . . | 1 0 2.80 | | Nov. 22 | . . . | 50.97 | | Dec. 12 | . . . | 1 42 9.84 | |
| LALANDE 1504, +38° 30'. | | | | LACAILLE 303, -24° 40'. | | | | Dec. 1 | . . . | 50.97 | | 1 ARIETIS, +21° 40'. | | | |
| Dec. 12 | . . . | 0 47 47.11 | 8.3 | Dec. 13 | . . . | 1 0 7.14 | 6.5 | (*)+15° 3'. | | | | Dec. 13 | . . . | 1 43 17.58 | 6.0 |
| 27 | . . . | 46.98 | | 15 | . . . | 6.98 | 7.0 | Nov. 1 | . . . | 1 26 24.85 | 9.0 | 15 | . . . | 17.66 | |
| (*)+38° 30'. | | | | 16 | . . . | 6.93 | 6.0 | Dec. 12 | . . . | 24.70 | 8.3 | WEISSE 753, -11° 18'. | | | |
| Dec. 12 | . . . | 0 47 47.20 | 8.0 | 21 | . . . | 7.36 | 7.0 | (*)+15° 3'. | | | | Dec. 27 | . . . | 1 43 18.02 | |
| (*)+1° 36'. | | | | LACAILLE 310, -24° 39'. | | | | Dec. 13 | . . . | 1 27 12.66 | | χ CETI, -11° 16'. | | | |
| Nov. 7 | . . . | 0 49 7.55 | 9.0 | Dec. 15 | . . . | 1 1 11.53 | 6.0 | WEISSE (2) 575, +15° 5'. | | | | Dec. 27 | . . . | 1 43 29.76 | 6.0 |
| γ CASSIOPEÆ, +60° 2'. | | | | 16 | . . . | 11.42 | 6.0 | Dec. 12 | . . . | 1 27 21.69 | 8.3 | | | | |
| Dec. 6 | . . . | 0 49 14.51 | | 21 | . . . | 11.86 | | | | | | | | | |

[illegible]

| | | | | | | | | | | | | | | | |
|-------------------------|-------|------|-------|----------------------------|-------|------|-------|---------------------------|-------|------|-------|---------------------------|-------|------|-------|
| B. A. C. 905, +7° 54'. | | | | (*)+38° 28'. | | | | WEISSE (2) 464, +37° 6'. | | | | LALANDE 6820, +36° 4'. | | | |
| 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. |
| Dec. 13 | . | 2 49 | 35.85 | Jan. 20 | . | 3 5 | 4.16 | Jan. 14 | . | 3 24 | 1.14 | Feb. 4 | . | 3 36 | 30.09 |
| 27 | . | | 35.95 | | | | | 20 | . | | 1.24 | | | | 5.5 |
| | | | | | | | | 25 | . | | 1.40 | | | | |
| B. A. C. 896, +78° 55'. | | | | WEISSE (2) 58, +38° 30'. | | | | LACAILLE 1114, -22° 56'. | | | | o PERSEI, +31° 54'. | | | |
| Jan. 20 | . | 2 49 | 41.09 | Jan. 20 | . | 3 5 | 8.26 | Jan. 31 | . | 3 24 | 22.36 | Jan. 28 | . | 3 36 | 32.54 |
| 24 | . | | 40.74 | | | | | | | | 7.3 | | | | |
| 26 | . | | 40.55 | WEISSE (2) 67, +38° 30'. | | | | WEISSE 456, -9° 2'. | | | | WEISSE (2) 776, +44° 57'. | | | |
| Dec. 5 | . | | 41.15 | Jan. 20 | . | 3 5 | 25.38 | Feb. 4 | . | 3 26 | 23.43 | Jan. 11 | . | 3 36 | 55.12 |
| RUMKER 755, +15° 30'. | | | | | | | | | | | 7.5 | | | | 8.0 |
| Dec. 6 | . | 2 51 | 21.87 | (*)+38° 28'. | | | | LACAILLE 1124, -26° 2'. | | | | γ CAMELOPARDI, +70° 54'. | | | |
| | | | | Jan. 20 | . | 3 5 | 48.35 | Jan. 28 | . | 3 26 | 35.79 | Jan. 25 | . | 3 37 | 17.72 |
| (*)+38° 26'. | | | | | | | | | | | | 26 | . | | 17.88 |
| Dec. 27 | . | 2 53 | 59.21 | LALANDE 5997, -18° 4'. | | | | 7 TAURI, +24° 4'. | | | | 31 | . | | 17.93 |
| | | | 6.5 | Dec. 6 | . | 3 7 | 27.24 | Dec. 6 | . | 3 27 | 6.06 | 18 TAURI, +24° 27'. | | | |
| B. A. C. 940, -25° 44'. | | | | 13 | . | | 27.33 | 27 | . | | 6.08 | Dec. 13 | . | 3 37 | 46.01 |
| Jan. 26 | . | 2 54 | 8.62 | | | | | | | | | 27 | . | | 45.85 |
| B. A. C. 944, -32° 58'. | | | | (*)-18° 5'. | | | | O. ARG. S. 2343, -26° 5'. | | | | 19 TAURI, +24° 8'. | | | |
| Dec. 13 | . | 2 54 | 31.18 | Jan. 14 | . | 3 7 | 45.15 | Jan. 11 | . | 3 27 | 9.13 | Jan. 20 | . | 3 37 | 49.76 |
| | | | 6.5 | | | | | 20 | . | | 9.32 | 24 | . | | 49.86 |
| α CETI, +3° 36'. | | | | ζ ARIETIS, +20° 35'. | | | | (*)+31° 36'. | | | | LACAILLE 1196, -31° 24'. | | | |
| Jan. 11 | . | 2 55 | 47.95 | Jan. 24 | . | 3 7 | 46.50 | Jan. 14 | . | 3 27 | 17.63 | Jan. 14 | . | 3 38 | 11.23 |
| 14 | . | | 47.99 | 25 | . | | 46.53 | | | | | Feb. 8 | . | | 11.17 |
| 25 | . | | 47.94 | 26 | . | | 46.49 | | | | | | | | 7.2 |
| 31 | . | | 47.98 | 31 | . | | 46.54 | (*)+31° 17'. | | | | | | | 7.5 |
| Dec. 5 | . | | 47.95 | Dec. 15 | . | | 46.57 | Jan. 24 | . | 3 27 | 39.32 | 21 TAURI, +24° 9'. | | | |
| 6 | . | | 47.80 | 27 | . | | 46.55 | | | | | Jan. 20 | . | 3 38 | 31.40 |
| ρ PERSEI, +38° 23'. | | | | B. A. C. 1005, -30° 17'. | | | | B. A. C. 1101, +31° 17'. | | | | 24 | . | | 31.34 |
| Dec. 27 | . | 2 57 | 13.93 | Jan. 10 | . | 3 8 | 27.40 | Jan. 24 | . | 3 27 | 55.25 | | | | 6.0 |
| | | | 4.5 | 11 | . | | 27.35 | | | | | 22 TAURI, +24° 8'. | | | |
| LALANDE 5682, +38° 7'. | | | | ι PERSEI, +42° 52'. | | | | (*)+46° 50'. | | | | Jan. 20 | . | 3 38 | 39.78 |
| Jan. 26 | . | 2 58 | 40.06 | Jan. 26 | . | 3 13 | 8.55 | Jan. 25 | . | 3 28 | 1.40 | 24 | . | | 39.60 |
| | | | 8.0 | 31 | . | | 8.54 | 26 | . | | 1.47 | | | | 7.0 |
| (*)+26° 14'. | | | | Dec. 6 | . | | 8.70 | (*)+46° 50'. | | | | WEISSE (2) 847, +44° 57'. | | | |
| Dec. 13 | . | 2 59 | 19.72 | 13 | . | | 8.67 | Jan. 25 | . | 3 28 | 21.04 | Jan. 11 | . | 3 39 | 25.59 |
| | | | 7.2 | | | | | 26 | . | | 21.30 | | | | |
| ι PERSEI, +49° 7'. | | | | Dec. 6 | . | 3 17 | 17.32 | LACAILLE 1134, -31° 3'. | | | | B. A. C. 1163, +24° 8'. | | | |
| Jan. 11 | . | 3 0 | 7.71 | | | | | Jan. 31 | . | 3 28 | 51.66 | Jan. 20 | . | 3 39 | 36.14 |
| 14 | . | | 7.52 | O. ARG. S. 2237, -17° 53'. | | | | | | | 7.0 | 24 | . | | 36.21 |
| 20 | . | | 7.62 | Jan. 26 | . | 3 17 | 36.89 | B. A. C. 1105, +42° 12'. | | | | | | | 7.0 |
| 24 | . | | 7.77 | | | | | Dec. 13 | . | 3 29 | 37.45 | 24 TAURI, +23° 43'. | | | |
| B. A. C. 975, +8° 0'. | | | | 66 ARIETIS, +22° 24'. | | | | | | | 6.8 | Dec. 6 | . | 3 39 | 59.01 |
| Dec. 6 | . | 3 2 | 0.42 | Dec. 6 | . | 3 21 | 11.77 | 10 TAURI, 0° 0'. | | | | A 20 PLEIADUM, +24° 12'. | | | |
| | | | 6.5 | LACAILLE 1102, -29° 0'. | | | | Feb. 4 | . | 3 30 | 32.77 | Jan. 20 | . | 3 40 | 0.51 |
| B. A. C. 978, -28° 18'. | | | | Jan. 31 | . | 3 21 | 33.64 | B. A. C. 1111, +62° 49'. | | | | η TAURI, +23° 43'. | | | |
| Jan. 31 | . | 3 2 | 32.92 | | | | | Jan. 28 | . | 3 31 | 23.93 | Feb. 4 | . | 3 40 | 6.87 |
| LALANDE 5834, +37° 36'. | | | | RUMKER 870, +18° 19'. | | | | | | | | 8 | . | | 6.90 |
| Jan. 26 | . | 3 3 | 28.55 | Jan. 26 | . | 3 22 | 42.71 | WEISSE (2) 657, +33° 35'. | | | | 10 | . | | 6.92 |
| Dec. 15 | . | | 28.77 | | | | | Dec. 27 | . | 3 32 | 16.63 | Dec. 6 | . | | 6.96 |
| (*)+37° 39'. | | | | (*)+5° 26'. | | | | | | | | 13 | . | | 7.12 |
| Jan. 26 | . | 3 3 | 32.41 | Jan. 11 | . | 3 22 | 53.82 | B. A. C. 1123, +37° 12'. | | | | 27 | . | | 6.99 |
| | | | 8.0 | | | | | Dec. 13 | . | 3 33 | 3.78 | WEISSE (2) 882, +44° 34'. | | | |
| WEISSE 26, +9° 30'. | | | | WEISSE (2) 461, +37° 4'. | | | | B. A. C. 1130, -28° 18'. | | | | Jan. 31 | . | 3 41 | 26.94 |
| Dec. 13 | . | 3 4 | 6.98 | Jan. 14 | . | 3 23 | 54.78 | Jan. 24 | . | 3 33 | 38.29 | 27 TAURI, +23° 44'. | | | |
| | | | 6.5 | 20 | . | | 54.89 | | | | | Jan. 26 | . | 3 41 | 47.40 |
| | | | | 25 | . | | 55.13 | | | | | | | | 5.5 |

| | | | | | | | | | | | | | | | |
|-----------------------------------|-------|---------|------|---------------------------------|-------|-------|------|----------------------------------|-------|-------|------|----------------------------------|-------|-------|------|
| 28 TAURI, +23° 50'. | | | | WEISSE (2) 1143, +34° 59'. | | | | (*)+44° 28'. | | | | 70 TAURI, +15° 39'. | | | |
| 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. |
| Jan. 26 | 3 41 | 48.68 | 6.5 | Jan. 11 | 3 54 | 39.78 | | Jan. 14 | 4 6 | 23.79 | 9.0 | Dec. 13 | 4 17 | 32.63 | 6.8 |
| | | | | 14 | | 39.73 | | | | | | | | | |
| | | | | 20 | | 39.67 | 8.0 | | | | | | | | |
| | | | | 24 | | 39.78 | | | | | | | | | |
| | | | | 25 | | 39.77 | | | | | | | | | |
| RADCLIFFE 1084, +40° 25'. | | | | (*)+35° 2'. | | | | (*)+44° 28'. | | | | (*)+6° 32'. | | | |
| Feb. 8 | 3 43 | 44.36 | 7.5 | | | | | Jan. 14 | 4 6 | 27.49 | 8.0 | Jan. 31 | 4 17 | 41.77 | |
| 10 | | 44.45 | 8.0 | | | | | 25 | | 27.75 | | Feb. 10 | | 41.88 | |
| (*)-19° 7'. | | | | Jan. 25 | 3 54 | 55.91 | | (*)-31° 35'. | | | | (*)-25° 40'. | | | |
| Feb. 4 | 3 44 | 40.65 | | | | | | Jan. 25 | 4 8 | 23.48 | | Feb. 4 | 4 18 | 10.66 | |
| GROOMBRIDGE 745, +75° 49'. | | | | LACAILLE 1326, -34° 49'. | | | | 31 | | 23.00 | 7.5 | 8 | | 10.56 | 7.8 |
| Jan. 14 | 3 45 | 21.53 | 8.0 | Jan. 31 | 3 57 | 17.70 | 7.0 | | | | | (*)-20° 31'. | | | |
| 20 | | 21.71 | | | | | | B. A. C. 1300, +64° 50'. | | | | Feb. 17 | 4 18 | 11.40 | 8.0 |
| B. A. C. 1205, -1° 30'. | | | | A ¹ TAURI, +21° 44'. | | | | Feb. 4 | 4 9 | 1.15 | | (*)+17° 9'. | | | |
| Dec. 13 | 3 45 | 50.91 | 6.0 | Jan. 26 | 3 57 | 21.96 | 5.5 | 8 | | 1.37 | 6.0 | Jan. 26 | 4 18 | 45.01 | 7.5 |
| 27 | | 51.03 | 7.0 | 28 | | 21.93 | | 10 | | 1.26 | | Feb. 16 | | 44.97 | 7.7 |
| RUMKER 1023, +16° 15'. | | | | Dec. 13 | | 22.03 | 5.5 | WEISSE (2) 137, +44° 24'. | | | | LALANDE 8431, -11° 24'. | | | |
| Jan. 31 | 3 47 | 23.71 | 7.0 | A ² TAURI, +21° 41'. | | | | Feb. 17 | 4 9 | 32.24 | | Feb. 4 | 4 21 | 56.68 | |
| GROOMBRIDGE 748, +75° 47'. | | | | Jan. 26 | 3 57 | 59.97 | 7.0 | o ² ERIDANI, -7° 50'. | | | | ε TAURI, +18° 54'. | | | |
| Jan. 14 | 3 48 | 2.92 | 8.5 | Feb. 8 | 3 58 | 23.11 | 6.5 | Jan. 20 | 4 9 | 33.93 | | Jan. 25 | 4 21 | 22.74 | |
| 20 | | 3.50 | | 10 | | 23.23 | | 26 | | 33.87 | | Dec. 13 | | 22.62 | |
| τ ⁸ ERIDANI, -24° 58'. | | | | c PERSEI, +47° 23'. | | | | B. A. C. 1307, +49° 44'. | | | | θ ¹ TAURI, +15° 40'. | | | |
| Feb. 4 | 3 48 | 26.23 | 5.0 | Feb. 4 | 3 59 | 39.79 | 5.0 | Dec. 13 | 4 9 | 55.24 | | Feb. 10 | 4 21 | 29.58 | 5.5 |
| 8 | | 26.04 | | WEISSE (2) 1251, +41° 8'. | | | | O. ARG. S. 2939, -22° 27'. | | | | WEISSE (2) 458, +27° 52'. | | | |
| GROOMBRIDGE 751, +75° 47'. | | | | Jan. 14 | 3 59 | 50.71 | 8.0 | Feb. 16 | 4 10 | 31.47 | 7.0 | Jan. 31 | 4 22 | 36.79 | 7.0 |
| Jan. 14 | 3 48 | 36.61 | 8.5 | 24 | | 50.82 | 8.0 | WEISSE (2) 203, +17° 30'. | | | | LACAILLE 1463, -32° 41'. | | | |
| 20 | | 36.72 | | 25 | | 50.60 | | Jan. 11 | 4 11 | 29.70 | 8.0 | Jan. 11 | 4 22 | 55.93 | 6.5 |
| WEISSE (2) 1030, +35° 35'. | | | | WEISSE (2) 1269, +41° 9'. | | | | 31 | | 29.79 | 8.0 | 14 | | 56.02 | 6.5 |
| Jan. 24 | 3 48 | 41.21 | 8.0 | Jan. 14 | 4 0 | 28.20 | 7.7 | WEISSE (2) 204, +17° 30'. | | | | 20 | | 56.13 | |
| 25 | | (41.49) | | 24 | | 28.40 | 7.5 | Jan. 11 | 4 11 | 30.19 | 9.0 | (*)-32° 43'. | | | |
| LALANDE 723ε, +22° 46'. | | | | 25 | | 28.30 | | γ TAURI, +15° 20'. | | | | Jan. 14 | 4 23 | 52.44 | 7.0 |
| Feb. 10 | 3 49 | 7.12 | 8.2 | O. ARG. S. 2803, -23° 36'. | | | | Jan. 24 | 4 12 | 44.43 | | 20 | | 52.64 | |
| B. A. C. 1211, +80° 21'. | | | | Jan. 11 | 4 0 | 52.75 | 8.2 | Feb. 16 | | 44.24 | | WEISSE (2) 506, +35° 35'. | | | |
| Jan. 28 | 3 49 | 20.15 | | B. A. C. 1272, +17° 0'. | | | | 17 | | 44.27 | | Jan. 24 | 4 24 | 51.55 | |
| (*)+35° 35'. | | | | Feb. 10 | 4 0 | 53.44 | 6.0 | ½ TAURI, +13° 43'. | | | | LACAILLE 1483, -23° 17'. | | | |
| Jan. 25 | 3 49 | 36.03 | | 16 | | 53.43 | | Feb. 10 | 4 12 | 58.75 | | Feb. 10 | 4 25 | 17.89 | 6.0 |
| 33 TAURI, +22° 47'. | | | | ω ¹ TAURI, +19° 16'. | | | | 58 TAURI, +14° 48'. | | | | B. A. C. 1404, -30° 43'. | | | |
| Feb. 10 | 3 49 | 42.74 | 7.5 | Jan. 26 | 4 1 | 56.59 | | Feb. 8 | 4 13 | 34.41 | 5.0 | Jan. 31 | 4 25 | 34.18 | |
| ξ PERSEI, +35° 26'. | | | | 31 | | 56.62 | | 55 PERSEI, +33° 50'. | | | | B. A. C. 1399, +80° 22'. | | | |
| Dec. 13 | 3 50 | 55.34 | 5.0 | B. A. C. 1282, +48° 46'. | | | | Jan. 20 | 4 16 | 26.49 | 5.5 | Jan. 26 | 4 27 | 24.14 | |
| γ ERIDANI, -13° 52'. | | | | Feb. 4 | 4 4 | 31.53 | 7.0 | (*)+6° 32'. | | | | 4 | | 23.46 | |
| Jan. 26 | 3 52 | 14.69 | | 8 | | 31.67 | 7.0 | Feb. 10 | 4 16 | 29.87 | | 8 | | 24.31 | |
| 31 | | 14.63 | | 13 | | 31.74 | | 56 PERSEI, +33° 40'. | | | | v ⁶ ERIDANI, -30° 0'. | | | |
| Feb. 4 | | 14.71 | | RUMKER 1110, +16° 57'. | | | | Jan. 20 | 4 16 | 35.18 | 6.5 | Feb. 10 | 4 28 | 38.64 | 5.0 |
| 8 | | 14.67 | | Feb. 10 | 4 5 | 24.85 | 6.5 | 26 | | 35.15 | | 17 | | 38.70 | |
| 10 | | 14.65 | | 16 | | 24.68 | 6.0 | WEISSE (2) 333, +36° 59'. | | | | (*)+27° 0'. | | | |
| 16 | | 14.74 | | LALANDE 7773, +44° 28'. | | | | Jan. 14 | 4 17 | 16.03 | 8.0 | Jan. 11 | 4 29 | 4.82 | 8.5 |
| Dec. 27 | | 14.66 | | Jan. 14 | 4 5 | 26.92 | 8.0 | 24 | | 16.20 | | 14 | | 4.79 | 9.0 |
| (*)+35° 0'. | | | | μ PERSEI, +48° 5'. | | | | | | | | | | | |
| Jan. 20 | 3 53 | 54.80 | 9.0 | Feb. 17 | 4 5 | 47.88 | | | | | | | | | |
| 24 | | 54.85 | | | | | | | | | | | | | |

| B. A. C. 1427, -3° 52'. | | | | (*)+1° 17'. | | | | (*)+45° 0'. | | | | (*)+30° 21'. | | | | | | | | | | | | | | | | |
|---------------------------------|-------|-------|-------|----------------------------------|---------|-------|-------|-----------------------|--------------------------|---------------------------|---------------------|-----------------------------|--------------------------|---------------------|---------------------|-------------------------|-------------------------|-------|---------|---------|---------|-------|-------|-----|-------|-------|-------|--|
| 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | | | | | | | | | | | | | |
| Jan. 31 | 4 | 29 | 50.56 | 6.0 | Feb. 22 | 4 | 41 | 59.76 | 8.2 | Feb. 8 | 4 | 56 | 17.83 | Jan. 20 | 5 | 7 | 57.52 | 7.3 | | | | | | | | | | |
| (*)+15° 46'. | | | | (*)-29° 59'. | | | | (*)+45° 19'. | | | | Feb. 24 | | | | 57.46 | | | | | | | | | | | | |
| Feb. 4 | 4 | 31 | 3.48 | Jan. 25 | 4 | 42 | 10.75 | 8.2 | Feb. 10 | 4 | 57 | 9.90 | 8.6 | Feb. 25 | | 57.54 | | | | | | | | | | | | |
| σ ² TAURI, +15° 40'. | | | | π ¹ ORIONIS, +6° 44'. | | | | 11 ORIONIS, +15° 14'. | | | | Feb. 4 | | | | 57.30 | | | | | | | | | | | | |
| Feb. 4 | 4 | 32 | 10.92 | Jan. 11 | 4 | 43 | 6.40 | 4.0 | Jan. 11 | 4 | 57 | 29.05 | β ORIONIS, -8° 21'. | | | | | | | | | | | | | | | |
| (*)+33° 31'. | | | | WEISSE 925, +1° 19'. | | | | Jan. 14 | | | | 29.05 | Feb. 5 | | | | 5 | 8 | 34.75 | | | | | | | | | |
| Jan. 20 | 4 | 33 | 1.58 | 9.0 | Feb. 22 | 4 | 44 | 4.29 | 7.7 | 20 | 29.03 | (*)+30° 16'. | | | | | | | | | | | | | | | | |
| 26 | | 1.72 | 8.5 | Feb. 22 | 4 | 44 | 4.29 | 7.7 | 24 | 29.04 | Jan. 11 | | | | 5 | 8 | 50.84 | 8.0 | | | | | | | | | | |
| LACAILLE 1540, -25° 57'. | | | | LACAILLE 1611, -35° 19'. | | | | Feb. 31 | | | | 29.08 | (*)+30° 15'. | | | | | | | | | | | | | | | |
| Feb. 8 | 4 | 33 | 49.74 | 6.5 | Jan. 31 | 4 | 44 | 38.61 | 7.0 | 2 | 29.10 | Feb. 16 | | | | 5 | 10 | 32.65 | | | | | | | | | | |
| 10 | | 49.80 | 7.0 | (*)+14° 3'. | | | | (*)+44° 33'. | | | | B. A. C. 1641, -35° 3'. | | | | | | | | | | | | | | | | |
| 17 | | 49.81 | 8.0 | Jan. 25 | 4 | 45 | 31.32 | 5.5 | Jan. 25 | 4 | 57 | 37.48 | Jan. 20 | | | | 5 | 11 | 19.76 | 6.0 | | | | | | | | |
| (*)+38° 11'. | | | | 26 | | 31.16 | | | (*)+45° 6'. | | | | 25 | | | | | 20.08 | | | | | | | | | | |
| Jan. 11 | 4 | 34 | 13.08 | (*)+44° 9'. | | | | Feb. 4 | | | | 4 | 58 | 29.26 | 7.5 | 31 | | 19.80 | | | | | | | | | | |
| 14 | | 12.99 | | Feb. 10 | 4 | 45 | 38.82 | 8.5 | 8 | | 29.15 | Feb. 10 | | | | | 19.79 | | | | | | | | | | | |
| (*)+38° 9'. | | | | Oct. 24 | | 39.01 | | | (*)-23° 48'. | | | | B. A. C. 1619, +77° 51'. | | | | | | | | | | | | | | | |
| Jan. 11 | 4 | 34 | 24.29 | LALANDE 9106, +43° 54'. | | | | Jan. 31 | | | | 5 | 0 | 17.69 | 8.0 | Feb. 2 | | | | 5 | 10 | 21.62 | | | | | | |
| 14 | | 24.12 | | Feb. 8 | 4 | 45 | 57.47 | 6.0 | Feb. 16 | | 17.76 | 8.5 | LACAILLE 1787, -31° 24'. | | | | | | | | | | | | | | | |
| WEISSE 727, +2° 15'. | | | | (*)+43° 54'. | | | | Feb. 2 | | | | 5 | 1 | 38.65 | Feb. 17 | | | | 5 | 12 | 18.15 | | | | | | | |
| Jan. 24 | 4 | 34 | 30.32 | 8.0 | Jan. 20 | 4 | 46 | 31.72 | 9.0 | RADCLIFFE 1377, +85° 35'. | | | | o COLUMBÆ, -35° 1'. | | | | | | | | | | | | | | |
| 31 | | 30.18 | 8.0 | B. A. C. 1518, +24° 24'. | | | | Jan. 26 | | | | 5 | 1 | 55.60 | Jan. 14 | | | | 5 | 13 | 0.68 | 5.0 | | | | | | |
| B. A. C. 1450, -24° 52'. | | | | Jan. 31 | 4 | 48 | 42.50 | 6.0 | Feb. 10 | | 55.19 | RUMKER N. F. 2553, +30° 6'. | | | | 31 | | | | | 0.65 | | | | | | | |
| Feb. 4 | 4 | 34 | 57.41 | 6.0 | Feb. 4 | | 42.47 | 6.5 | (*)+30° 13'. | | | | B. A. C. 1661, +3° 30'. | | | | Feb. 10 | | | | | 0.66 | | | | | | |
| (*)-25° 54'. | | | | (*)+37° 43'. | | | | Jan. 14 | | | | 5 | 3 | 10.35 | 8.5 | (*)-25° 21'. | | | | Feb. 4 | | | | 5 | 14 | 26.78 | 7.0 | |
| Feb. 8 | 4 | 35 | 31.90 | 8.0 | Jan. 26 | 4 | 50 | 50.39 | 8.5 | 24 | | 10.41 | (*)-25° 21'. | | | | Jan. 11 | | | | 5 | 14 | 38.44 | | | | | |
| 10 | | 31.77 | 8.0 | Feb. 17 | | 50.32 | 8.5 | (*)+30° 13'. | | | | B. A. C. 1661, +3° 30'. | | | | Feb. 16 | | | | 5 | 15 | 34.41 | 7.5 | | | | | |
| 17 | | 31.85 | 8.5 | 4 AURIGÆ, +37° 43'. | | | | Jan. 25 | | | | 5 | 3 | 54.73 | m ORIONIS, +3° 26'. | | | | Feb. 16 | | | | 5 | 16 | 19.02 | | | |
| (*)+10° 45'. | | | | Jan. 14 | 4 | 50 | 50.42 | | (*)+30° 13'. | | | | SANTINI 345, +3° 27'. | | | | (*)+38° 58'. | | | | Jan. 14 | | | | 5 | 18 | 11.75 | |
| Feb. 10 | 4 | 41 | 24.77 | 25 | | 50.64 | | | Jan. 25 | | | | 5 | 4 | 31.93 | Feb. 16 | | | | 5 | 16 | 20.10 | 8.0 | | | | | |
| (*)+10° 42'. | | | | 26 | | 50.40 | 5.5 | | WEISSE (2) 49, +30° 17'. | | | | (*)+38° 58'. | | | | B. A. C. 1661, +3° 30'. | | | | Feb. 2 | | | | | | | |
| Jan. 20 | 4 | 41 | 35.96 | Feb. 17 | | 50.26 | 6.0 | Jan. 11 | | | | 5 | 4 | 40.43 | 8.0 | (*)+38° 58'. | | | | Jan. 14 | | | | 5 | 18 | 11.75 | | |
| (*)+10° 42'. | | | | WEISSE 1105, +1° 27'. | | | | Jan. 20 | | | | 5 | 5 | 11.33 | 9.0 | B. A. C. 1661, +3° 30'. | | | | Feb. 8 | | | | | | | | |
| Jan. 20 | 4 | 41 | 38.62 | Feb. 2 | 4 | 51 | 40.40 | Jan. 14 | | | | 5 | 4 | 40.59 | | (*)+38° 58'. | | | | 17 | | | | | | | | |
| 24 | | 38.69 | | (*)+60° 14'. | | | | Jan. 24 | | | | 5 | 5 | 11.33 | 9.0 | B. A. C. 1661, +3° 30'. | | | | 22 | | | | | | | | |
| 26 | | 38.53 | 8.0 | Feb. 4 | 4 | 52 | 18.34 | 8.0 | (*)+30° 13'. | | | | SANTINI 345, +3° 27'. | | | | (*)+39° 3'. | | | | 22 | | | | | | | |
| Feb. 10 | | 38.52 | | 8 | | 18.60 | 8.0 | (*)+39° 3'. | | | | Feb. 16 | | | | 5 | 16 | 19.02 | Jan. 20 | | | | 5 | 19 | 13.58 | | | |
| (*)+10° 42'. | | | | Jan. 24 | | | | 4 | 52 | 34.77 | WEISSE 56, +4° 12'. | | | | β TAURI, +28° 30'. | | | | 24 | | | | | | | | | |
| Jan. 26 | 4 | 41 | 40.99 | 8.0 | Feb. 10 | | 34.70 | | Jan. 20 | | | | 5 | 5 | 11.33 | 9.0 | Jan. 11 | | | | 5 | 18 | 27.34 | 6.0 | | | | |
| (*)+10° 42'. | | | | (*)-29° 3'. | | | | Jan. 31 | | | | 5 | 6 | 6.49 | 9.2 | Feb. 8 | | | | | | | | | | | | |
| Jan. 24 | 4 | 41 | 43.44 | 8.0 | Jan. 31 | 4 | 53 | 40.32 | Feb. 22 | | | | | 6.73 | 17 | | | | | | | | | | | | | |
| 26 | | 43.38 | | 64 ERIDANI, -12° 43'. | | | | Jan. 11 | | | | 5 | 6 | 18.77 | 7.0 | 22 | | | | | | | | | | | | |
| (*)+10° 42'. | | | | Jan. 14 | 4 | 54 | 10.05 | | Jan. 24 | | | | 5 | 6 | 18.84 | | Mar. 2 | | | | | | | | | | | |
| Jan. 20 | 4 | 41 | 53.64 | 25 | | 10.14 | | Jan. 24 | | | | 5 | 6 | 18.84 | | 3 | | | | | | | | | | | | |
| Feb. 10 | | 53.56 | | 26 | | 10.02 | 5.0 | (*)+39° 3'. | | | | B. A. C. 1661, +3° 30'. | | | | 24 | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | |
|--|------------|------|--|----------------------------|------------|------|--|----------------------------|--------------|------|--|------------------------------------|------------|------|--|
| (*)+39° 3'. | | | | LALANDE 10666, +38° 11'. | | | | WEISSE 1143, -13° 50'. | | | | (*)+26° 25'. | | | |
| 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | |
| Jan. 31 . . . | 5 19 18.46 | | | Feb. 2 . . . | 5 34 16.76 | | | Mar. 3 . . . | 5 45 55.04 | 8.2 | | Jan. 20 . . . | 5 54 44.22 | 8.5 | |
| | | | | | | | | | | | | 24 . . . | 44.17 | 8.0 | |
| (*)+39° 4'. | | | | α COLUMBÆ, -34° 8'. | | | | α ORIONIS, +7° 23'. | | | | WEISSE (2) 1795, +26° 30'. | | | |
| Jan. 20 . . . | 5 19 33.37 | | | Feb. 12 . . . | 5 35 9.65 | | | Jan. 26 . . . | 5 48 27.55 | | | Jan. 20 . . . | 5 55 50.26 | 6.0 | |
| 24 . . . | 33.44 | | | | | | | Feb. 4 . . . | 27.51 | | | 24 . . . | 50.14 | 7.0 | |
| 31 . . . | 33.18 | | | (*)+38° 11'. | | | | 22 . . . | 27.59 | | | | | | |
| SCHJELLERUP 1787, -0° 22'. | | | | Feb. 2 . . . | 5 35 32.65 | | | (*)+72° 26'. | | | | LACAILLE 2105, -27° 21'. | | | |
| Feb. 2 . . . | 5 21 23.01 | | | 5 . . . | 32.62 | | | Feb. 2 . . . | 5 48 41.58 | | | Feb. 2 . . . | 5 56 57.96 | | |
| 10 . . . | 23.09 | 7.5 | | 10 . . . | 32.42 | 8.0 | | | | | | | | | |
| LACAILLE 1844, -32° 35'. | | | | (*)+38° 11'. | | | | δ AURIGÆ, +54° 17'. | | | | LACAILLE 2107, -27° 21'. | | | |
| Feb. 16 . . . | 5 22 35.78 | 7.0 | | Feb. 5 . . . | 5 35 43.76 | | | Jan. 25 . . . | 5 49 19.24 | | | Feb. 2 . . . | 5 57 11.23 | | |
| | | | | 10 . . . | 43.77 | 9.0 | | Feb. 10 . . . | 19.12 | | | | | | |
| β LEPORIS, -20° 50'. | | | | WEISSE (2) 1147, +31° 16'. | | | | B. A. C. 1881, +66° 53'. | | | | WEISSE 1479, -14° 2'. | | | |
| Jan. 25 . . . | 5 22 55.91 | | | Jan. 14 . . . | 5 36 40.41 | | | Jan. 20 . . . | 5 49 27.07 | | | Mar. 3 . . . | 5 58 33.44 | 7.5 | |
| 26 . . . | 56.05 | | | 20 . . . | 40.54 | | | 24 . . . | 27.03 | 6.0 | | | | | |
| GROOMBRIDGE 980, +38° 13'. | | | | (*)+31° 18'. | | | | (*)+7° 19'. | | | | WEISSE 1487, -14° 7'. | | | |
| Feb. 22 . . . | 5 22 56.20 | | | Jan. 20 . . . | 5 36 42.24 | | | Feb. 12 . . . | 5 50 0.63 | | | Mar. 3 . . . | 5 58 55.65 | 8.0 | |
| O. ARG. N. 5930, +70° 17'. | | | | (*)+38° 5'. | | | | Mar. 3 . . . | 0.84 | 8.5 | | (*)+20° 8'. | | | |
| Jan. 31 . . . | 5 24 43.36 | 6.0 | | Jan. 24 . . . | 5 37 45.39 | 8.3 | | O. ARG. S. 4453, -28° 59'. | | | | Feb. 5 . . . | 5 59 20.64 | | |
| Feb. 17 . . . | 43.27 | 7.0 | | (*)+38° 5'. | | | | Mar. 2 . . . | 5 50 45.30 | 7.0 | | 12 . . . | 20.59 | | |
| WEISSE 603, -0° 23'. | | | | Jan. 24 . . . | 5 37 46.09 | | | (*)-29° 56'. | | | | 17 . . . | 20.67 | 8.5 | |
| Mar. 2 . . . | 5 25 40.31 | | | 25 . . . | 46.23 | | | Feb. 18 . . . | 5 50 50.83 | | | 22 . . . | 20.53 | 8.2 | |
| 3 . . . | 40.24 | | | 26 . . . | 46.01 | 8.2 | | O. ARG. N. 6356, +72° 26'. | | | | (*)+20° 11'. | | | |
| δ ORIONIS, -0° 23'. | | | | Feb. 16 . . . | 45.95 | | | Feb. 2 . . . | 5 50 56.05 | | | Feb. 22 . . . | 5 59 38.97 | | |
| Jan. 11 . . . | 5 25 40.31 | | | LACAILLE 1964, -34° 43'. | | | | 16 . . . | 55.31 | 8.0 | | (*)+20° 8'. | | | |
| Feb. 5 . . . | 40.38 | | | Mar. 3 . . . | 5 37 48.40 | 5.5 | | (*)+72° 36'. | | | | Feb. 12 . . . | 5 59 58.43 | | |
| 8 . . . | 40.30 | | | (*)-20° 47'. | | | | Feb. 17 . . . | 5 51 33.40 | 7.5 | | (*)+25° 53'. | | | |
| Mar. 2 . . . | 40.36 | | | Feb. 17 . . . | 5 38 2.15 | | | (*)-31° 59'. | | | | Jan. 20 . . . | 5 59 59.33 | 8.5 | |
| 3 . . . | 40.30 | | | (*)+38° 4'. | | | | Feb. 4 . . . | 5 52 11.36 | 6.0 | | WEISSE (2) 1958, +25° 58'. | | | |
| α LEPORIS, -17° 55'. | | | | Feb. 16 . . . | 5 39 3.27 | | | (*)+36° 32'. | | | | Jan. 20 . . . | 6 0 19.93 | | |
| Jan. 24 . . . | 5 27 15.69 | | | Mar. 2 . . . | 3.31 | | | Feb. 12 . . . | 5 53 0.35 | | | O. ARG. S. 4625 (1st *), -28° 40'. | | | |
| Mar. 2 . . . | 15.64 | | | (*)-20° 46'. | | | | B. A. C. 1915, -31° 59'. | | | | Feb. 4 . . . | 6 0 34.10 | | |
| β ² ORIONIS (1st *), -5° 30'. | | | | Feb. 2 . . . | 5 39 21.21 | | | Jan. 25 . . . | 5 53 (18.82) | | | 16 . . . | 34.19 | | |
| Jan. 20 . . . | 5 29 17.60 | | | 10 . . . | 21.18 | 9.0 | | Feb. 4 . . . | 18.51 | 6.5 | | O. ARG. S. 4625 (2d *), -28° 40'. | | | |
| β ² ORIONIS (2d *), -5° 30'. | | | | WEISSE 1034, +9° 51'. | | | | 10 . . . | 18.52 | 7.0 | | Feb. 16 . . . | 6 0 34.33 | | |
| Jan. 20 . . . | 5 29 21.11 | | | Jan. 14 . . . | 5 42 15.48 | | | Mar. 3 . . . | 18.53 | 7.0 | | (*)+31° 27'. | | | |
| ε ORIONIS, -1° 17'. | | | | ν AURIGÆ, +37° 17'. | | | | (*)-31° 56'. | | | | Feb. 2 . . . | 6 2 40.19 | | |
| Jan. 14 . . . | 5 29 55.35 | 8.3 | | Mar. 3 . . . | 5 42 35.16 | 5.5 | | Feb. 18 . . . | 5 53 47.12 | | | (*)+31° 27'. | | | |
| 24 . . . | 55.39 | | | LACAILLE 1993, -35° 43'. | | | | WEISSE 1368, -13° 57'. | | | | Feb. 18 . . . | 6 2 49.12 | | |
| Feb. 10 . . . | 55.35 | | | Feb. 2 . . . | 5 42 56.47 | | | Jan. 26 . . . | 5 54 23.14 | 8.0 | | (*)+31° 10'. | | | |
| 12 . . . | 55.27 | | | B. A. C. 1860, -23° 1'. | | | | Feb. 16 . . . | 23.37 | 8.5 | | Feb. 12 . . . | 6 3 9.11 | | |
| 22 . . . | 55.26 | | | Jan. 12 . . . | 5 44 42.85 | | | 22 . . . | 23.13 | | | 17 . . . | 9.01 | | |
| Mar. 2 . . . | 55.37 | | | 16 . . . | 42.75 | 6.0 | | WEISSE 1378, -14° 0'. | | | | Mar. 2 . . . | 9.12 | | |
| 3 . . . | 55.34 | | | 17 . . . | 42.71 | 6.5 | | Jan. 26 . . . | 5 54 42.52 | 9.0 | | WEISSE (2) 12, +31° 10'. | | | |
| B. A. C. 1751, +65° 37'. | | | | Mar. 2 . . . | 42.75 | | | Feb. 22 . . . | 42.59 | | | Feb. 12 . . . | 6 3 41.10 | | |
| Jan. 25 . . . | 5 30 0.80 | | | | | | | | | | | | | | |
| (*)+25° 32'. | | | | | | | | | | | | | | | |
| Jan. 31 . . . | 5 30 16.01 | 9.2 | | | | | | | | | | | | | |
| 125 TAURI, +25° 51'. | | | | | | | | | | | | | | | |
| Jan. 11 . . . | 5 32 3.06 | | | | | | | | | | | | | | |
| 24 . . . | 3.19 | 5.5 | | | | | | | | | | | | | |

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|--------------------------|-------|------------|------|----------------------------|-------|------------|------|-------------------------------|-------|------------|------|----------------------------|-------|------------|------|
| (*)+31° 27'. | | | | LACAILLE 2232, -29° 36'. | | | | (*)+32° 4'. | | | | (*)+23° 49'. | | | |
| 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. |
| Feb. 22 | . . | 6 4 14.19 | | Jan. 26 | . . | 6 16 8.94 | 6.0 | Feb. 12 | . . | 6 30 8.80 | | Mar. 3 | . . | 6 37 50.53 | 7.7 |
| | | | | Feb. 18 | . . | 8.85 | | | | | | | | | |
| (*)+31° 27'. | | | | (*)+24° 18'. | | | | γ GEMINORUM, +16° 30'. | | | | (*)+23° 50'. | | | |
| Feb. 22 | . . | 6 4 23.48 | | Jan. 20 | . . | 6 19 19.09 | 9.0 | Jan. 20 | . . | 6 30 32.96 | | Mar. 3 | . . | 6 38 9.74 | 8.5 |
| | | | | 24 | . . | 19.26 | 8.0 | 26 | . . | 33.01 | | | | | |
| (*)-27° 33'. | | | | | | | | 31 | . . | 32.94 | | LACAILLE 2420-27° 28'. | | | |
| Feb. 2 | . . | 6 5 44.01 | | 48 AURIGÆ, +30° 34'. | | | | Feb. 2 | . . | 32.93 | | Jan. 20 | . . | 6 38 57.55 | 7.0 |
| 17 | . . | 44.04 | | | | | | 5 | . . | 32.95 | | | | | |
| B. A. C. 1994, -6° 31'. | | | | Feb. 17 | . . | 6 20 35.91 | | 18 | . . | 32.91 | | | | | |
| Feb. 16 | . . | 6 5 49.73 | 5.0 | | | | | Mar. 23 | . . | 32.92 | | | | | |
| (*)-26° 42'. | | | | LACAILLE 2271, -29° 37'. | | | | LALANDE 12678, +32° 4'. | | | | (*)-31° 31'. | | | |
| Feb. 5 | . . | 6 6 45.53 | | Feb. 12 | . . | 6 20 53.45 | | Jan. 25 | . . | 6 31 3.63 | | Feb. 10 | . . | 6 40 20.61 | 7.0 |
| Mar. 3 | . . | 45.85 | | Mar. 2 | . . | 53.50 | 6.5 | | | | | (*)-31° 31'. | | | |
| (*)-26° 40'. | | | | O. ARG. N. 6864, +76° 29'. | | | | (*)+24° 38'. | | | | Feb. 5 | . . | 6 40 26.82 | |
| Feb. 5 | . . | 6 6 49.32 | | Feb. 5 | . . | 6 20 57.48 | | Jan. 24 | . . | 6 31 23.00 | 8.3 | (*)-31° 31'. | | | |
| Mar. 2 | . . | 48.87 | | 22 | . . | 58 22 | | | | | | Feb. 5 | . . | 6 40 44.60 | |
| (*)-26° 42'. | | | | B. A. C. 2069, +78° 5'. | | | | (*)+32° 4'. | | | | (*)-28° 36'. | | | |
| Feb. 18 | . . | 6 7 5.84 | | Jan. 26 | . . | 6 21 11.60 | 6.0 | Mar. 3 | . . | 6 31 35.15 | 8.5 | Feb. 10 | . . | 6 43 26.43 | |
| (*)-5° 14'. | | | | 31 | . . | 11.18 | | 54 AURIGÆ, +28° 22'. | | | | O. ARG. N. 7298, +51° 40'. | | | |
| Feb. 12 | . . | 6 8 52.90 | | Feb. 4 | . . | 11.57 | | Feb. 22 | . . | 6 31 43.96 | | Jan. 20 | . . | 6 43 41.13 | 7.0 |
| B. A. C. 2014, +35° 12'. | | | | B. A. C. 2100, -25° 48'. | | | | WEISSE (2) 909, +24° 42'. | | | | (*)-28° 35'. | | | |
| Feb. 22 | . . | 6 9 15.35 | 6.0 | Jan. 20 | . . | 6 22 11.53 | | Jan. 24 | . . | 6 31 55.11 | 6.0 | Feb. 5 | . . | 6 43 52.03 | |
| B. A. C. 2021, +35° 15'. | | | | (*)-25° 48'. | | | | (*)+32° 45'. | | | | O. ARG. S. 5745-28° 34'. | | | |
| Feb. 22 | . . | 6 10 35.92 | 6.0 | Jan. 20 | . . | 6 22 41.10 | | Feb. 17 | . . | 6 33 41.93 | | Feb. 5 | . . | 6 44 34.25 | |

| (*)-24° 48'. | | | | (*)-14° 42'. | | | | LALANDE 14120, +36° 54'. | | | | (*)+40° 42'. | | | | | | | |
|----------------------------|---|----------|-------|----------------------------|--------------------------|----------|------|--------------------------|--------------|---------------------------------|------|---------------------------|---------------------------|-----------------------|--------------------------|-------------------------|------------|------------|-----|
| 1876. | | h. m. s. | Mag. | 1876. | | h. m. s. | Mag. | 1876. | | h. m. s. | Mag. | 1877. | | h. m. s. | Mag. | | | | |
| Jan. 20 | . | 6 51 | 47.42 | 7.5 | Feb. 5 | . | 7 2 | 52.99 | Mag. | Mar. 23 | . | 7 11 | 4.10 | 7.5 | Feb. 5 | . | 7 22 | 23.16 | |
| Feb. 22 | . | | 47.47 | 8.8 | 12 | . | | 52.73 | | | | | | | | | | | |
| (*)-30° 45'. | | | | δ CANIS MAJORIS, -26° 12'. | | | | δ GEMINORUM, +22° 13'. | | | | WEISSE (2) 613, +41° 43'. | | | | | | | |
| Feb. 2 | . | 6 52 | 15.09 | | Feb. 4 | . | 7 3 | 20.99 | | Jan. 31 | . | 7 12 | 43.03 | | Jan. 31 | . | 7 23 | 8.28 | 8.0 |
| 18 | . | | 15.02 | | 10 | . | | 20.95 | | Feb. 2 | . | | 42.98 | | | | | | |
| (*)-30° 45'. | | | | O. ARG. S. 6314, -24° 58'. | | | | (*)-14° 25'. | | | | (*)-14° 46'. | | | | | | | |
| Feb. 2 | . | 6 52 | 48.90 | | 16 | . | | 21.01 | | 4 | . | | 43.04 | | Feb. 18 | . | 7 23 | 30.89 | |
| 18 | . | | 48.66 | | 18 | . | | 21.00 | | 10 | . | | 43.14 | | (*)+41° 43'. | | | | |
| (*)-30° 45'. | | | | Mar. 29 | | | | 21.05 | | 12 | . | | 43.07 | | Feb. 5 | . | 7 26 | 17.86 | |
| Feb. 2 | . | 6 53 | 22.54 | | 31 | . | | 21.07 | | 16 | . | | 43.06 | | α² GEMINORUM, +32° 9'. | | | | |
| ε CANIS MAJORIS, -28° 48'. | | | | Mar. 3 | | | | 36.35 | 7.0 | 17 | . | | 43.01 | | Feb. 18 | . | 7 26 | 41.12 | |
| Feb. 4 | . | 6 53 | 45.26 | | O. ARG. S 6317-24° 59'. | | | | (*)-14° 24'. | | | | WEISSE (2) 728, +40° 46'. | | | | | | |
| 5 | . | | 45.15 | | Mar. 3 | . | 7 4 | 38.31 | 8.5 | Mar. 23 | . | 7 15 | 21 74 | 8.5 | Feb. 12 | . | 7 26 | 44.01 | |
| 10 | . | | 45.19 | | B. A. C. 2326, +82° 40'. | | | | Feb. 18 | | | | 7 15 28.94 | | Mar. 23 | . | | 44.29 | 8.0 |
| April 1 | . | | 45.23 | | Jan. 31 | . | 7 4 | 52.24 | | Feb. 18 | . | 7 15 | 28.94 | | 31 | . | | 44.03 | |
| (*)-26° 5'. | | | | (*)-24° 58'. | | | | (*)-24° 40'. | | | | g PUPPIS, -25° 50'. | | | | | | | |
| Jan. 31 | . | 6 53 | 56.88 | | Feb. 2 | . | 7 5 | 3.44 | | Jan. 31 | . | 7 17 | 14.50 | 6.5 | April 1 | . | 7 29 | 22.40 | |
| Feb. 17 | . | | 56.80 | | 22 MONOCEROTIS-0° 16'. | | | | Feb. 10 | | | | 14.36 | 6.5 | (*)+21° 44'. | | | | |
| LACAILLE 2558, -27° 43'. | | | | Feb. 22 | | | | 31.92 | 4.5 | (*)-24° 42'. | | | | Feb. 5 | | | | 7 29 52.56 | |
| Jan. 20 | . | 6 54 | 38.97 | 7.0 | 23 | . | | 31.94 | 6.5 | Feb. 10 | . | 7 17 | 20.60 | 8.0 | 12 | . | | 52.55 | |
| Mar. 2 | . | | 38.96 | 7.3 | (*)-14° 48'. | | | | Feb. 22 | | | | 7 17 33.91 | | 17 | . | | 52.51 | 7.5 |
| 3 | . | | 38.96 | | Jan. 20 | . | 7 5 | 56.92 | 7.8 | (*)-14° 38'. | | | | WEISSE 924, -14° 13'. | | | | | |
| 23 | . | | 38.93 | | Feb. 16 | . | | 57.06 | 8.5 | (*)-14° 38'. | | | | Jan. 20 | | | | 7 30 53.60 | |
| (*)-23° 41'. | | | | WEISSE (2) 153, +42° 8'. | | | | Feb. 22 | | | | 7 17 34.66 | | (*)-14° 13'. | | | | | |
| Feb. 12 | . | 6 55 | 25.88 | | Feb. 10 | . | 7 7 | 12.33 | | LACAILLE 2767 (2d *), -35° 25'. | | | | Jan. 20 | | | | 7 30 54.14 | |
| 22 | . | | 25.82 | 9.0 | (*)-14° 27'. | | | | Jan. 20 | | | | 7 17 48.05 | 7.5 | (*)-31° 3'. | | | | |
| (*)-30° 25'. | | | | Feb. 12 | | | | 7 7 18.50 | | PIAZZI 67, +68° 42'. | | | | Mar. 29 | | | | 7 31 44.65 | 8.3 |
| Feb. 16 | . | 6 56 | 29.23 | | (*)+38° 35'. | | | | Feb. 5 | | | | 7 17 57.40 | | (*)-31° 2'. | | | | |
| 44 GEMINORUM, +22° 49'. | | | | Feb. 5 | | | | 7 8 55.00 | | (*)+35° 35'. | | | | Mar. 29 | | | | 7 32 4.10 | 9.0 |
| Feb. 5 | . | 6 57 | 50.41 | | (*)+38° 35'. | | | | Feb. 12 | | | | 7 18 53.86 | | (*)-34° 32'. | | | | |
| (*)+22° 53'. | | | | Feb. 2 | | | | 7 9 13.88 | | (*)-35° 33'. | | | | Feb. 18 | | | | 7 34 41.32 | |
| Feb. 5 | . | 6 58 | 20.17 | | (*)+38° 35'. | | | | Jan. 20 | | | | 7 19 28.91 | 7.0 | (*)-14° 21'. | | | | |
| WEISSE (2) 1747, +22° 53'. | | | | Feb. 2 | | | | 7 9 34.56 | 7.9 | (*)-31° 31'. | | | | Feb. 17 | | | | 7 34 51.01 | |
| Feb. 2 | . | 6 58 | 49.67 | | 16 | . | | 34.69 | | B. A. C. 2461, -31° 31'. | | | | (*)-34° 31'. | | | | | |
| 4 | . | | 49.64 | 7.5 | WEISSE 274, -14° 16'. | | | | Mar. 29 | | | | 7 19 58.82 | 5.5 | LACAILLE 2916, -31° 20'. | | | | |
| (*)-14° 40'. | | | | Jan. 20 | | | | 7 10 10.75 | 7.5 | B. A. C. 2463, +27° 48'. | | | | Mar. 31 | | | | 7 36 4.03 | 7.0 |
| Feb. 12 | . | 6 59 | 31.42 | | Feb. 10 | . | | 10.78 | | Mar. 23 | | | | 7 20 57.71 | | April 1 | . | 4.01 | 6.0 |
| PIAZZI 328, -14° 41'. | | | | Feb. 10 | | | | 25.47 | | April 1 | | | | 57.69 | | β GEMINORUM, +28° 20'. | | | |
| Mar. 3 | . | 6 59 | 54.14 | 7.7 | WEISSE 283, -14° 16'. | | | | Feb. 12 | | | | 7 22 5.87 | | April 6 | . | 7 37 43.60 | | |
| (*)+22° 53'. | | | | Jan. 20 | | | | 7 10 25.35 | 7.0 | Mar. 3 | | | | 5.98 | | 8 | . | 43.61 | |
| Feb. 2 | . | 6 59 | 55.41 | | Feb. 10 | . | | 25.47 | | LALANDE 14499, +37° 2'. | | | | Feb. 12 | | | | 7 22 5.87 | |
| (*)-14° 42'. | | | | Feb. 10 | | | | 25.47 | | Feb. 12 | | | | 7 22 5.87 | | LALANDE 14499, +37° 2'. | | | |
| Jan. 20 | . | 7 2 | 45.37 | 8.5 | WEISSE 290, -14° 37'. | | | | Mar. 3 | | | | 5.98 | | LALANDE 14499, +37° 2'. | | | | |
| Feb. 12 | . | | 45.47 | | Feb. 12 | . | 7 10 | 35.04 | | Feb. 12 | | | | 7 22 5.87 | | LALANDE 14499, +37° 2'. | | | |
| 17 | . | | 45.22 | | Mar. 3 | . | | 35.10 | 8.5 | Mar. 3 | | | | 5.98 | | LALANDE 14499, +37° 2'. | | | |

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|--------------------------------------|---|----------|------|------|--------------------------------------|---|----------|------|------|--------------------------------------|---|----------|-------|------|--------------------------------------|---|----------|------|------|
| LALANDE 15079, $-11^{\circ} 1'$. | | | | | (*) $-29^{\circ} 59'$. | | | | | LACAILE 3248, $-32^{\circ} 30'$. | | | | | O. ARG. S. 8806, $-25^{\circ} 59'$. | | | | |
| 1876. | | h. m. s. | | Mag. | 1876. | | h. m. s. | | Mag. | 1876. | | h. m. s. | | Mag. | 1876. | | h. m. s. | | Mag. |
| Jan. 20 | . | 7 38 | 9.72 | 7.8 | Feb. 5 | . | 7 54 | 3.37 | | April 6 | . | 8 12 | 35.96 | 6.8 | April 8 | . | 8 33 | 1.76 | 8.0 |
| Mar. 23 | . | | 9.66 | 8.2 | | | | | | | | | | | | | | | |
| 29 | . | | 9.72 | 8.0 | | | | | | | | | | | | | | | |
| (*) $+38^{\circ} 20'$. | | | | | Feb. 18 . . . 7 57 58.43 | | | | | Mar. 31 . . . 8 14 39.21 8.8 | | | | | Mar. 3 . . . 8 33 7.85 7.0 | | | | |
| Feb. 18 . . . 7 41 26.46 | | | | | O. ARG. N. 8586, $+60^{\circ} 41'$. | | | | | LALANDE 16367, $+27^{\circ} 30'$. | | | | | (*) $+6^{\circ} 14'$. | | | | |
| Mar. 3 . . . 26.51 7.5 | | | | | Feb. 17 . . . 7 58 30.58 | | | | | Feb. 22 . . . 8 15 31.84 8.0 | | | | | Mar. 3 . . . 8 33 8.83 8.3 | | | | |
| WEISSE 1232, $-11^{\circ} 51'$. | | | | | Mar. 29 . . . 30.43 9.0 | | | | | Mar. 3 . . . 31.90 7.5 | | | | | LACAILE 3449, $-28^{\circ} 38'$. | | | | |
| Feb. 5 . . . 7 41 29.49 | | | | | 31 . . . 30.35 | | | | | LALANDE 16413, $+35^{\circ} 23'$. | | | | | Mar. 29 . . . 8 34 30.50 | | | | |
| (*) $-14^{\circ} 21'$. | | | | | Feb. 5 . . . 7 58 31.89 | | | | | April 6 . . . 8 17 8.39 6.5 | | | | | WEISSE (2) 856, $+43^{\circ} 7'$. | | | | |
| Feb. 12 . . . 7 41 41.35 | | | | | 22 . . . 31.89 | | | | | B. A. C. 2824, $+69^{\circ} 45'$. | | | | | Feb. 22 . . . 8 35 21.02 7.5 | | | | |
| RUMKER 2287, $+13^{\circ} 8'$. | | | | | Feb. 12 . . . 7 59 20.00 | | | | | Feb. 22 . . . 8 20 36.09 | | | | | (*) $-23^{\circ} 49'$. | | | | |
| Mar. 31 . . . 7 42 37.25 | | | | | WEISSE (2) 1642, $+28^{\circ} 57'$. | | | | | April 6 . . . 35.74 | | | | | April 1 . . . 8 36 0.03 8.5 | | | | |
| April 1 . . . 37.25 6.0 | | | | | April 1 . . . 8 0 38.60 8.5 | | | | | (*) $+13^{\circ} 10'$. | | | | | 6 . . . 0.01 8.5 | | | | |
| (*) $-23^{\circ} 27'$. | | | | | ρ ARGUS, $-23^{\circ} 57'$. | | | | | Mar. 3 . . . 8 24 13.83 9.0 | | | | | WEISSE (2) 898, $+23^{\circ} 9'$. | | | | |
| Feb. 22 . . . 7 42 39.83 | | | | | Feb. 5 . . . 8 2 15.91 | | | | | O. ARG. S. 8610, $-29^{\circ} 53'$. | | | | | Mar. 3 . . . 8 36 31.18 8.0 | | | | |
| (*) $+38^{\circ} 9'$. | | | | | 12 . . . 15.89 | | | | | Mar. 29 . . . 8 24 14.22 8.2 | | | | | 31 . . . 31.21 8.0 | | | | |
| Feb. 17 . . . 7 42 46.10 | | | | | 22 . . . 15.81 | | | | | 31 . . . 14.10 8.0 | | | | | O. ARG. S. 8887, $-23^{\circ} 52'$. | | | | |
| (*) $+0^{\circ} 28'$. | | | | | April 6 . . . 15.90 | | | | | (*) $+19^{\circ} 57'$. | | | | | April 1 . . . 8 37 8.63 8.0 | | | | |
| Mar. 23 . . . 7 45 53.96 | | | | | 8 . . . 15.88 | | | | | April 1 . . . 8 24 33.51 7.5 | | | | | LALANDE 17182, $+37^{\circ} 45'$. | | | | |
| ϕ GEMINORUM, $+27^{\circ} 5'$. | | | | | B. A. C. 2749, $+72^{\circ} 47'$. | | | | | WEISSE 601, $+13^{\circ} 10'$. | | | | | April 8 . . . 8 37 40.35 | | | | |
| Jan. 20 . . . 7 45 54.49 | | | | | April 6 . . . 8 6 57.90 | | | | | Mar. 3 . . . 8 24 38.95 8.5 | | | | | LACAILE 3502, $-31^{\circ} 47'$. | | | | |
| Feb. 5 . . . 54.50 | | | | | 8 . . . 58.04 | | | | | April 6 . . . 38.78 8.3 | | | | | Mar. 3 . . . 8 40 5.75 6.0 | | | | |
| 12 . . . 54.40 | | | | | LACAILE 3201, $-41^{\circ} 24'$. | | | | | Feb. 22 . . . 8 28 11.87 8.2 | | | | | 29 . . . 5.92 6.5 | | | | |
| 17 . . . 54.45 | | | | | Feb. 17 . . . 8 7 37.84 | | | | | Feb. 22 . . . 8 28 11.87 8.2 | | | | | ϵ HYDRÆ, $+6^{\circ} 52'$. | | | | |
| 18 . . . 54.41 | | | | | 22 . . . 37.92 | | | | | April 8 . . . 11.74 6.5 | | | | | Feb. 22 . . . 8 40 12.61 | | | | |
| Mar. 3 . . . 54.39 | | | | | Mar. 3 . . . 37.82 | | | | | WEISSE (2) 629, $+30^{\circ} 27'$. | | | | | Mar. 23 . . . 12.48 | | | | |
| (*) $+0^{\circ} 28'$. | | | | | (*) $+31^{\circ} 1'$. | | | | | Mar. 3 . . . 8 28 24.26 7.0 | | | | | April 1 . . . 12.55 | | | | |
| Feb. 22 . . . 7 46 4.33 | | | | | Mar. 29 . . . 8 9 53.72 9.2 | | | | | (*) $-34^{\circ} 13'$. | | | | | 6 . . . 12.54 | | | | |
| (*) $+0^{\circ} 28'$. | | | | | WEISSE (2) 181, $+30^{\circ} 59'$. | | | | | Mar. 29 . . . 8 28 32.98 | | | | | 19 . . . 12.59 | | | | |
| Feb. 2 . . . 7 47 16.78 | | | | | Mar. 29 . . . 8 10 30.(59) 8.8 | | | | | (*) $+23^{\circ} 43'$. | | | | | (*) $-32^{\circ} 47'$. | | | | |
| (*) $-30^{\circ} 33'$. | | | | | 31 . . . 30.10 8.2 | | | | | Mar. 31 . . . 8 29 39.39 8.0 | | | | | Mar. 31 . . . 8 41 37.69 7.5 | | | | |
| Feb. 5 . . . 7 50 20.27 | | | | | (*) $-30^{\circ} 12'$. | | | | | April 1 . . . 39.41 8.3 | | | | | O. ARG. N. 9350, $+63^{\circ} 3'$. | | | | |
| O. ARG. S. 7669, $-30^{\circ} 2'$. | | | | | Mar. 3 . . . 8 10 46.00 8.0 | | | | | 6 . . . 39.33 8.0 | | | | | April 8 . . . 8 43 41.50 8.0 | | | | |
| Feb. 17 . . . 7 50 31.45 | | | | | (*) $-30^{\circ} 11'$. | | | | | WEISSE (2) 262, $+9^{\circ} 33'$. | | | | | B. A. C. 3005, $-28^{\circ} 59'$. | | | | |
| (*) $-30^{\circ} 2'$. | | | | | Mar. 3 . . . 8 10 50.13 8.5 | | | | | Feb. 17 . . . 8 10 57.13 7.7 | | | | | Feb. 22 . . . 8 44 50.30 4.5 | | | | |
| Feb. 12 . . . 7 51 55.34 | | | | | WEISSE 230, $+9^{\circ} 33'$. | | | | | 22 . . . 57.04 | | | | | Mar. 31 . . . 50.34 5.5 | | | | |
| 17 . . . 55.12 | | | | | (*) $+9^{\circ} 32'$. | | | | | Feb. 17 . . . 8 11 27.92 | | | | | (*) $-42^{\circ} 21'$. | | | | |
| B. A. C. 2655, $-29^{\circ} 59'$. | | | | | Feb. 17 . . . 8 11 27.92 | | | | | 38 CANCRI, $+20^{\circ} 13'$. | | | | | Mar. 29 . . . 8 45 12.81 7.5 | | | | |
| Feb. 5 . . . 7 52 43.78 | | | | | WEISSE 262, $+9^{\circ} 33'$. | | | | | Mar. 31 . . . 8 32 35.17 6.0 | | | | | (*) $-41^{\circ} 14'$. | | | | |
| 17 . . . 43.68 5.0 | | | | | Feb. 17 . . . 8 11 40.04 | | | | | WEISSE 829, $-2^{\circ} 35'$. | | | | | April 1 . . . 8 45 15.39 8.5 | | | | |
| LACAILE 3086, $-42^{\circ} 1'$. | | | | | 22 . . . 40.03 | | | | | Feb. 22 . . . 8 32 51.52 | | | | | LACAILE 3567, $-27^{\circ} 10'$. | | | | |
| Feb. 18 . . . 7 52 48.52 | | | | | (*) $+9^{\circ} 33'$. | | | | | Feb. 22 . . . 8 32 51.52 | | | | | Mar. 3 . . . 8 46 41.29 7.0 | | | | |
| (*) $-29^{\circ} 59'$. | | | | | Feb. 17 . . . 8 11 46.72 | | | | | Feb. 22 . . . 8 32 51.52 | | | | | April 8 . . . 41.11 8.2 | | | | |
| Feb. 5 . . . 7 53 44.13 | | | | | 22 . . . 46.58 | | | | | | | | | | | | | | |

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|--------------------------------------|----------|-------|-----|--|----------|-------|-----|--------------------------------------|----------|-------|-----|---|----------|-------|-----|
| 60 CANCRI, $-12^{\circ} 6'$. | | | | (*) $+21^{\circ} 30'$. | | | | B. A. C. 3202 $+8^{\circ} 16'$. | | | | B. A. C. 3275, $+78^{\circ} 42'$. | | | |
| 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | |
| April 19 | 8 49 | 9.18 | | Feb. 22 | 9 0 | 37.99 | | Mar. 31 | 9 16 | 53.70 | 6.0 | April 21 | 9 31 | 20.72 | |
| | | | | Mar. 3 | | 37.95 | 8.5 | April 5 | | 53.63 | | | | | |
| (*) $-35^{\circ} 6'$. | | | | κ CANCRI, $+11^{\circ} 10'$. | | | | (*) $-38^{\circ} 50'$. | | | | LACAILLE 3928, $-24^{\circ} 44'$. | | | |
| Mar. 31 | 8 49 | 50.55 | 8.0 | Mar. 6 | 9 1 | 1.73 | | April 6 | 9 17 | 35.15 | 7.5 | April 26 | 9 31 | 25.68 | |
| LALANDE 17662, $-13^{\circ} 26'$. | | | | 29 | | 1.79 | | (*) $-34^{\circ} 58'$. | | | | (*) $+25^{\circ} 1'$. | | | |
| April 8 | 8 50 | 20.45 | 8.0 | April 21 | | 1.80 | | Mar. 23 | 9 17 | 44.55 | 7.0 | Mar. 6 | 9 31 | 39.79 | |
| (*) $-13^{\circ} 26'$. | | | | LALANDE 18122 (1st *), $+53^{\circ} 14'$. | | | | April 8 | | 44.64 | 7.5 | (*) $+10^{\circ} 12'$. | | | |
| April 6 | 8 50 | 46.68 | | Mar. 3 | 9 5 | 55.14 | 7.0 | LACAILLE 3815, $-38^{\circ} 52'$. | | | | Mar. 31 | 9 31 | 47.97 | |
| WEISSE 1282, $-13^{\circ} 29'$. | | | | 23 | | 55.00 | 8.0 | Mar. 3 | 9 19 | 20.82 | 6.0 | April 6 | | 48.02 | |
| Feb. 22 | 8 50 | 37.31 | | 29 | | 55.13 | 8.0 | April 1 | | 20.93 | | (*) $+10^{\circ} 8'$. | | | |
| Mar. 3 | | 37.29 | 8.3 | LALANDE 18122 (2d *), $+53^{\circ} 14'$. | | | | 41 LYNCIS, $+46^{\circ} 9'$. | | | | Mar. 31 | 9 31 | 57.74 | |
| 29 | | 37.29 | | Mar. 3 | 9 5 | 57.08 | 7.0 | April 21 | 9 20 | 31.83 | | (*) $+25^{\circ} 1'$. | | | |
| (*) $-13^{\circ} 26'$. | | | | 23 | | 56.91 | 8.0 | (*) $+46^{\circ} 9'$. | | | | Mar. 6 | 9 31 | 57.93 | |
| April 6 | 8 51 | 0.46 | 8.5 | 29 | | 56.96 | 8.0 | April 21 | 9 20 | 34.27 | | σ LEONIS, $+10^{\circ} 27'$. | | | |
| B. A. C. 3042, $+81^{\circ} 23'$. | | | | WEISSE (2) 87, $+24^{\circ} 49'$. | | | | α HYDRÆ, $-8^{\circ} 7'$. | | | | Nov. 8 | 9 34 | 31.86 | |
| April 1 | 8 52 | 32.81 | | April 1 | 9 6 | 21.13 | 7.5 | Mar. 23 | 9 21 | 29.65 | | B. A. C. 3314, $+30^{\circ} 40'$. | | | |
| O. ARG. S. 9210, $-30^{\circ} 45'$. | | | | 8 | | 21.03 | | April 5 | | 29.69 | | April 19 | 9 35 | 27.74 | |
| Feb. 22 | 8 53 | 36.42 | 7.5 | (*) $+20^{\circ} 10'$. | | | | 19 | | 29.64 | | 28 URÆ MAJORIS, $+64^{\circ} 4'$. | | | |
| Mar. 3 | | 36.47 | 8.0 | Mar. 31 | 9 9 | 36.14 | 9.5 | 26 | | 29.67 | | April 21 | 9 36 | 21.47 | |
| 23 | | 36.41 | 8.2 | LACAILLE 3741, $-35^{\circ} 23'$. | | | | 29 | | 29.73 | | B. A. C. 3318, $+20^{\circ} 45'$. | | | |
| B. A. C. 3070, $-28^{\circ} 19'$. | | | | April 19 | 9 7 | 15.02 | | O. ARG. S. 9789, $-29^{\circ} 34'$. | | | | April 6 | 9 36 | 25.84 | |
| April 19 | 8 54 | 0.01 | | 21 | | 15.13 | | Mar. 29 | 9 24 | 47.78 | 6.5 | ψ LEONIS, $+14^{\circ} 35'$. | | | |
| WEISSE (2) 1352, $+23^{\circ} 6'$. | | | | (*) $-27^{\circ} 40'$. | | | | April 8 | | 47.72 | 7.5 | April 26 | 9 36 | 58.65 | 6.0 |
| April 6 | 8 56 | 13.84 | | Mar. 3 | 9 10 | 30.94 | 7.5 | ψ ARGUS, $-39^{\circ} 54'$. | | | | ϵ LEONIS, $+24^{\circ} 21'$. | | | |
| (*) $-38^{\circ} 54'$. | | | | 23 | | 31.01 | 8.0 | April 21 | 9 25 | 49.13 | 5.0 | Mar. 3 | 9 38 | 48.68 | |
| Mar. 29 | 8 57 | 21.30 | 6.5 | 29 | | 30.99 | 7.8 | 29 | | 49.15 | | 23 | | 48.66 | |
| 31 | | 21.22 | | 38 LYNCIS, $+37^{\circ} 20'$. | | | | B. A. C. 3255, $+28^{\circ} 56'$. | | | | 29 | | 48.55 | |
| (*) $+53^{\circ} 45'$. | | | | April 21 | 9 11 | 7.25 | | April 19 | 9 26 | 2.22 | 6.0 | 31 | | 48.58 | |
| Feb. 22 | 8 57 | 27.08 | | α LYNCIS, $+34^{\circ} 54'$. | | | | ζ^2 ANTLÆ, $-31^{\circ} 19'$. | | | | April 8 | | 48.59 | |
| Mar. 3 | | 26.95 | 8.2 | April 19 | 9 13 | 29.58 | | Mar. 31 | 9 26 | 14.04 | | 29 | | 48.61 | |
| 23 | | 26.75 | 8.5 | B. A. C. 3182, $+50^{\circ} 5'$. | | | | April 5 | | 13.97 | | May 1 | | 48.59 | |
| April 1 | | 26.83 | | April 1 | 9 14 | 4.40 | 6.5 | 6 | | 14.11 | | Nov. 8 | | 48.64 | |
| B. A. C. 3104, $+15^{\circ} 46'$. | | | | 6 | | 4.36 | 7.0 | O. ARG. S. 9855, $-31^{\circ} 24'$. | | | | (*) $+12^{\circ} 9'$. | | | |
| Mar. 31 | 8 58 | 28.62 | | WEISSE 271, $+15^{\circ} 54'$. | | | | April 8 | 9 28 | 39.58 | | April 1 | 9 40 | 45.93 | 6.5 |
| April 19 | | 28.62 | | Mar. 23 | 9 14 | 24.47 | 7.0 | O. ARG. S. 9586, $-31^{\circ} 28'$. | | | | 26 | | 45.87 | 6.5 |
| (*) $+53^{\circ} 45'$. | | | | 31 | | 24.56 | 6.0 | Mar. 14 | 9 28 | 41.79 | 6.5 | (*) $-10^{\circ} 57'$. | | | |
| Mar. 23 | 8 59 | 12.75 | 8.5 | (*) $-28^{\circ} 42'$. | | | | 29 | | 41.79 | 6.5 | April 21 | 9 41 | 46.73 | 9.0 |
| (*) $-31^{\circ} 56'$. | | | | Mar. 3 | 9 15 | 4.56 | 7.0 | April 8 | | 41.75 | | (*) $-37^{\circ} 8'$. | | | |
| April 8 | 8 59 | 21.81 | | 29 | | 4.74 | 7.0 | 19 | | 41.88 | | April 19 | 9 42 | 18.20 | 8.0 |
| (*) $+53^{\circ} 48'$. | | | | O. ARG. S. 9615, $-28^{\circ} 37'$. | | | | LACAILLE 3918, $-35^{\circ} 15'$. | | | | ϕ URÆ MAJORIS, $+54^{\circ} 39'$. | | | |
| Mar. 23 | 8 59 | 29.37 | | Mar. 3 | 9 15 | 20.72 | 8.0 | April 5 | 9 30 | 2.37 | 7.5 | April 29 | 9 43 | 39.33 | |
| B. A. C. 3107, $+15^{\circ} 41'$. | | | | 29 | | 20.79 | 7.5 | (*) $-35^{\circ} 15'$. | | | | (*) $+18^{\circ} 2'$. | | | |
| Mar. 31 | 8 59 | 52.74 | | (*) $-34^{\circ} 49'$. | | | | Mar. 3 | 9 30 | 20.55 | 9.0 | April 5 | 9 44 | 49.12 | |
| April 5 | | 52.77 | | April 8 | 9 16 | 5.30 | 7.5 | | | | | | | | |
| 19 | | 52.73 | | 19 | | 5.28 | | | | | | | | | |

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|--|------------|------|--|--|-------------|------|--|--|-------------|------|--|---|-------------|------|--|
| LACAILLE 4046, $-30^{\circ} 55'$. | | | | B. A. C. 3439, $+35^{\circ} 36'$. | | | | γ^1 LEONIS, $+20^{\circ} 28'$. | | | | RUMKER 3211, $+12^{\circ} 16'$. | | | |
| 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | |
| April 26 | 9 45 37.14 | | | April 29 | 9 58 30.12 | | | Mar. 31 | 10 13 8.09 | | | April 10 | 10 23 51.09 | 8.5 | |
| | | | | May 1 | 30.21 | | | April 19 | 8.09 | | | 26 | 50.95 | 8.2 | |
| μ LEONIS, $+26^{\circ} 35'$. | | | | A LEONIS, $+10^{\circ} 37'$. | | | | LACAILLE 4242, $-36^{\circ} 11'$. | | | | ρ LEONIS, $+9^{\circ} 57'$. | | | |
| Mar. 6 | 9 45 42.58 | | | May 1 | 10 1 19.24 | 5.0 | | April 8 | 10 13 10.99 | 6.0 | | Mar. 6 | 10 26 16.87 | | |
| 29 | 42.55 | | | | | | | | | | | 31 | 16.87 | | |
| April 31 | 42.55 | | | α LEONIS, $+12^{\circ} 34'$. | | | | WEISSE 209, $+12^{\circ} 0'$. | | | | April 1 | 16.90 | | |
| April 1 | 42.52 | | | April 10 | 10 1 46.01 | | | April 21 | 10 13 50.58 | 7.7 | | 5 | 16.87 | | |
| 6 | 42.48 | | | 21 | 46.02 | | | Σ CAT. GEN. 1198 (1st *), $+44^{\circ} 31'$. | | | | May 3 | 16.85 | | |
| 8 | 42.49 | | | 29 | 45.99 | | | April 10 | 10 14 30.53 | | | 13 | 16.94 | | |
| May 1 | 42.53 | | | GROOMBRIDGE 1616, $+50^{\circ} 7'$. | | | | Σ CAT. GEN. 1198 (2d *), $+44^{\circ} 31'$. | | | | (*) $+4^{\circ} 54'$. | | | |
| Nov. 8 | 42.48 | | | April 5 | 10 2 23.51 | 7.0 | | April 10 | 10 14 30.96 | | | April 19 | 10 27 24.01 | 8.3 | |
| (*) $+18^{\circ} 6'$. | | | | 6 | 23.57 | 7.0 | | May 1 | 10 15 33.62 | 8.0 | | 26 | 23.89 | 8.4 | |
| Mar. 3 | 9 45 42.76 | | | WEISSE (2) 1316, $+20^{\circ} 57'$. | | | | WEISSE 240, $+11^{\circ} 57'$. | | | | WEISSE 526, $-9^{\circ} 10'$. | | | |
| B. A. C. 3376, $+73^{\circ} 28'$. | | | | April 26 | 10 2 28.96 | 7.5 | | May 1 | 10 16 2.65 | | | April 26 | 10 30 32.16 | 9.0 | |
| April 21 | 9 47 14.91 | | | | | | | 26 | 2.66 | 8.3 | | B. A. C. 3629, $+81^{\circ} 5'$. | | | |
| B. A. C. 3385, $-26^{\circ} 45'$. | | | | GROOMBRIDGE 1618, $+50^{\circ} 5'$. | | | | WEISSE 247, $+2^{\circ} 6'$. | | | | April 21 | 10 31 7.37 | | |
| April 19 | 9 47 25.01 | | | April 1 | 10 3 46.45 | 6.0 | | April 19 | 10 16 2.65 | | | May 1 | 7.58 | | |
| 29 | 25.00 | | | 5 | 46.08 | 6.0 | | 26 | 2.66 | 8.3 | | B. A. C. 3652, $+69^{\circ} 48'$. | | | |
| 19 LEONIS MINORIS, $+41^{\circ} 34'$. | | | | 6 | 46.15 | 6.0 | | WEISSE 255, $-3^{\circ} 6'$. | | | | Mar. 6 | 10 34 9.67 | | |
| April 8 | 9 50 5.14 | | | WEISSE 38, $+6^{\circ} 47'$. | | | | April 1 | 10 16 23.17 | 8.2 | | April 10 | 9.85 | 6.0 | |
| 26 | 4.95 | | | April 21 | 10 4 41.28 | | | 5 | 23.08 | | | May 3 | 8.95 | | |
| WEISSE (2) 1038, $+29^{\circ} 8'$. | | | | WEISSE 70, $-10^{\circ} 31'$. | | | | 24 SEXTANTIS, $-0^{\circ} 15'$. | | | | WEISSE 600, $+14^{\circ} 37'$. | | | |
| April 6 | 9 50 5.98 | 7.5 | | April 29 | 10 6 12.12 | | | Mar. 6 | 10 17 7.49 | | | April 1 | 10 35 1.53 | 7.5 | |
| (*) $-38^{\circ} 57'$. | | | | May 1 | 12.08 | 8.0 | | April 6 | 7.60 | 6.0 | | 6 | 1.43 | 7.5 | |
| April 1 | 9 50 49.04 | 7.2 | | LACAILLE 4192, $-31^{\circ} 53'$. | | | | 8 | 7.56 | | | WEISSE 608, $+14^{\circ} 34'$. | | | |
| LACAILLE 4074, $-25^{\circ} 57'$. | | | | April 10 | 10 7 17.57 | | | LALANDE 20169, $+36^{\circ} 50'$. | | | | April 6 | 10 35 15.56 | 9.0 | |
| April 29 | 9 51 9.21 | 6.5 | | 26 | 17.65 | 7.0 | | April 29 | 10 18 18.67 | | | 19 | 15.54 | 8.5 | |
| May 1 | 9.25 | | | 21 SEXTANTIS, $-7^{\circ} 22'$. | | | | B. A. C. 3563, $-6^{\circ} 25'$. | | | | (*) $+4^{\circ} 59'$. | | | |
| LACAILLE 4076, $-26^{\circ} 53'$. | | | | April 1 | 10 7 57.73 | | | Mar. 6 | 10 19 32.39 | | | May 1 | 10 35 22.45 | 8.0 | |
| April 19 | 9 51 18.11 | 6.5 | | 32 URSÆ MAJORIS, $+65^{\circ} 43'$. | | | | April 1 | 32.48 | 6.0 | | (*) $+4^{\circ} 59'$. | | | |
| LACAILLE 4095, $-35^{\circ} 18'$. | | | | Mar. 14 | 10 9 0.75 | | | 5 | 32.43 | | | April 21 | 10 36 58.95 | 7.7 | |
| April 5 | 9 53 33.08 | | | (*) $-30^{\circ} 12'$. | | | | 6 | 32.44 | 6.0 | | May 1 | 58.83 | 7.5 | |
| π LEONIS, $+8^{\circ} 38'$. | | | | April 6 | 10 9 6.39 | | | B. A. C. 3566, $-5^{\circ} 47'$. | | | | 42 LEONIS MINORIS, $31^{\circ} 21'$. | | | |
| Nov. 8 | 9 53 39.55 | | | 8 | 6.33 | | | April 21 | 10 20 4.69 | 7.0 | | Mar. 6 | 10 38 58.04 | | |
| (*) $-34^{\circ} 42'$. | | | | (*) $-28^{\circ} 22'$. | | | | (*) $+12^{\circ} 16'$. | | | | April 1 | 57.93 | 6.0 | |
| April 1 | 9 54 51.89 | 8.0 | | April 29 | 10 10 38.50 | 7.7 | | April 29 | 10 22 23.02 | | | 6 | 57.90 | 5.5 | |
| 6 | 52.08 | 7.5 | | WEISSE (2) 197, $+38^{\circ} 8'$. | | | | O. ARG. N. 10874, $+56^{\circ} 38'$. | | | | (*) $+31^{\circ} 17'$. | | | |
| B. A. C. 3420, $+32^{\circ} 8'$. | | | | April 10 | 10 11 3.97 | 8.0 | | Mar. 31 | 10 22 28.59 | 8.5 | | Mar. 6 | 10 38 59.94 | | |
| April 8 | 9 54 52.53 | | | RADCLIFFE 2472, $+52^{\circ} 2'$. | | | | 8 | 28.60 | 8.5 | | April 1 | 59.91 | | |
| (*) $-38^{\circ} 49'$. | | | | April 5 | 10 11 5.69 | 6.5 | | (*) $+64^{\circ} 55'$. | | | | 6 | 59.94 | 8.0 | |
| April 6 | 9 57 52.12 | 7.5 | | May 1 | 5.44 | 7.0 | | May 3 | 10 22 33.59 | | | κ LEONIS, $+14^{\circ} 51'$. | | | |
| 8 | 51.92 | | | B. A. C. 3521, $-28^{\circ} 22'$. | | | | 36 URSÆ MAJORIS, $+56^{\circ} 38'$. | | | | April 19 | 10 39 51.17 | 6.0 | |
| 19 | 52.14 | 7.8 | | April 29 | 10 12 26.66 | 6.0 | | Mar. 31 | 10 22 40.74 | 5.0 | | 26 | 51.15 | | |
| 26 | 52.18 | | | (*) $-3^{\circ} 27'$. | | | | April 8 | 40.74 | 6.5 | | WEISSE (2) 818, $+38^{\circ} 14'$. | | | |
| LACAILLE 4120, $-32^{\circ} 37'$. | | | | April 1 | 10 12 56.78 | 9.2 | | (*) $-35^{\circ} 34'$. | | | | April 21 | 10 41 20.94 | 7.0 | |
| Mar. 14 | 9 57 56.14 | | | 26 | 56.56 | 8.5 | | April 19 | 10 22 41.79 | 8.0 | | 43 LEONIS MINORIS, $+30^{\circ} 6'$. | | | |
| 31 | 56.13 | 6.5 | | (*) $+2^{\circ} 9'$. | | | | May 1 | 41.50 | 7.0 | | April 5 | 10 42 6.67 | | |
| April 1 | 56.15 | 7.0 | | Mar. 6 | 10 23 28.64 | | | 5 | 20.35 | 6.0 | | 6 | 6.78 | | |
| 5 | 56.25 | | | (*) $+2^{\circ} 9'$. | | | | 6 | 20.38 | | | ι LEONIS, $+11^{\circ} 12'$. | | | |
| | | | | | | | | | | | | Mar. 6 | 10 42 44.29 | | |
| | | | | | | | | | | | | April 10 | 44.41 | | |
| | | | | | | | | | | | | May 1 | 44.27 | | |
| | | | | | | | | | | | | 13 | 44.37 | | |

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|-----------------------------|-------------|------|--|-----------------------------|-------------|------|--|-----------------------------------|-------------|------|--|-----------------------------|-------------|------|--|
| (*)-37° 38'. | | | | B. A. C. 3781, +39° 32'. | | | | 5 CRATERIS, -14° 6'. | | | | (*)+36° 57'. | | | |
| 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | |
| May 3 | 10 43 29.81 | | | April 26 | 10 57 22.79 | 7.0 | | April 6 | 11 13 8.56 | | | April 26 | 11 24 33.38 | 8.0 | |
| O. ARG. S. 10941, -29° 32'. | | | | B. A. C. 3792, -35° 7'. | | | | | | | | LALANDE 21902, +36° 57'. | | | |
| May 3 | 10 46 37.95 | 8.0 | | April 19 | 10 59 2.98 | | | May 4 | 11 13 8.58 | | | April 26 | 11 25 34.74 | 7.0 | |
| (*)-29° 40'. | | | | WEISSE 1044, +13° 15'. | | | | | | | | WEISSE 421, -6° 53'. | | | |
| April 26 | 10 47 3.48 | | | April 5 | 10 59 19.79 | 7.5 | | LALANDE 21645, -12° 0'. | | | | April 10 | 11 25 49.60 | 8.3 | |
| (*)-29° 40'. | | | | 8 | 19.76 | | | April 5 | 11 15 17.82 | | | 29 | 49.37 | 8.0 | |
| May 1 | 10 47 4.23 | 7.7 | | WEISSE (2) 1185, +37° 25'. | | | | May 1 | 11 15 17.79 | 8.0 | | LACAILLE 4773, -28° 25'. | | | |
| O. ARG. S. 10952, -29° 26'. | | | | April 6 | 11 0 10.69 | 8.0 | | 3 | 17.80 | 8.0 | | May 4 | 11 26 22.90 | 8.3 | |
| May 3 | 10 47 22.88 | 7.5 | | May 4 | 10.57 | | | WEISSE (2) 257 (1st *), +37° 47'. | | | | B. A. C. 3927, -39° 48'. | | | |
| WEISSE (2) 944, +37° 27'. | | | | WEISSE 1075, +10° 53'. | | | | April 29 | 11 15 22.79 | | | April 19 | 11 26 46.30 | 6.0 | |
| April 6 | 10 47 47.19 | 7.0 | | April 26 | 11 0 44.54 | 7.5 | | WEISSE (2) 257 (2d *), +37° 47'. | | | | May 1 | 46.24 | 6.5 | |
| 10 | 47.24 | 7.3 | | WEISSE (2) 1196, +37° 27'. | | | | April 10 | 11 15 23.03 | | | 6 | 46.22 | | |
| WEISSE 859, -0° 50'. | | | | May 4 | 11 0 45.62 | | | 29 | 22.97 | | | WEISSE (2) 509, +21° 8'. | | | |
| April 19 | 10 48 14.39 | 7.5 | | (*)-32° 51'. | | | | B. A. C. 3864, +65° 2'. | | | | May 20 | 11 28 35.51 | 6.5 | |
| O. ARG. S. 10974, -29° 40'. | | | | May 3 | 11 1 17.94 | 7.7 | | May 13 | 11 15 28.21 | 5.5 | | 2 DRACONIS, +70° 1'. | | | |
| April 26 | 10 48 57.92 | 8.2 | | (*)-40° 14'. | | | | WEISSE (2) 266, +35° 44'. | | | | May 24 | 11 28 45.32 | | |
| B. A. C. 3747, +78° 27'. | | | | April 29 | 11 2 10.67 | 8.5 | | April 8 | 11 15 58.22 | 7.5 | | 26 | 45.32 | | |
| April 21 | 10 49 57.83 | 6.0 | | B. A. C. 3821, +69° 2'. | | | | 19 | 58.17 | | | ♄ CRATERIS, -9° 6'. | | | |
| 29 | 58.04 | | | April 10 | 11 4 14.62 | | | B. A. C. 3875, -35° 28'. | | | | May 23 | 11 30 23.55 | | |
| May 13 | 57.78 | | | 19 | 14.21 | | | May 4 | 11 17 12.58 | | | v LEONIS, -0° 8'. | | | |
| LALANDE 21081, +36° 45'. | | | | May 13 | 14.16 | | | (*)-0° 11'. | | | | April 5 | 11 30 36.06 | | |
| May 4 | 10 52 37.23 | 6.5 | | O. ARG. S. 11214, -28° 54'. | | | | May 1 | 11 19 27.69 | 6.0 | | 10 | 35.97 | | |
| (*)+12° 31'. | | | | May 3 | 11 4 46.10 | 8.3 | | LACAILLE 4746, -37° 27'. | | | | (*)+71° 15'. | | | |
| April 5 | 10 52 55.52 | | | O. ARG. S. 11226, -29° 5'. | | | | April 10 | 11 20 41.70 | 7.5 | | May 3 | 11 31 2.40 | 9.0 | |
| 6 | 55.47 | 8.3 | | April 29 | 11 6 18.46 | 6.5 | | 26 | (41.23) | | | ι CRATERIS, -12° 30'. | | | |
| May 3 | 55.29 | 8.5 | | May 4 | 18.58 | 7.5 | | B. A. C. 3901, -0° 59'. | | | | May 24 | 11 32 22.27 | | |
| (*)+12° 25'. | | | | ♁ LEONIS, +21° 12'. | | | | April 5 | 11 21 33.65 | 6.5 | | LACAILLE 4837, -37° 23'. | | | |
| April 26 | 10 53 12.21 | 7.0 | | April 5 | 11 7 30.72 | | | 8 | 33.60 | 6.0 | | May 1 | 11 33 50.77 | 6.5 | |
| WEISSE 957, +4° 25'. | | | | 6 | 30.77 | | | τ LEONIS, +3° 32'. | | | | 6 | 51.01 | 7.0 | |
| April 10 | 10 54 13.50 | 8.0 | | 8 | 30.73 | | | May 4 | 11 21 33.63 | | | 61 URSAE MAJORIS, +34° 55'. | | | |
| 19 | 13.66 | 7.5 | | 21 | 30.61 | | | WEISSE 347, +3° 30'. | | | | May 4 | 11 34 30.87 | 6.0 | |
| (*)+12° 31'. | | | | May 6 | 30.75 | | | May 4 | 11 21 34.45 | | | 26 | 31.08 | | |
| May 3 | 10 54 17.41 | 7.5 | | 23 | 30.75 | | | B. A. C. 3903, -0° 11'. | | | | 3 DRACONIS, +67° 26'. | | | |
| (*)+12° 34'. | | | | 24 | 30.79 | | | April 19 | 11 21 42.82 | 7.0 | | April 5 | 11 35 32.32 | | |
| May 3 | 10 54 33.73 | 8.0 | | 26 | 30.78 | | | 29 | 42.62 | 6.5 | | 13 | 32.21 | 5.0 | |
| LACAILLE 4567, -40° 25'. | | | | WEISSE 133, -2° 46'. | | | | B. A. C. 3906, +81° 49'. | | | | 20 | 32.22 | | |
| April 29 | 10 56 29.94 | 6.5 | | April 26 | 11 9 52.20 | 7.5 | | May 1 | 11 22 60.63 | | | 23 | 32.43 | | |
| LALANDE 21185, +36° 48'. | | | | 29 | 52.19 | 7.0 | | 3 | 59.67 | | | RUMKER 3697, +22° 55'. | | | |
| April 5 | 10 56 33.25 | | | WEISSE 137, -2° 56'. | | | | 6 | 60.57 | | | May 3 | 11 35 38.69 | 7.2 | |
| 6 | 33.30 | | | April 19 | 11 10 15.04 | | | 86 LEONIS, +19° 6'. | | | | ζ CRATERIS, -17° 31'. | | | |
| ♐ LEONIS, +0° 4'. | | | | May 1 | 15.06 | 8.5 | | May 1 | 11 22 60.63 | | | April 10 | 11 38 28.84 | 5.5 | |
| April 8 | 10 57 15.87 | 6.0 | | 3 | 14.97 | 8.3 | | 3 | 59.67 | | | 19 | 28.76 | | |
| 10 | 15.68 | 6.5 | | ♑ LEONIS, -2° 55'. | | | | 6 | 60.57 | | | May 1 | 28.86 | 5.0 | |
| 21 | 15.81 | | | April 10 | 11 10 21.56 | 6.0 | | 5 CRATERIS, -14° 6'. | | | | | | | |
| | | | | May 1 | 21.39 | | | May 20 | 11 24 0.69 | | | | | | |

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|-----------------------------------|-------|-------|-------|----------------------------|-------|-------|-------|-----------------------------|-------|-------|-------|---------------------------|-------|-------|-------|
| RUMKER 3727, +14° 58'. | | | | B. A. C. 4036, +62° 15'. | | | | o VIRGINIS. | | | | WEISSE 114, -9° 35'. | | | |
| 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. |
| May 3 | . . | 11 38 | 47.41 | May 13 | . . | 11 50 | 24.17 | May 4 | . . | 11 58 | 53.56 | May 24 | . . | 12 10 | 12.31 |
| 24 | . . | | 47.50 | 20 | . . | | 21.02 | 26 | . . | | 53.54 | | | | |
| | | | | 23 | . . | | 24.27 | 29 | . . | | 53.53 | | | | |
| | | | | 24 | . . | | 24.09 | | | | | | | | |
| WEISSE (2) 746, +20° 35'. | | | | B. A. C. 4037, -32° 37'. | | | | O. ARG. S. 11920, -23° 16'. | | | | WEISSE 144, +7° 18'. | | | |
| May 4 | . . | 11 38 | 55.10 | May 26 | . . | 11 50 | 46.02 | May 24 | . . | 12 1 | 15.63 | April 19 | . . | 12 11 | 6.98 |
| | | | | | | | | | | | | 29 | . . | | 6.95 |
| B. A. C. 3988, -39° 49'. | | | | B. A. C. 4042, -25° 12'. | | | | (*)+29° 39'. | | | | WEISSE (2) 199, +29° 39'. | | | |
| April 29 | . . | 11 40 | 36.40 | May 6 | . . | 11 52 | 35.19 | April 10 | . . | 12 1 | 15.64 | April 21 | . . | 12 11 | 15.60 |
| | | | | | | | | | | | | | | | 6.5 |
| O. ARG. S. 11656, -25° 16'. | | | | WEISSE (2) 1013, +33° 51'. | | | | a CORVI, -24° 1'. | | | | LACAILLE 5097, -31° 53'. | | | |
| April 10 | . . | 11 41 | 4.84 | May 27 | . . | 11 52 | 54.62 | April 26 | . . | 12 2 | 1.18 | May 4 | . . | 12 13 | 3.82 |
| 26 | . . | | 4.81 | | | | 6.0 | May 3 | . . | | 1.20 | | | | |
| | | | | | | | | 4 | . . | | 1.22 | | | | |
| A ¹ VIRGINIS, +5° 56'. | | | | b VIRGINIS, +4° 20'. | | | | (*)-27° 18'. | | | | η VIRGINIS, +0° 1'. | | | |
| May 20 | . . | 11 41 | 32.62 | April 29 | . . | 11 53 | 35.74 | April 29 | . . | 12 2 | 7.26 | April 26 | . . | 12 13 | 33.74 |
| 24 | . . | | 32.62 | | | | 5.5 | May 6 | . . | | 7.56 | May 3 | . . | | 33.80 |
| | | | | | | | | | | | | 13 | . . | | 33.68 |
| B. A. C. 3994, -26° 3'. | | | | WEISSE 908, +8° 39'. | | | | (*)-27° 16'. | | | | 23 | . . | | 33.78 |
| May 4 | . . | 11 42 | 29.60 | April 10 | . . | 11 54 | 4.30 | May 6 | . . | 12 2 | 18.09 | 24 | . . | | 33.76 |
| | | | | May 3 | . . | | 4.01 | | | | | 27 | . . | | 33.74 |
| β LEONIS, +15° 16'. | | | | WEISSE 921, +8° 36'. | | | | 11 VIRGINIS, +6° 30'. | | | | June 5 | . . | | 33.80 |
| April 5 | . . | 11 42 | 44.08 | May 3 | . . | 11 54 | 40.41 | May 13 | . . | 12 3 | 44.24 | WEISSE 199, +6° 27'. | | | |
| 19 | . . | | 44.00 | | | | 8.2 | 23 | . . | | 44.14 | May 6 | . . | 12 13 | 52.21 |
| 21 | . . | | 44.00 | | | | | 27 | . . | | 44.21 | | | | 9.0 |
| May 1 | . . | | 44.07 | B. A. C. 4055, +4° 20'. | | | | LACAILLE 5044, -24° 15'. | | | | (*)+26° 32'. | | | |
| 3 | . . | | 44.11 | May 13 | . . | 11 54 | 49.37 | May 26 | . . | 12 4 | 5.19 | May 24 | . . | 12 16 | 17.16 |

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|---------------------------------------|-----------------|------|--|---------------------------------------|-----------------|------|--|--|-----------------|------|--|---------------------------------------|-----------------|------|--|
| B. A. C. 4198, $-15^{\circ} 56'$. | | | | B. A. C. 4243, $-40^{\circ} 19'$. | | | | O. ARG. S. 12389, $-28^{\circ} 3'$. | | | | (*) $-9^{\circ} 4'$. | | | |
| 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | |
| May 20 | . . 12 21 23.20 | | | May 29 | . . 12 29 5.29 | 5.5 | | April 21 | . . 12 38 39.36 | | | April 29 | . . 12 51 0.42 | 6.5 | |
| WEISSE 335, $-6^{\circ} 53'$. | | | | LACAILLE 5214, $-39^{\circ} 11'$. | | | | 10 CANUM VENAT., $+39^{\circ} 58'$. | | | | 'WEISSE 880, $-9^{\circ} 8'$. | | | |
| May 29 | . . 12 21 36.54 | 8.0 | | May 23 | . . 12 29 21.17 | 6.0 | | April 26 | . . 12 39 7.12 | | | April 19 | . . 12 52 40.66 | 7.0 | |
| (*) $-37^{\circ} 15'$. | | | | O. ARG. S. 12286, $-25^{\circ} 40'$. | | | | WEISSE 668, $-8^{\circ} 31'$. | | | | May 29 | . . 40.80 | | |
| April 10 | . . 12 22 18.21 | 8.0 | | May 24 | . . 12 30 41.34 | 8.5 | | May 4 | . . 12 40 40.63 | 6.0 | | May 24 | . . 40.76 | 7.5 | |
| May 23 | . . 18.22 | 7.3 | | 26 | . . 41.24 | 8.0 | | (*) $-26^{\circ} 52'$. | | | | (*) $+69^{\circ} 23'$. | | | |
| 24 | . . 18.09 | 7.5 | | O. ARG. S. 12288, $-27^{\circ} 43'$. | | | | April 15 | . . 12 41 18.47 | 9.0 | | April 10 | . . 12 53 34.24 | 7.8 | |
| (*) $-15^{\circ} 49'$. | | | | April 29 | . . 12 30 57.56 | 7.7 | | 19 | . . 18.05 | 8.0 | | 15 | . . 34.34 | 7.0 | |
| May 27 | . . 12 23 26.05 | 8.0 | | WEISSE 498, $-2^{\circ} 52'$. | | | | B. A. C. 4297, $-26^{\circ} 50'$. | | | | 21 | . . 33.95 | | |
| δ CORVI, $-15^{\circ} 49'$. | | | | April 10 | . . 12 31 10.23 | 8.5 | | April 15 | . . 12 41 49.97 | | | 46 VIRGINIS, $-2^{\circ} 39'$. | | | |
| May 27 | . . 12 23 26.96 | 4.5 | | B. A. C. 4255, $-3^{\circ} 41'$. | | | | 19 | . . 49.71 | 6.0 | | May 1 | . . 12 54 12.83 | | |
| June 5 | . . 27.04 | | | May 6 | . . 12 32 20.98 | 6.0 | | 7 DRACONIS, $+67^{\circ} 28'$. | | | | 6 | . . 12.96 | | |
| LACAILLE 5188, $-30^{\circ} 56'$. | | | | 27 | . . 20.86 | 6.5 | | May 1 | . . 12 42 29.86 | 6.0 | | GROOMBRIDGE 1947, $+69^{\circ} 27'$. | | | |
| May 3 | . . 12 24 35.57 | 7.5 | | June 6 | . . 20.90 | | | 6 | . . 29.75 | 5.5 | | April 10 | . . 12 54 21.38 | 8.3 | |
| 4 DRACONIS, $+69^{\circ} 55'$. | | | | B. A. C. 4262, $-39^{\circ} 18'$. | | | | 24 | . . 29.25 | | | LACAILLE 5367, $-27^{\circ} 35'$. | | | |
| April 19 | . . 12 24 40.02 | 5.0 | | May 3 | . . 12 33 10.11 | 5.5 | | 11 CANUM VENAT., $+49^{\circ} 9'$. | | | | April 26 | . . 12 55 39.62 | 7.0 | |
| 21 | . . 39.56 | | | 29 | . . 9.96 | 5.5 | | May 13 | . . 12 42 59.15 | | | May 13 | . . 39.65 | 6.5 | |
| May 1 | . . 39.67 | | | LALANDE 23666, $+34^{\circ} 54'$. | | | | WEISSE (2) 868, $+26^{\circ} 55'$. | | | | 24 | . . 39.50 | | |
| 4 | . . 39.54 | | | May 1 | . . 12 34 6.19 | 7.5 | | April 21 | . . 12 43 28.19 | 8.0 | | LACAILLE 5379, $-24^{\circ} 50'$. | | | |
| LACAILLE 5189, $-40^{\circ} 21'$. | | | | 4 | . . 6.26 | 7.5 | | 26 | . . 28.32 | | | April 29 | . . 12 57 15.52 | 7.2 | |
| April 29 | . . 12 25 19.87 | 7.0 | | 13 | . . 6.25 | 6.5 | | LACAILLE 5295, $-29^{\circ} 54'$. | | | | May 4 | . . 15.74 | 7.0 | |
| LACAILLE 5192, $-26^{\circ} 52'$. | | | | 14 | . . 6.34 | 6.0 | | May 3 | . . 12 43 43.54 | 7.5 | | LACAILLE 5382, $-27^{\circ} 43'$. | | | |
| May 26 | . . 12 25 37.99 | 6.7 | | LACAILLE 5239, $-27^{\circ} 0'$. | | | | WEISSE 743, $-12^{\circ} 46'$. | | | | April 21 | . . 12 57 39.58 | 7.0 | |
| 29 | . . 38.01 | 6.5 | | April 10 | . . 12 34 16.52 | 8.0 | | April 10 | . . 12 41 58.38 | 8.0 | | May 1 | . . 39.60 | | |
| O. ARG. N. 12726, $+64^{\circ} 27'$. | | | | 15 | . . 16.56 | 8.3 | | 15 | . . 58.41 | 8.0 | | B. A. C. 4378, $-40^{\circ} 55'$. | | | |
| May 6 | . . 12 26 23.40 | 7.5 | | 19 | . . 16.53 | 7.0 | | WEISSE 786, $+0^{\circ} 48'$. | | | | May 3 | . . 12 59 33.97 | | |
| O. ARG. S. 12243, $-22^{\circ} 48'$. | | | | O. ARG. S. 12338, $-27^{\circ} 12'$. | | | | April 29 | . . 12 47 15.19 | | | 13 | . . 34.07 | | |
| April 26 | . . 12 27 17.71 | 8.3 | | April 21 | . . 12 34 38.62 | 7.0 | | (*) $-27^{\circ} 15'$. | | | | 14 CANUM VENAT., $+36^{\circ} 28'$. | | | |
| O. ARG. S. 12246, $-22^{\circ} 50'$. | | | | 26 | . . 38.63 | 7.0 | | April 10 | . . 12 47 35.76 | 7.8 | | May 4 | . . 12 59 56.38 | | |
| April 26 | . . 12 27 34.33 | 7.5 | | O. ARG. S. 12342, $-24^{\circ} 18'$. | | | | 21 | . . 35.65 | | | θ VIRGINIS, $-4^{\circ} 53'$. | | | |
| O. ARG. S. 12254, $-22^{\circ} 46'$. | | | | May 26 | . . 12 34 54.13 | 7.5 | | (*) $-27^{\circ} 15'$. | | | | April 10 | . . 13 3 31.84 | | |
| April 26 | . . 12 27 34.33 | 7.5 | | LACAILLE 5252, $-37^{\circ} 13'$. | | | | April 19 | . . 12 47 36.33 | 9.5 | | 15 | . . 31.87 | | |
| O. ARG. S. 12254, $-22^{\circ} 46'$. | | | | May 24 | . . 12 35 49.92 | 7.5 | | B. A. C. 4331, $-43^{\circ} 28'$. | | | | 19 | . . 31.86 | | |
| April 10 | . . 12 28 18.18 | 9.0 | | WEISSE 585, $-4^{\circ} 45'$. | | | | May 24 | . . 12 48 4.27 | | | 27 | . . 31.89 | | |
| WEISSE (2) 581, $+21^{\circ} 35'$. | | | | May 27 | . . 12 36 12.72 | 7.5 | | (*) $-14^{\circ} 18'$. | | | | May 1 | . . 31.84 | | |
| May 27 | . . 12 28 20.40 | 7.7 | | LALANDE 23711, $+34^{\circ} 22'$. | | | | May 4 | . . 12 48 55.70 | | | 4 | . . 31.87 | | |
| WEISSE (2) 599, $+22^{\circ} 35'$. | | | | April 29 | . . 12 36 17.91 | 8.3 | | δ VIRGINIS, $+4^{\circ} 5'$. | | | | 6 | . . 32.00 | | |
| May 1 | . . 12 28 56.33 | 6.5 | | May 6 | . . 17.95 | 7.0 | | May 1 | . . 12 49 21.45 | | | O. ARG. S. 12687, $-23^{\circ} 10'$. | | | |
| 4 | . . 56.33 | | | LACAILLE 5256, $-24^{\circ} 18'$. | | | | 6 | . . 21.51 | 5.0 | | April 21 | . . 13 3 39.56 | 8.2 | |
| June 6 | . . 56.36 | | | May 3 | . . 12 36 38.90 | 6.2 | | B. A. C. 4345, $+38^{\circ} 59'$. | | | | B. A. C. 4407, $+38^{\circ} 4'$. | | | |
| WEISSE 463, $+2^{\circ} 57'$. | | | | 26 | . . 38.79 | 6.2 | | April 15 | . . 12 50 12.24 | | | May 13 | . . 13 3 55.51 | | |
| April 21 | . . 12 28 56.81 | 7.5 | | LACAILLE 5257, $-25^{\circ} 37'$. | | | | α CANUM VENAT., $+38^{\circ} 59'$. | | | | April 10 | . . 13 7 38.53 | | |
| O. ARG. S. 12259, $-28^{\circ} 2'$. | | | | May 29 | . . 12 36 57.02 | 7.2 | | April 15 | . . 12 50 13.46 | | | 15 | . . 38.47 | | |
| May 3 | . . 12 29 2.79 | 8.2 | | B. A. C. 4282, $+44^{\circ} 28'$. | | | | B. A. C. 4431, $+2^{\circ} 6'$. | | | | B. A. C. 4437, $-30^{\circ} 49'$. | | | |
| | | | | May 12 | . . 12 38 35.78 | 5.5 | | | | | | May 23 | . . 13 10 0.14 | | |
| | | | | | | | | | | | | 24 | . . 0.01 | | |

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|--|----------|-------|-----|--------------------------------------|----------|-------|-----|--|---------------|-------|-----|---|----------|-------|-----|
| O. ARG. S. 12800, $-23^{\circ} 49'$. | | | | WEISSE (2) 782, $+22^{\circ} 30'$. | | | | (*) $+23^{\circ} 28'$. | | | | O. ARG. S. 13387, $-26^{\circ} 45'$. | | | |
| 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | |
| May 23 | 13 13 | 33.25 | 8.5 | May 3 | 13 38 | 25.52 | | May 29 | 13 52 | 51.16 | 9.0 | June 6 | 13 59 | 57.38 | 7.5 |
| 24 | | 33.43 | 8.3 | 23 | | 25.21 | 8.5 | June 8 | | 51.34 | | 8 | | 57.39 | 7.0 |
| | | | | 24 | | 25.37 | 8.5 | | | | | 9 | | 57.39 | 7.0 |
| LALANDE 24841, $+40^{\circ} 6'$. | | | | B. A. C. 4578, $-6^{\circ} 59'$. | | | | Σ CAT. GEN. 1570 (1st *), $+26^{\circ} 25'$. | | | | WEISSE (2) 1314, $+34^{\circ} 59'$. | | | |
| May 13 | 13 17 | 51.69 | | April 26 | 13 38 | 26.90 | 7.0 | May 6 | 13 53 | 23.51 | | April 21 | 14 0 | 33.39 | |
| 23 | | 51.73 | 7.5 | May 4 | | 26.98 | | June 5 | | 23.44 | 8.5 | 26 | | 33.41 | 7.5 |
| 24 | | 51.71 | 7.2 | | | | | 6 | | 23.21 | | May 26 | | 33.67 | 7.7 |
| α VIRGINIS, $-10^{\circ} 31'$. | | | | B. A. C. 4593, $-6^{\circ} 4'$. | | | | Σ CAT. GEN. 1570 (2d *), $26^{\circ} 25'$. | | | | June 5 | | 33.61 | 7.8 |
| April 10 | 13 18 | 39.81 | | April 21 | 13 40 | 56.57 | 6.5 | May 6 | 13 53 | 23.73 | | (*) $-26^{\circ} 4'$. | | | |
| 15 | | 39.79 | | May 6 | | 56.72 | 7.0 | June 5 | | 23.59 | 8.0 | June 14 | 14 1 | 29.50 | 8.0 |
| 19 | | 39.79 | | 13 | | 56.76 | 6.5 | 6 | | 23.62 | | O. ARG. S. 13438, $-25^{\circ} 45'$. | | | |
| 21 | | 39.81 | | June 8 | | 56.75 | | | | | | June 9 | 14 4 | 17.00 | 7.8 |
| 26 | | 39.78 | | | | | | | | | | 20 | | 16.85 | |
| May 1 | | 39.77 | | η VIRGINIS, $-6^{\circ} 12'$. | | | | WEISSE (2) 1159, $+23^{\circ} 29'$. | | | | LALANDE 26013, $+37^{\circ} 55'$. | | | |
| B. A. C. 4506, $+73^{\circ} 2'$. | | | | April 26 | 13 41 | 48.83 | 6.5 | May 4 | 13 53 | 34.14 | 8.3 | June 8 | 14 4 | 31.17 | |
| April 19 | 13 22 | 58.46 | | May 4 | | 48.87 | | 23 | | 34.21 | | 14 | | 31.16 | |
| 21 | | 58.12 | | | | | | 24 | | 34.42 | 8.3 | 21 | | 31.19 | |
| WEISSE 370, $+8^{\circ} 4'$. | | | | O. ARG. S. 13159, $-20^{\circ} 6'$. | | | | WEISSE (2) 1167, $+23^{\circ} 29'$. | | | | (*) $-24^{\circ} 34'$. | | | |
| April 15 | 13 24 | 9.87 | 8.3 | May 3 | 13 42 | 9.07 | 7.5 | April 21 | 13 53 | 55.05 | | May 23 | 14 4 | 34.35 | 7.5 |
| 26 | | 10.05 | 8.0 | | | | | 26 | | 55.20 | | 24 | | 34.30 | 8.0 |
| LAMONT 4068, $-1^{\circ} 39'$. | | | | B. A. C. 4613, $-20^{\circ} 13'$. | | | | (*) $+77^{\circ} 11'$. | | | | B. A. C. 4714, $+32^{\circ} 53'$. | | | |
| May 4 | 13 24 | 47.32 | 8.2 | May 23 | 13 43 | 25.65 | 7.0 | May 13 | 13 54 | 31.26 | 7.5 | May 26 | 14 5 | 50.77 | 6.0 |
| (*) $+61^{\circ} 54'$. | | | | 24 | | 25.65 | 7.0 | 26 | | 31.42 | 7.8 | 27 | | 50.68 | |
| May 23 | 13 25 | 20.19 | 8.3 | LACAILLE 5710, $-23^{\circ} 46'$. | | | | WEISSE 931, $+2^{\circ} 10'$. | | | | June 27 | | 50.64 | 6.0 |
| 24 | | 19.36 | 8.2 | June 8 | 13 44 | 30.92 | 6.5 | May 29 | 13 55 | 15.19 | | 29 | | 50.58 | 6.0 |
| LAMONT 4071, $-1^{\circ} 40'$. | | | | (*) $-38^{\circ} 27'$. | | | | June 8 | | 15.30 | 9.0 | June 5 | | 50.58 | 6.0 |
| May 4 | 13 25 | 23.62 | 7.0 | May 6 | 13 46 | 5.78 | 7.5 | B. A. C. 4671, $-26^{\circ} 50'$. | | | | 14 BOOTIS, $+13^{\circ} 32'$. | | | |
| 6 | | 23.65 | 7.0 | 13 | | 5.96 | 8.0 | June 14 | 13 55 | 20.03 | | June 6 | 14 8 | 7.40 | 6.0 |
| 13 | | 23.70 | 7.0 | | | | | | | | | 20 | | 7.22 | 5.5 |
| ζ VIRGINIS, $+0^{\circ} 2'$. | | | | April 15 | 13 46 | 19.25 | 5.5 | 11 BOOTIS, $+27^{\circ} 59'$. | | | | 21 | | 7.30 | |
| May 3 | 13 28 | 22.62 | | 21 | | 19.02 | | June 9 | 13 55 | 33.11 | 6.5 | LALANDE 26054, $-16^{\circ} 52'$. | | | |
| 24 | | 22.62 | | WEISSE 797, $+10^{\circ} 51'$. | | | | WEISSE 942, $+2^{\circ} 10'$. | | | | April 21 | 14 8 | 23.22 | 8.0 |
| WEISSE 461, $+7^{\circ} 6'$. | | | | May 4 | 13 47 | 50.51 | 8.0 | June 8 | 13 55 | 43.42 | 9.0 | α BOOTIS, $+19^{\circ} 50'$. | | | |
| April 21 | 13 28 | 43.44 | 8.3 | η BOOTIS, $+19^{\circ} 1'$. | | | | (*) $-37^{\circ} 10'$. | | | | April 15 | 14 10 | 0.33 | |
| WEISSE 472, $+7^{\circ} 9'$. | | | | April 26 | 13 48 | 46.79 | | May 27 | 13 56 | 37.95 | 7.5 | 21 | | 0.33 | |
| April 21 | 13 29 | 1.53 | 9.0 | May 3 | | 46.84 | | June 5 | | 38.12 | 8.0 | 26 | | 0.41 | |
| WEISSE 569, $-8^{\circ} 2'$. | | | | 13 | | 46.92 | | B. A. C. 4680, $-8^{\circ} 36'$. | | | | May 4 | | 0.35 | |
| May 3 | 13 34 | 26.90 | | 26 | | 46.90 | | April 21 | 13 57 | 47.45 | 6.5 | 6 | | 0.34 | |
| 4 | | 26.77 | | 27 | | 46.90 | | 26 | | 47.47 | 6.5 | 13 | | 0.38 | |
| 24 | | 26.79 | 8.3 | 29 | | 46.86 | | June 21 | | 47.47 | | 24 | | 0.30 | |
| m VIRGINIS, $-8^{\circ} 0'$. | | | | June 5 | | 46.84 | | B. A. C. 4682, $-15^{\circ} 44'$. | | | | June 9 | | 0.45 | |
| April 15 | 13 35 | 6.27 | 7.0 | 6 | | 46.81 | | June 14 | 13 58 | 28.89 | | 21 | | 0.37 | |
| WEISSE 626, $-12^{\circ} 16'$. | | | | 23 | | 46.91 | | (*) $-33^{\circ} 5'$. | | | | 26 | | 0.34 | |
| April 21 | 13 37 | 35.69 | 8.0 | 20 | | 46.87 | | May 6 | 13 58 (31.80) | 8.5 | | WEISSE (2) 196 (1st *), $+20^{\circ} 42'$. | | | |
| May 6 | | 35.91 | 8.3 | (*) $-37^{\circ} 46'$. | | | | 23 | | 31.35 | 8.0 | May 23 | 14 10 | 46.98 | 6.0 |
| 13 | | 35.92 | 8.0 | May 23 | 13 49 | 27.57 | 7.5 | 24 | | 31.38 | | 26 | | 47.09 | |
| WEISSE (2) 777, $+22^{\circ} 28'$. | | | | B. A. C. 4652, $+32^{\circ} 40'$. | | | | θ CENTAURI, $-35^{\circ} 44'$. | | | | June 5 | | 47.05 | 6.5 |
| May 3 | 13 38 | 7.12 | | April 15 | 13 50 | 40.32 | | May 4 | 13 59 | 23.38 | | WEISSE (2) 196 (2d *), $+20^{\circ} 42'$. | | | |
| 23 | | 7.20 | 8.2 | 21 | | 40.23 | | 13 | | 23.53 | | May 26 | 14 10 | 47.09 | |
| 24 | | 6.99 | 8.0 | | | | | | | | | June 5 | | 47.18 | 9.0 |
| | | | | | | | | (*) $-5^{\circ} 22'$. | | | | June 14 | 14 11 | 8.02 | 8.5 |

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|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| ϵ BOOTIS, $+51^{\circ} 56'$. 1876. h. m. s. Mag. May 27 . . 14 11 46.55 5.5 29 46.55 6.0 June 8 46.38 5.5 | | | | O. ARG. S. 13629, $-27^{\circ} 21'$. 1876. h. m. s. Mag. May 6 . . 14 20 16.97 7.5 26 17.00 8.0 27 16.81 7.5 | | | | LACAILLE 6015, $-38^{\circ} 15'$. 1876. h. m. s. Mag. June 26 . . 14 30 35.38 6.0 | | | | a^2 LIBRÆ, $-15^{\circ} 31'$. 1876. h. m. s. Mag. May 23 . . 14 44 1.20 27 1.25 29 1.25 June 6 1.28 24 1.22 | | | |
| WEISSE 173, $-5^{\circ} 22'$. June 6 . . 14 11 27.10 7.5 14 27.21 7.5 | | | | WEISSE 362, $-1^{\circ} 12'$. June 5 . . 14 20 56.62 106 VIRGINIS, $-6^{\circ} 21'$. June 14 . . 14 22 9.51 | | | | B. A. C. 4838, $+26^{\circ} 10'$. June 20 . . 14 32 27.62 6.5 | | | | WEISSE (2) 936, $+36^{\circ} 34'$. May 26 . . 14 44 3.13 June 20 3.13 | | | |
| O. ARG. N. 14432, $+51^{\circ} 56'$. May 27 . . 14 11 48.78 8.2 29 48.93 8.5 June 8 48.81 8.0 | | | | (*) $+38^{\circ} 7'$. June 20 . . 14 23 4.91 7.0 | | | | WEISSE 608, $-10^{\circ} 50'$. June 9 . . 14 34 37.36 7.3 | | | | LACAILLE 6135, $-33^{\circ} 38'$. June 9 . . 14 46 49.21 7.0 21 49.03 | | | |
| B. A. C. 4752, $+51^{\circ} 53'$. June 8 . . 14 12 56.75 7.5 | | | | B. A. C. 4798, $+1^{\circ} 23'$. June 6 . . 14 23 31.30 | | | | π BOOTIS (1st *), $+16^{\circ} 57'$. May 23 . . 14 34 54.07 29 53.95 June 5 54.03 8 54.01 | | | | O. ARG. S. 14065, $-26^{\circ} 17'$. June 14 . . 14 49 8.44 | | | |
| (*) $-38^{\circ} 6'$. May 23 . . 14 14 13.00 7.5 June 20 13.16 7.0 | | | | O. ARG. S. 13683, $-24^{\circ} 1'$. May 6 . . 14 23 46.66 9.0 23 46.45 8.0 29 46.46 | | | | LACAILLE 6162, $-28^{\circ} 38'$. June 26 . . 14 49 49.81 6.5 | | | | B. A. C. 4923 (1st *), $-20^{\circ} 51'$. May 23 . . 14 50 12.67 8.3 June 5 12.72 | | | |
| WEISSE 236, $-4^{\circ} 38'$. June 5 . . 14 14 50.40 7.0 | | | | WEISSE 445, $-1^{\circ} 15'$. June 5 . . 14 25 39.41 8.2 14 39.61 7.8 | | | | π BOOTIS (2d *), $+16^{\circ} 57'$. May 23 . . 14 34 54.48 29 54.38 7.5 June 5 54.52 8 54.38 | | | | B. A. C. 4923 (2d *), $-20^{\circ} 51'$. May 23 . . 14 50 13.65 6.5 June 15 13.68 6.5 | | | |
| (*) $-4^{\circ} 44'$. May 27 . . 14 14 51.63 9.0 June 14 51.66 8.5 | | | | LACAILLE 5967, $-34^{\circ} 8'$. June 26 . . 14 25 41.20 | | | | ζ BOOTIS, $+14^{\circ} 16'$. May 26 . . 14 35 13.78 5.0 June 6 13.68 14 13.76 5.0 | | | | (*) $+38^{\circ} 28'$. June 20 . . 14 50 52.65 7.5 | | | |
| WEISSE 254, $-4^{\circ} 39'$. May 6 . . 14 15 39.10 26 38.95 June 5 38.98 8.5 | | | | 26 BOOTIS, $+22^{\circ} 48'$. June 8 . . 14 26 54.45 20 54.35 6.0 | | | | LACAILLE 4852, $-34^{\circ} 37'$. May 27 . . 14 36 4.62 5.0 June 21 4.66 | | | | WEISSE (2) 1127, $+40^{\circ} 41'$. May 26 . . 14 52 44.39 8.0 June 9 44.13 30 44.28 8.0 | | | |
| WEISSE 257, $-4^{\circ} 44'$. May 27 . . 14 15 48.05 | | | | LACAILLE 5999, $-39^{\circ} 4'$. June 21 . . 14 28 39.65 | | | | WEISSE (2) 788, $+37^{\circ} 17'$. June 26 . . 14 37 38.51 7.0 | | | | WEISSE (2) 1130, $+40^{\circ} 41'$. May 26 . . 14 52 45.29 8.5 June 9 44.92 30 45.14 8.5 | | | |
| 2 LIBRÆ, $-11^{\circ} 8'$. May 23 . . 14 16 45.44 6.0 | | | | O. ARG. S. 13747, $-27^{\circ} 41'$. May 6 . . 14 29 15.28 7.5 23 15.24 7.5 26 15.24 7.8 27 15.16 7.7 | | | | LAMONT 4482, $+0^{\circ} 9'$. June 20 . . 14 39 16.39 | | | | WEISSE (2) 1139, $+40^{\circ} 42'$. June 14 . . 14 52 59.04 8.5 | | | |
| LACAILLE 5925, $-36^{\circ} 53'$. June 21 . . 14 17 27.55 6.5 | | | | LAMONT 4429, $+1^{\circ} 35'$. June 9 . . 14 29 28.08 9.2 | | | | ϵ BOOTIS, $+27^{\circ} 36'$. May 23 . . 14 39 34.41 27 34.30 June 14 34.27 21 34.30 | | | | WEISSE (2) 1147, $+40^{\circ} 44'$. June 30 . . 14 53 20.02 8.3 | | | |
| (*) $-11^{\circ} 5'$. May 23 . . 14 18 1.12 6.5 29 1.03 6.5 June 6 1.15 6.0 | | | | (*) $-27^{\circ} 42'$. May 27 . . 14 29 50.78 9.0 June 5 51.01 9.0 14 50.75 8.5 | | | | 55 HYDRÆ, $-25^{\circ} 5'$. May 26 . . 14 40 10.02 5.5 June 5 10.04 6.0 6 10.05 6.0 | | | | O. ARG. N. 14996, $+59^{\circ} 52'$. May 27 . . 14 53 24.45 June 8 24.41 7.5 | | | |
| B. A. C. 4778, $+37^{\circ} 45'$. June 8 . . 14 18 20.52 7.0 | | | | (*) $-27^{\circ} 41'$. May 29 . . 14 29 52.24 9.0 | | | | (*) $+37^{\circ} 26'$. June 26 . . 14 41 2.87 8.0 | | | | LACAILLE 6186, $-37^{\circ} 33'$. June 21 . . 14 54 21.71 | | | |
| RUMKER 4697, $+1^{\circ} 33'$. June 20 . . 14 19 37.14 6.5 | | | | (*) $-27^{\circ} 44'$. May 26 . . 14 29 59.65 8.5 June 5 59.52 8.5 14 59.59 8.3 | | | | (*) $-36^{\circ} 52'$. June 8 . . 14 42 22.12 7.5 9 22.11 8.0 | | | | (*) $+10^{\circ} 24'$. June 26 . . 14 56 26.93 | | | |
| LACAILLE 5945, $-34^{\circ} 48'$. June 26 . . 14 20 1.37 | | | | B. A. C. 4830, $+49^{\circ} 54'$. June 8 . . 14 30 19.56 5.5 | | | | WEISSE (2) 932, $+26^{\circ} 34'$. June 20 . . 14 43 47.20 | | | | (*) $+10^{\circ} 24'$. June 20 . . 14 56 27.65 9.0 | | | |
| O. ARG. S. 13626, $-27^{\circ} 21'$. May 6 . . 14 20 8.21 8.5 26 8.31 8.5 27 8.21 8.2 | | | | | | | | | | | | | | | |

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|---|-------|-------|-------|--|---|-----|-------------|---------------------------------------|---|---------------------------------------|-------------|--|---|-------------|--|--|---------------------------------------|-------------|--|--|--|--|
| WEISSE 1048, $-10^{\circ} 29'$. | | | | (*) $-37^{\circ} 2'$. | | | | ζ^3 LIBRÆ, $-16^{\circ} 11'$. | | | | ζ CORONÆ BOREALIS (2d *), $+37^{\circ} 4'$. | | | | | | | | | | |
| 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | | | | | | | |
| June 8 | . . | 14 57 | 10.68 | 8.0 | June 26 | . . | 15 8 13.52 | 8.0 | June 21 | . . | 15 23 40.66 | 6.5 | July 17 | . . | 15 34 42.57 | | | | | | | |
| 9 | . . | 10.70 | 7.5 | | | | | | 30 | . . | 40.73 | | 21 | . . | 42.35 | | | | | | | |
| WEISSE 1063, $-10^{\circ} 32'$. | | | | B. A. C. 5026 (1st *), $+38^{\circ} 43'$. | | | | WEISSE (2) 518, $+37^{\circ} 9'$. | | | | WEISSE (2) 845, $+43^{\circ} 11'$. | | | | | | | | | | |
| May 26 | . . | 14 57 | 33.87 | 8.0 | June 9 | . . | 15 8 52.28 | 7.3 | June 26 | . . | 15 23 54.69 | 5.8 | June 14 | . . | 15 35 16.29 | 7.5 | | | | | | |
| June 8 | . . | 33.81 | 8.0 | | 30 | . . | 52.28 | | | | | | 21 | . . | 16.22 | | | | | | | |
| 9 | . . | 33.85 | 8.0 | | B. A. C. 5026 (2d *), $+38^{\circ} 43'$. | | | | (*) $-27^{\circ} 44'$. | | | | 24 | . . | 16.18 | | | | | | | |
| LACAILLE 6219, $-30^{\circ} 3'$. | | | | June 30 | | | | . . | 15 8 52.32 | May 26 | | | | . . | 15 24 37.14 | 8.0 | | | | | | |
| June 21 | . . | 14 58 | 3.53 | | β LIBRÆ, $-8^{\circ} 55'$. | | | | June 6 | | | | . . | 37.12 | 7.5 | | | | | | | |
| B. A. C. 4982, $+83^{\circ} 1'$. | | | | May 26 | | | | . . | 15 10 20.07 | 14 | | | | . . | 37.06 | 7.5 | | | | | | |
| May 27 | . . | 14 58 | 49.70 | 6.0 | 29 | . . | 20.16 | | 21 | | | | . . | 36.91 | 7.5 | | | | | | | |
| June 30 | . . | 49.50 | | | June 5 | . . | 20.02 | | O. ARG. S. 14618, $-24^{\circ} 41'$. | | | | June 8 | | | | . . | 15 38 | 9.71 | | | |
| (*) $-10^{\circ} 42'$. | | | | June 6 | | | | . . | 20.12 | June 6 | | | | . . | 15 26 33.09 | 7.5 | 26 | . . | 9.69 | | | |
| June 26 | . . | 14 59 | 21.56 | 8.3 | 21 | . . | 20.14 | | June 9 | | | | . . | 33.02 | 7.5 | 17 | . . | 9.69 | | | | |
| γ BOOTIS (1st *), $+48^{\circ} 8'$. | | | | 24 | | | | . . | 20.13 | O. ARG. S. 14665, $-24^{\circ} 40'$. | | | | 21 | | | | . . | 9.71 | | | |
| June 5 | . . | 14 59 | 41.87 | | O. ARG. N. 15259, $+67^{\circ} 24'$. | | | | May 26 | | | | . . | 15 27 44.28 | 7.5 | 22 | . . | 9.68 | | | | |
| γ BOOTIS (2d *), $+48^{\circ} 8'$. | | | | June 8 | | | | . . | 15 12 20.03 | 7.8 | June 6 | . . | 44.34 | 8.0 | 24 | . . | 9.71 | | | | | |
| June 5 | . . | 14 59 | 42.36 | | 14 | . . | 20.07 | 7.5 | O. ARG. S. 14674, $-24^{\circ} 37'$. | | | | May 26 | | | | . . | 15 38 38.16 | | | | |
| WEISSE (2) 1326, $+36^{\circ} 55'$. | | | | 26 | | | | . . | 20.06 | 7.8 | June 14 | . . | 15 28 15.38 | 8.0 | β SERPENTIS, $+15^{\circ} 52'$. | | | | | | | |
| May 26 | . . | 15 1 | 43.67 | 6.5 | O. ARG. S. 14487, $-29^{\circ} 57'$. | | | | June 21 | | | | . . | 15.29 | 8.2 | May 26 | . . | 15 40 28.10 | 4.5 | | | |
| June 20 | . . | 43.48 | 6.0 | O. ARG. S. 14490, $-29^{\circ} 57'$. | | | | a CORONÆ BOREALIS, $+27^{\circ} 8'$. | | | | June 5 | | | | . . | 27.95 | 4.5 | | | | |
| O. ARG. S. 14294, $-21^{\circ} 46'$. | | | | June 6 | | | | . . | 15 15 11.43 | 8.5 | July 15 | . . | 15 29 26.15 | | 6 | . . | 27.89 | | | | | |
| June 8 | . . | 15 1 | 55.45 | 8.2 | (*) $+41^{\circ} 34'$. | | | | July 17 | | | | . . | 26.26 | | B. A. C. 5215, $-28^{\circ} 24'$. | | | | | | |
| O. ARG. S. 14297, $-21^{\circ} 46'$. | | | | May 26 | | | | . . | 15 15 58.20 | 8.2 | 21 | . . | 26.23 | | June 21 | . . | 15 40 46.75 | 7.5 | | | | |
| June 8 | . . | 15 1 | 58.08 | 8.0 | June 8 | . . | 57.88 | 8.3 | (*) $-36^{\circ} 2'$. | | | | (*) $-2^{\circ} 51'$. | | | | | | | | | |
| δ BOOTIS, $+26^{\circ} 46'$. | | | | June 14 | | | | . . | 15 16 15.41 | 8.0 | June 26 | . . | 15 31 52.73 | 8.2 | June 21 | . . | 15 42 43.48 | 8.0 | | | | |
| June 14 | . . | 15 3 | 2.65 | 5.5 | 20 | . . | 15.38 | 7.5 | (*) $-38^{\circ} 19'$. | | | | 26 | | | | . . | 43.69 | 7.8 | | | |
| (*) $-37^{\circ} 2'$. | | | | June 14 | | | | . . | 15 16 58.15 | 8.0 | May 26 | . . | 15 32 2.47 | 8.2 | WEISSE 792, $-14^{\circ} 27'$. | | | | | | | |
| June 26 | . . | 15 3 | 34.81 | 8.5 | 26 | . . | 58.20 | 7.7 | June 14 | . . | 2.21 | | June 24 | . . | 15 42 49.47 | 9.0 | μ SERPENTIS, $-3^{\circ} 1'$. | | | | | |
| (*) $-32^{\circ} 2'$. | | | | June 20 | | | | . . | 58.02 | | June 14 | . . | | | July 24 | . . | 15 43 8.94 | | | | | |
| May 27 | . . | 15 4 | 2.51 | | (*) $-37^{\circ} 2'$. | | | | (*) $-38^{\circ} 23'$. | | | | WEISSE 818, $-2^{\circ} 48'$. | | | | | | | | | |
| B. A. C. 5001, $+29^{\circ} 42'$. | | | | June 26 | | | | . . | 58.20 | 7.7 | June 14 | . . | 15 32 10.51 | | June 21 | . . | 15 43 35.96 | 9.0 | | | | |
| June 24 | . . | 15 5 | 40.91 | | II URSÆ MINORIS, $+72^{\circ} 17'$. | | | | (*) $+43^{\circ} 11'$. | | | | 26 | | | | . . | 36.10 | 8.5 | | | |
| (*) $-37^{\circ} 2'$. | | | | June 9 | | | | . . | 15 17 12.78 | | June 9 | . . | 15 33 42.36 | 9.0 | WEISSE 825, $-2^{\circ} 41'$. | | | | | | | |
| 26 LIBRÆ, $-17^{\circ} 19'$. | | | | 24 | | | | . . | 12.39 | | 21 | . . | 41.57 | 9.2 | June 6 | . . | 15 43 55.89 | 8.0 | | | | |
| June 6 | . . | 15 7 | 34.12 | 6.0 | (*) $-37^{\circ} 2'$. | | | | (*) $-15^{\circ} 34'$. | | | | δ CORONÆ BOREALIS, $+26^{\circ} 26'$. | | | | | | | | | |
| 14 | . . | 34.12 | | | June 14 | . . | 15 17 56.88 | 7.5 | June 6 | . . | 15 33 49.44 | 8.8 | June 30 | . . | 15 44 23.62 | 6.0 | | | | | | |
| 20 | . . | 33.93 | | | 20 | . . | 56.71 | 7.0 | (*) $+43^{\circ} 11'$. | | | | July 17 | | | | . . | 23.45 | | | | |
| WEISSE 99, $-0^{\circ} 51'$. | | | | 26 | | | | . . | 56.84 | 7.2 | June 5 | . . | 15 33 51.32 | 8.0 | 21 | . . | 23.60 | | | | | |
| May 26 | . . | 15 7 | 38.07 | 6.5 | LACAILLE 6372, $-36^{\circ} 2'$. | | | | June 9 | | | | . . | 51.55 | 7.8 | ϵ SERPENTIS, $+4^{\circ} 51'$. | | | | | | |
| June 8 | . . | 37.99 | | | June 30 | . . | 15 18 8.96 | 7.0 | 21 | . . | 51.48 | 8.5 | June 8 | . . | 15 44 38.17 | | ρ SERPENTIS, $+21^{\circ} 22'$. | | | | | |
| LACAILLE 6372, $-36^{\circ} 2'$. | | | | (*) $+38^{\circ} 36'$. | | | | WEISSE (2) 822, $+43^{\circ} 14'$. | | | | 9 | | | | . . | 38.16 | | A SCORPII (1st *), $-24^{\circ} 58'$. | | | |
| May 27 | . . | 15 5 | 47.25 | | May 26 | . . | 15 19 33.05 | 8.2 | June 9 | . . | 15 34 40.12 | 8.5 | June 14 | . . | 15 46 10.00 | | LALANDE 28926, $+37^{\circ} 55'$. | | | | | |
| 26 LIBRÆ, $-17^{\circ} 19'$. | | | | (*) $+38^{\circ} 36'$. | | | | June 21 | | | | . . | 39.90 | 8.8 | June 5 | . . | 15 46 18.48 | 7.5 | | | | |
| June 6 | . . | 15 7 | 34.12 | 6.0 | June 6 | . . | 15 19 40.11 | 7.5 | 24 | . . | 39.83 | | 6 | . . | 18.49 | 7.2 | | | | | | |
| 14 | . . | 34.12 | | | ζ^1 LIBRÆ, $-16^{\circ} 16'$. | | | | ζ CORONÆ BOREALIS (1st *), $+37^{\circ} 4'$. | | | | | | | | | | | | | |
| 20 | . . | 33.93 | | | June 8 | . . | 15 21 15.98 | 6.0 | July 17 | . . | 15 34 41.98 | | | | | | | | | | | |
| WEISSE 99, $-0^{\circ} 51'$. | | | | 9 | | | | . . | 16.07 | 6.0 | 21 | . . | 41.90 | | | | | | | | | |
| May 26 | . . | 15 7 | 38.07 | 6.5 | June 8 | . . | 15 21 15.98 | 6.0 | | | | | | | | | | | | | | |
| June 8 | . . | 37.99 | | | 9 | . . | 16.07 | 6.0 | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | |
|---|-------|---------|------|---|-------|-------|------|---|-------|-------|------|--|-------|-------|------|
| A SCORPII, $-24^{\circ} 58'$. | | | | β SCORPII, $-19^{\circ} 28'$. | | | | δ OPHIUCHI, $-3^{\circ} 22'$. | | | | ν^2 CORONÆ BOREALIS, $+34^{\circ} 0'$. | | | |
| 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. |
| June 14 . . | 15 47 | 12.92 | | June 5 . . | 15 58 | 13.79 | | June 5 . . | 16 7 | 50.92 | | July 15 . . | 16 17 | 48.75 | |
| | | | | 14 . . | | 13.72 | | 24 . . | | 50.96 | | | | | |
| WEISSE (2) 1180, $+43^{\circ} 0'$. | | | | July 3 . . | | 13.77 | | July 15 . . | | 50.99 | | (*) $-24^{\circ} 9'$. | | | |
| June 8 . . | 15 47 | 44.82 | 8.0 | | | | | 27 . . | | 50.89 | | June 26 . . | 16 17 | 50.26 | |
| 24 . . | | 44.84 | 8.0 | θ LUPI, $-36^{\circ} 26'$. | | | | LACAILLE 6765, $-34^{\circ} 31'$. | | | | July 22 . . | | 50.16 | |
| (*) $+4^{\circ} 30'$. | | | | June 8 . . | 15 58 | 27.21 | 5.0 | June 6 . . | 16 9 | 23.09 | 8.0 | O. ARG. S. 15612 $-24^{\circ} 9'$. | | | |
| June 24 . . | 15 47 | 49.92 | 9.0 | 21 . . | | 27.07 | 5.0 | 8 . . | | 22.98 | | June 26 . . | 16 17 | 54.95 | 8.0 |
| 4 SCORPII, $-25^{\circ} 53'$. | | | | 24 . . | | 27.24 | 5.5 | σ COR. BOREALIS (1st *), $+34^{\circ} 10'$. | | | | July 22 . . | | 55.06 | |
| July 17 . . | 15 48 | 0.71 | | B. A. C. 5333, $-19^{\circ} 19'$. | | | | June 26 . . | 16 10 | 2.12 | | 24 . . | | 55.24 | 8.0 |
| 21 . . | | 0.72 | | July 17 . . | 15 58 | 32.78 | 7.5 | σ COR. BOREALIS (2d *), $+34^{\circ} 10'$. | | | | | | | |
| 24 . . | | 0.52 | 6.0 | LACAILLE 6686, $-36^{\circ} 25'$. | | | | June 26 . . | 16 10 | 2.23 | | ρ OPHIUCHI (1st *), $-23^{\circ} 3'$, S. | | | |
| (*) $-16^{\circ} 53'$. | | | | June 24 . . | 15 59 | 7.01 | 6.5 | B. A. C. 5430, $-27^{\circ} 44'$. | | | | June 8 . . | 16 18 | 9.16 | |
| June 26 . . | 15 48 | 24.20 | 9.0 | (*) $-36^{\circ} 24'$. | | | | June 21 . . | 16 10 | 36.50 | 6.5 | 24 . . | | 9.11 | |
| WEISSE (2) 1201, $+42^{\circ} 57'$. | | | | June 24 . . | 15 59 | 25.89 | 7.7 | July 3 . . | | 36.58 | 6.8 | ρ OPHIUCHI (2d *), $-23^{\circ} 3'$, N. | | | |
| May 26 . . | 15 48 | (30.65) | | (*) $-12^{\circ} 10'$. | | | | 17 . . | | 36.67 | 6.0 | June 8 . . | 16 18 | 9.17 | |
| June 21 . . | | 30.36 | 8.0 | June 6 . . | 15 59 | 42.19 | 8.2 | 21 . . | | 36.71 | 6.5 | 24 . . | | 9.07 | |
| July 15 . . | | 30.26 | | 26 . . | | 42.09 | | WEISSE 173, $-13^{\circ} 8'$. | | | | (*) $-23^{\circ} 1'$. | | | |
| B. A. C. 5273, $+20^{\circ} 41'$. | | | | WEISSE (2) 1561, $+42^{\circ} 20'$. | | | | July 22 . . | 16 10 | 54.34 | 8.0 | June 8 . . | 16 18 | 9.24 | |
| July 21 . . | 15 49 | 6.71 | 6.0 | July 15 . . | 16 1 | 13.07 | 8.0 | WEISSE 176, $-13^{\circ} 4'$. | | | | 24 . . | | 9.20 | |
| γ SERPENTIS, $+16^{\circ} 3'$. | | | | 17 . . | | 13.15 | 8.0 | July 22 . . | 16 11 | 3.75 | 7.0 | June 21 . . | 16 21 | 5.70 | 6.0 |
| June 6 . . | 15 50 | 43.65 | 5.0 | 24 . . | | 13.31 | 8.0 | (*) $+37^{\circ} 11'$. | | | | July 17 . . | | 5.86 | 6.0 |
| 8 . . | | 43.59 | 4.5 | 45 SERPENTIS, $+10^{\circ} 12'$. | | | | July 24 . . | 16 12 | 5.92 | 8.5 | 21 . . | | 5.86 | 6.0 |
| B. A. C. 5299, $-30^{\circ} 47'$. | | | | June 9 . . | 16 1 | 42.37 | 6.0 | WEISSE 221, $+8^{\circ} 54'$. | | | | 27 . . | | 5.75 | 5.5 |
| June 26 . . | 15 52 | 6.16 | 6.5 | July 3 . . | | 42.31 | | WEISSE 173, $-13^{\circ} 8'$. | | | | O. ARG. S. 15671, $-24^{\circ} 51'$. | | | |
| July 17 . . | | 6.44 | 7.0 | O. ARG. S. 15303, $-16^{\circ} 51'$. | | | | June 9 . . | 16 12 | 36.73 | 8.3 | July 3 . . | 16 22 | 27.34 | 8.0 |
| ϵ CORONÆ BOREALIS, $+27^{\circ} 14'$. | | | | June 21 . . | 16 2 | 24.69 | 7.0 | 14 . . | | 36.69 | | 22 SCORPII, $-24^{\circ} 50'$. | | | |
| May 26 . . | 15 52 | 27.43 | | July 21 . . | | 24.64 | 7.5 | 19 SCORPII, $-23^{\circ} 51'$. | | | | July 3 . . | 16 22 | 40.61 | 6.0 |
| July 3 . . | | 27.29 | | 22 . . | | 24.71 | 7.5 | June 8 . . | 16 13 | 10.61 | 6.0 | B. A. C. 5508, $-34^{\circ} 26'$. | | | |
| 24 . . | | 27.25 | | τ CORONÆ BOREALIS, $+36^{\circ} 48'$. | | | | 24 . . | | 10.59 | 5.0 | June 6 . . | 16 23 | 16.99 | 5.0 |
| O. ARG. S. 15108, $-26^{\circ} 42'$. | | | | June 26 . . | 16 4 | 26.28 | | July 15 . . | | 10.56 | 5.5 | 9 . . | | 16.74 | |
| June 6 . . | 15 53 | 31.46 | 7.0 | July 3 . . | | 26.16 | | LACAILLE 6806, $-34^{\circ} 40'$. | | | | 14 . . | | 16.83 | 5.0 |
| 9 . . | | 31.33 | 7.3 | ν^1 SCORPII, $-19^{\circ} 8'$. | | | | July 3 . . | 16 15 | 6.38 | 6.5 | WEISSE 439, $+4^{\circ} 30'$. | | | |
| 14 . . | | 31.17 | | June 6 . . | 16 4 | 46.40 | 7.0 | LALANDE 29796, $+37^{\circ} 15'$. | | | | June 8 . . | 16 24 | 22.69 | 7.0 |
| B. A. C. 5310, $+36^{\circ} 58'$. | | | | 8 . . | | 46.28 | | WEISSE (2) 457, $+40^{\circ} 34'$. | | | | 21 . . | | 22.53 | 7.0 |
| June 8 . . | 15 54 | 22.87 | 6.0 | July 15 . . | | 46.34 | 7.0 | June 6 . . | 16 15 | 50.44 | | July 21 . . | | 22.50 | 7.0 |
| 21 . . | | 22.74 | 5.5 | ν^2 SCORPII, $-19^{\circ} 8'$. | | | | 14 . . | | 50.43 | 6.5 | 22 . . | | 22.56 | 6.5 |
| 24 . . | | 22.86 | 5.5 | June 6 . . | 16 4 | 47.43 | 5.0 | July 17 . . | | 50.42 | 7.5 | 24 . . | | 22.62 | 7.5 |
| B. A. C. 5352, $+83^{\circ} 20'$. | | | | 8 . . | | 47.44 | | g HERCULIS, $+42^{\circ} 10'$. | | | | July 26 . . | 16 24 | 34.29 | |
| July 21 . . | 15 56 | 25.12 | | July 15 . . | | 47.45 | 5.0 | WEISSE (2) 457, $+40^{\circ} 34'$. | | | | 27 . . | | 34.13 | |
| 22 . . | | 26.87 | 6.5 | B. A. C. 5406, $+68^{\circ} 8'$. | | | | July 21 . . | 16 16 | 3.42 | 7.5 | β HERCULIS, $+21^{\circ} 45'$. | | | |
| 24 . . | | 27.51 | | June 9 . . | 16 5 | 59.46 | | B. A. C. 5457, $-37^{\circ} 17'$. | | | | Aug. 5 . . | 16 24 | 53.42 | |
| LACAILLE 6657, $-37^{\circ} 31'$. | | | | July 17 . . | | 59.69 | 8.0 | June 21 . . | 16 16 | 15.68 | 6.0 | O. ARG. S. 15712, $-20^{\circ} 30'$. | | | |
| June 26 . . | 15 56 | 25.99 | 6.5 | 21 . . | | 59.03 | 6.0 | (*) $+37^{\circ} 15'$. | | | | July 17 . . | 16 25 | 2.91 | 8.3 |
| July 15 . . | | 26.14 | 6.5 | 24 . . | | 59.92 | 5.5 | June 9 . . | 16 16 | 48.77 | 7.0 | 24 . . | | 3.02 | |
| LACAILLE 6658, $-37^{\circ} 29'$. | | | | B. A. C. 5403, $-25^{\circ} 10'$. | | | | ν^1 CORONÆ BOREALIS, $+34^{\circ} 6'$. | | | | O. ARG. S. 15714, $-20^{\circ} 30'$. | | | |
| June 6 . . | 15 56 | 30.43 | 7.5 | June 21 . . | 16 7 | 22.62 | 6.2 | July 26 . . | 16 17 | 41.35 | | June 24 . . | 16 25 | 7.61 | |
| 26 . . | | 30.35 | 7.5 | B. A. C. 5408, $-18^{\circ} 12'$. | | | | | | | | July 17 . . | | 7.51 | 8.0 |
| July 15 . . | | 30.56 | 8.0 | July 22 . . | 16 7 | 29.97 | 6.5 | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|-------|-------|-------|-----------------------------|---------|-------|-------------|----------------------------------|-----------------------------|--------------|-------|--------------------------|--------------------------|---------|--------|--------------------------|-------|-------------|-------|------|-------|-----|
| WEISSE (2) 787, +38° 19'. | | | | B. A. C. 5572, -30° 13'. | | | | O. ARG. S. 16031, -21° 26'. | | | | (*)-29° 58'. | | | | | | | | | | |
| 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | | | | | | | |
| June 14 | . . | 16 26 | 34.76 | 8.0 | June 14 | . . | 16 34 13.08 | 7.8 | June 8 | . . | 16 44 | 7.32 | 8.0 | July 21 | . . | 16 50 42.86 | 8.5 | | | | | |
| 26 | . . | 34.90 | | | | | | | July 24 | . . | 7.33 | 8.8 | | | | | | | | | | |
| O. ARG. S. 15734, -15° 15'. | | | | O. ARG. S. 15847, -24° 34'. | | | | LACAILLE 7011, -37° 23'. | | | | κ OPHIUCHI, +9° 34'. | | | | | | | | | | |
| June 6 | . . | 16 26 | 59.02 | June 6 | . . | 16 34 | 36.87 | 8.0 | July 8 | . . | 16 44 | 14.11 | 7.5 | June 21 | . . | 16 51 47.93 | | | | | | |
| July 15 | . . | 59.10 | | July 15 | . . | 36.79 | 8.0 | | 22 | . . | 13.90 | 7.5 | 26 | . . | 47.91 | | | | | | | |
| LACAILLE 6894, -35° 39'. | | | | (*)-30° 13'. | | | | (*)-21° 7'. | | | | (*)-37° 9'. | | | | | | | | | | |
| July 27 | . . | 16 28 | 29.04 | 6.6 | July 3 | . . | 16 35 | 18.02 | June 14 | . . | 16 44 | 34.51 | 9.0 | July 24 | . . | 16 52 49.12 | 9.0 | | | | | |
| | | | | | 17 | . . | 18.38 | 8.5 | O. ARG. S. 16050, -26° 32'. | | | | (*)-32° 9'. | | | | | | | | | |
| WEISSE 539, -8° 38'. | | | | LALANDE 30419, +37° 35'. | | | | June 6 | | | | . . | 16 45 | 15.78 | 8.2 | July 3 | . . | 16 53 41.34 | 7.3 | | | |
| June 8 | . . | 16 29 | 47.11 | 7.0 | June 8 | . . | 16 35 | 53.39 | June 6 | . . | 16 45 | 15.78 | 8.2 | | | | | | | | | |
| 15 | . . | 47.02 | 7.0 | 9 | . . | 53.29 | 7.0 | (*)-38° 12'. | | | | B. A. C. 5721, -32° 58'. | | | | | | | | | | |
| WEISSE 544, -8° 35'. | | | | B. A. C. 5600, -27° 13'. | | | | July 21 | | | | . . | 16 46 | 6.83 | 8.5 | July 3 | . . | 16 54 25.84 | 6.0 | | | |
| July 8 | . . | 16 30 | 11.35 | 8.0 | June 6 | . . | 16 36 | 35.88 | 6.5 | (*)-38° 12'. | | | | 15 | . . | 26.16 | 7.0 | | | | | |
| ζ OPHIUCHI, -10° 19'. | | | | 24 | . . | 35.93 | 7.0 | July 17 | | | | . . | 16 46 | 40.04 | 7.0 | (*)-36° 59'. | | | | | | |
| June 6 | . . | 16 30 | 20.00 | 26 | . . | 35.89 | 6.5 | WEISSE 873, +0° 14'. | | | | July 17 | . . | 16 55 | 5.93 | 9.0 | | | | | | |
| July 9 | . . | 19.99 | | July 15 | . . | 35.81 | 6.5 | June 21 | . . | 16 46 | 43.86 | 6.5 | (*)-36° 59'. | | | | | | | | | |
| July 22 | . . | 19.91 | | 27 | . . | 35.75 | | 24 | . . | 43.93 | 6.5 | July 27 | . . | 16 55 | 15.97 | 8.5 | | | | | | |
| 26 | . . | 19.90 | | O. ARG. S. 15896, -27° 13'. | | | | (*)-29° 7'. | | | | (*)-36° 59'. | | | | | | | | | | |
| Aug. 5 | . . | 19.94 | | June 6 | . . | 16 37 | 8.40 | 8.0 | July 15 | . . | 16 46 | 53.33 | (*)-36° 59'. | | | | | | | | | |
| (*)-28° 39'. | | | | 14 | . . | 8.32 | | O. ARG. S. 16088, -29° 6'. | | | | July 17 | . . | 16 55 | 16.88 | 8.5 | | | | | | |
| June 14 | . . | 16 30 | 45.21 | 24 | . . | 8.31 | 8.5 | July 15 | . . | 16 47 | 13.61 | B. A. C. 5730, -24° 6'. | | | | | | | | | | |
| July 3 | . . | 45.22 | 8.3 | 26 | . . | 8.43 | 8.0 | 24 | . . | 13.55 | 8.2 | June 8 | . . | 16 55 | 57.21 | 7.0 | | | | | | |
| 17 | . . | 45.15 | 8.5 | July 15 | . . | 8.42 | 8.0 | (*)-31° 8'. | | | | (*)-24° 6'. | | | | | | | | | | |
| 33 HERCULIS, +7° 22'. | | | | 27 | . . | 8.34 | 7.8 | June 8 | . . | 16 47 | 36.23 | 8.2 | July 26 | . . | 16 56 | 8.13 | 8.5 | | | | | |
| June 24 | . . | 16 30 | 50.18 | η HERCULIS, +39° 10'. | | | | O. ARG. S. 16100, -29° 6'. | | | | July 24 | . . | 16 56 | 26.46 | 8.0 | | | | | | |
| July 24 | . . | 50.15 | 6.5 | June 9 | . . | 16 38 | 38.65 | July 15 | . . | 16 47 | 13.61 | 24 | . . | 26.31 | | | | | | | | |
| O. ARG. S. 15788, -23° 52'. | | | | July 8 | . . | 38.63 | | 24 | . . | 13.55 | 8.2 | (*)-20° 17'. | | | | | | | | | | |
| June 21 | . . | 16 31 | 3.85 | B. A. C. 5619, +34° 15'. | | | | June 8 | | | | . . | 16 47 | 36.23 | 8.2 | July 21 | . . | 16 56 | 26.46 | 8.0 | | |
| 26 | . . | 3.88 | 8.0 | July 22 | . . | 16 39 | 17.25 | 6.0 | July 3 | . . | 36.23 | 8.0 | 24 | . . | 26.31 | | | | | | | |
| O. ARG. S. 15790, -28° 38'. | | | | WEISSE 760, -6° 6'. | | | | O. ARG. S. 16100, -29° 6'. | | | | (*)-20° 14'. | | | | | | | | | | |
| June 14 | . . | 16 31 | 21.04 | July 26 | . . | 16 40 | 48.17 | 8.0 | July 24 | . . | 16 47 | 42.84 | 8.0 | July 21 | . . | 16 56 | 26.46 | 8.0 | | | | |
| July 17 | . . | 21.17 | 8.0 | 19 OPHIUCHI, +2° 17'. | | | | B. A. C. 5690, -31° 8'. | | | | WEISSE 1048, -9° 5'. | | | | | | | | | | |
| B. A. C. 5567, -20° 10'. | | | | June 6 | . . | 16 40 | 54.71 | 6.5 | July 3 | . . | 16 48 | 19.98 | 7.5 | July 22 | . . | 16 56 | 29.97 | 8.5 | | | | |
| June 8 | . . | 16 33 | 15.99 | 8 | . . | 54.69 | | (*)-38° 14'. | | | | (*)-20° 14'. | | | | | | | | | | |
| 27 | . . | 15.98 | 6.0 | June 14 | . . | 16 41 | 56.08 | 7.0 | June 14 | . . | 16 48 | 32.82 | 7.8 | July 24 | . . | 16 56 | 37.09 | | | | | |
| (*)-36° 50'. | | | | 21 | . . | 55.99 | | B. A. C. 5705, +77° 43'. | | | | July 17 | . . | 33.08 | 8.0 | B. A. C. 5756, -29° 57'. | | | | | | |
| July 26 | . . | 16 33 | 31.24 | (*)-24° 26'. | | | | July 26 | | | | . . | 16 48 | 39.24 | | July 15 | . . | 16 58 | 35.88 | 7.0 | | |
| LACAILLE 6931, -32° 34'. | | | | June 26 | . . | 16 42 | 2.05 | 9.0 | 27 | . . | 38.58 | | 60 HERCULIS, +12° 54'. | | | | | | | | | |
| June 24 | . . | 16 33 | 42.70 | July 3 | . . | 1.76 | 8.5 | B. A. C. 5700 (1st *), -19° 20'. | | | | June 6 | . . | 16 59 | 37.71 | 5.5 | | | | | | |
| July 21 | . . | 42.74 | 8.0 | 18 OPHIUCHI, -24° 25'. | | | | June 6 | | | | . . | 16 49 | 46.68 | | 8 | . . | 37.63 | 6.0 | | | |
| (*)-32° 34'. | | | | June 26 | . . | 16 42 | 11.73 | 6.5 | 24 | . . | 46.60 | 8.0 | July 27 | . . | 37.68 | 6.0 | | | | | | |
| July 21 | . . | 16 33 | 49.94 | July 3 | . . | 11.65 | 7.5 | B. A. C. 5700 (2d *), -19° 20'. | | | | July 22 | . . | 46.62 | 7.5 | B. A. C. 5775, +43° 59'. | | | | | | |
| (*)-30° 11'. | | | | (*)-24° 5'. | | | | June 24 | | | | . . | 16 42 | 16.43 | July 8 | | | | . . | 17 1 | 18.53 | 6.5 |
| June 14 | . . | 16 34 | 9.08 | 8.5 | June 24 | . . | 16 42 | 16.43 | July 22 | . . | 46.87 | 6.5 | 24 | . . | 18.36 | 6.5 | | | | | | |
| LACAILLE 6933, -36° 50'. | | | | (*)-24° 7'. | | | | July 27 | | | | . . | 16 42 | 17.00 | 22 | . . | 18.44 | 6.0 | | | | |
| July 22 | . . | 16 34 | 11.26 | 6.0 | July 27 | . . | 16 42 | 17.00 | B. A. C. 5704, -25° 52'. | | | | LALANDE 31166, -20° 32'. | | | | | | | | | |
| (*)-37° 23'. | | | | (*)-37° 23'. | | | | July 8 | | | | . . | 16 50 | 38.05 | 7.5 | July 24 | . . | 17 1 | 35.60 | 7.0 | | |
| July 22 | . . | 16 44 | 2.81 | 9.0 | July 22 | . . | 16 44 | 2.81 | 9.0 | 15 | . . | 38.15 | 7.3 | | | | | | | | | |

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|--|-------|-------|-------|---|-------|-------|-------|---------------------------------------|-------|-------|-------|---------------------------------------|-------|-------|-------|
| LACAILLE 7160, $-38^{\circ} 40'$. | | | | (*) $-35^{\circ} 15'$. | | | | B. A. C. 5895, $+37^{\circ} 3'$. | | | | (*) $-20^{\circ} 35'$. | | | |
| 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. |
| July 3 | . . | 17 3 | 45.60 | July 8 | . . | 17 14 | 17.23 | July 27 | . . | 17 20 | 9.38 | June 26 | . . | 17 30 | 7.76 |
| | | | 6.0 | | | | 7.0 | | | | 6.0 | | | | 8.0 |
| (*) $-37^{\circ} 18'$. | | | | (*) $-24^{\circ} 50'$. | | | | O. ARG. S. 16832, $-15^{\circ} 55'$. | | | | (*) $-20^{\circ} 35'$. | | | |
| June 14 | . . | 17 4 | 24.29 | June 8 | . . | 17 14 | 41.04 | June 6 | . . | 17 21 | 47.77 | July 26 | . . | 17 30 | 27.28 |
| July 17 | . . | | 24.45 | July 26 | . . | | 41.05 | July 17 | . . | | 47.74 | | | | 8.5 |
| | | | 8.0 | | | | 8.3 | | | | 9.0 | | | | |
| B. A. C. 5791, $-25^{\circ} 5'$. | | | | O. ARG. S. 16676, $-27^{\circ} 34'$. | | | | O. ARG. S. 16833, $-15^{\circ} 55'$. | | | | (*) $-32^{\circ} 11'$. | | | |
| July 22 | . . | 17 4 | 36.51 | June 14 | . . | 17 14 | 59.81 | June 6 | . . | 17 21 | 55.06 | July 27 | . . | 17 31 | 32.25 |
| | | | 6.5 | July 14 | . . | 17 14 | 59.81 | 8 | . . | | 55.16 | | | | 7.5 |
| O. ARG. S. 16450, $-25^{\circ} 3'$. | | | | (*) $-27^{\circ} 51'$. | | | | O. ARG. S. 16842, $-15^{\circ} 55'$. | | | | (*) $-32^{\circ} 9'$. | | | |
| July 22 | . . | 17 4 | 54.32 | July 24 | . . | 17 15 | 29.48 | June 6 | . . | 17 22 | 21.44 | July 17 | . . | 17 31 | 56.15 |
| | | | 8.2 | | | | 8.5 | | | | | | | | 7.5 |
| B. A. C. 5793, $-32^{\circ} 17'$. | | | | LACAILLE 7259, $-34^{\circ} 41'$. | | | | O. ARG. S. 16856, $-15^{\circ} 55'$. | | | | (*) $-32^{\circ} 10'$. | | | |
| July 27 | . . | 17 4 | 54.93 | July 26 | . . | 17 15 | 54.30 | June 6 | . . | 17 22 | 45.88 | July 27 | . . | 17 32 | 4.87 |
| | | | 6.5 | | | | 7.0 | | | | | | | | |
| O. ARG. S. 16503, $-30^{\circ} 8'$. | | | | w HERCULIS, $+32^{\circ} 38'$. | | | | WEISSE 409, $-5^{\circ} 58'$. | | | | (*) $-32^{\circ} 11'$. | | | |
| June 26 | . . | 17 7 | 33.69 | July 21 | . . | 17 16 | 1.05 | July 21 | . . | 17 23 | 54.63 | July 27 | . . | 17 32 | 5.49 |
| July 3 | . . | | 33.60 | | | | 6.0 | | | | 8.2 | | | | |
| | | | 8.0 | (*) $-35^{\circ} 14'$. | | | | B. A. C. 5916, $-29^{\circ} 34'$. | | | | (*) $-32^{\circ} 12'$. | | | |
| B. A. C. 5809, $-30^{\circ} 6'$. | | | | July 22 | . . | 17 16 | 20.58 | June 8 | . . | 17 25 | 8.94 | July 17 | . . | 17 32 | 6.09 |
| July 3 | . . | 17 7 | 56.20 | | | | | 14 | . . | | 8.92 | | | | 8.5 |
| | | | 6.5 | (*) $-31^{\circ} 31'$. | | | | 26 | . . | | 8.92 | (*) $-32^{\circ} 12'$. | | | |
| (*) $-35^{\circ} 21'$. | | | | July 17 | . . | 17 17 | 18.34 | July 3 | . . | | 8.95 | July 17 | . . | 17 32 | 16.48 |
| July 22 | . . | 17 8 | 35.78 | | | | | | | | 6.5 | | | | 8.0 |
| B. A. C. 5818 (1st *), $-30^{\circ} 13'$. | | | | B. A. C. 5887, $+71^{\circ} 56'$. | | | | July 15 . . 17 25 43.54 9.0 | | | | f DRACONIS, $+68^{\circ} 13'$. | | | |
| July 8 | . . | 17 8 | 58.42 | June 24 | . . | 17 18 | 7.43 | (*) $-32^{\circ} 32'$. | | | | July 21 . . 17 32 27.57 | | | |
| 21 | . . | | 58.54 | | | | | July 22 . . 17 25 56.32 | | | | 22 . . 27.95 | | | |
| | | | 7.0 | B. A. C. 5875, $-28^{\circ} 18'$. | | | | July 15 . . 17 26 16.14 8.5 | | | | 24 . . 28.31 | | | |
| | | | 7.0 | June 6 | . . | 17 18 | 26.48 | B. A. C. 5925, $-32^{\circ} 32'$. | | | | B. A. C. 5968, $-32^{\circ} 2'$. | | | |
| a HERCULIS, $+14^{\circ} 32'$. | | | | 8 | . . | | 26.40 | July 15 . . 17 26 36.39 6.0 | | | | July 15 . . 17 33 33.44 7.5 | | | |
| June 6 | . . | 17 8 | 59.63 | | | | 7.2 | (*) $-32^{\circ} 32'$. | | | | O. ARG. S. 17091, $-23^{\circ} 16'$. | | | |
| 8 | . . | | 59.62 | p HERCULIS (1st *), $+37^{\circ} 14'$. | | | | July 27 . . 17 26 38.58 | | | | July 3 . . 17 34 48.70 6.8 | | | |
| 14 | . . | | 59.57 | July 24 | . . | 17 19 | 24.10 | (*) $-38^{\circ} 32'$. | | | | 8 . . 48.82 7.0 | | | |
| 21 | . . | | 59.59 | | | | | July 26 . . 17 27 8.85 | | | | June 26 . . 17 35 32.45 8.0 | | | |
| 24 | . . | | 59.59 | p HERCULIS (2d *), $+37^{\circ} 14'$. | | | | O. ARG. S. 16952, $-18^{\circ} 8'$. | | | | July 26 . . 32.35 | | | |
| July 17 | . . | | 59.58 | July 24 | . . | 17 19 | 24.25 | July 8 . . 17 27 18.45 6.5 | | | | June 24 . . 17 35 32.45 8.0 | | | |
| 24 | . . | | 59.65 | | | | | O. ARG. S. 16958, $-18^{\circ} 10'$. | | | | 58 OPHIUCHI, $-21^{\circ} 40'$. | | | |
| 26 | . . | | 59.63 | WEISSE 322, $+2^{\circ} 14'$. | | | | June 6 . . 17 27 40.01 9.0 | | | | July 15 . . 17 36 0.07 5.5 | | | |
| 27 | . . | | 59.63 | July 15 | . . | 17 19 | 35.25 | July 24 . . 40.22 9.0 | | | | (*) $-34^{\circ} 23'$. | | | |
| B. A. C. 5818 (2d *), $-30^{\circ} 13'$. | | | | (*) $+2^{\circ} 12'$. | | | | 52 OPHIUCHI, $-21^{\circ} 58'$. | | | | Aug. 9 . . 17 36 38.95 8.5 | | | |
| July 8 | . . | 17 9 | 4.10 | July 3 | . . | 17 19 | 40.84 | June 26 . . 17 27 50.86 7.0 | | | | LACAILLE 7414, $-35^{\circ} 29'$. | | | |
| | | | 8.2 | | | | 8.5 | July 17 . . 50.91 | | | | June 24 . . 17 36 43.01 7.0 | | | |
| 38 OPHIUCHI (1st *), $-26^{\circ} 24'$. | | | | LALANDE 31762, $+37^{\circ} 2'$. | | | | a OPHIUCHI, $+12^{\circ} 39'$. | | | | O. ARG. S. 17133, $-21^{\circ} 40'$. | | | |
| July 15 | . . | 17 9 | 57.43 | July 27 | . . | 17 19 | 53.00 | June 8 . . 17 29 10.66 | | | | July 27 . . 17 36 54.36 8.2 | | | |
| B. A. C. 5839, $-17^{\circ} 37'$. | | | | (*) $+2^{\circ} 12'$. | | | | July 14 . . 10.73 | | | | O. ARG. N. 17413, $+68^{\circ} 27'$. | | | |
| July 21 | . . | 17 12 | 40.38 | July 3 | . . | 17 19 | 57.30 | 24 . . 10.63 | | | | July 22 . . 17 37 9.11 8.2 | | | |
| μ HERCULIS, $-33^{\circ} 13'$. | | | | July 15 | . . | | 57.31 | July 3 . . 10.73 | | | | | | | |
| June 6 | . . | 17 12 | 44.67 | | | | 8.0 | 21 . . 10.72 | | | | | | | |
| 24 | . . | | 44.64 | B. A. C. 5890, $-4^{\circ} 59'$. | | | | Aug. 9 . . 10.76 | | | | | | | |
| | | | 6.0 | July 26 | . . | 17 20 | 2.98 | | | | | | | | |
| | | | 5.0 | | | | 6.0 | | | | | | | | |
| (*) $-35^{\circ} 14'$. | | | | B. A. C. 5888, $-12^{\circ} 24'$. | | | | | | | | | | | |
| July 8 | . . | 17 13 | 30.59 | June 14 | . . | 17 20 | 4.53 | | | | | | | | |
| 15 | . . | | 30.83 | 26 | . . | | 4.52 | | | | | | | | |
| 17 | . . | | 30.61 | July 8 | . . | | 4.61 | | | | | | | | |
| | | | 8.2 | 21 | . . | | 4.58 | | | | | | | | |
| LALANDE 31492, $-5^{\circ} 23'$. | | | | | | | | | | | | | | | |
| July 3 | . . | 17 13 | 42.12 | | | | | | | | | | | | |
| | | | 7.7 | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|-----------|-------|-------|----------------------------|-----------------------------|-----------|-----------------------------|---------------------------------|--------------------------|-----------------------------|----------------------------------|--------------------------|-----------------------------|--------------|--------------------------|--------------------------|--------------|-----------|-------------------------|--------------------------|---------|-----------|-----------|-----------|-------|-----------|-----------|-----|--|
| O. ARG. N. 17419, +68° 27'. | | | | | (*)-34° 52'. | | | | | O. ARG. S. 17533, -27° 44'. | | | | | (*)-37° 41'. | | | | | | | | | | | | | | |
| 1876. | h. m. s. | Mag. | 1876. | h. m. s. | Mag. | 1876. | h. m. s. | Mag. | 1876. | h. m. s. | Mag. | 1876. | h. m. s. | Mag. | 1876. | h. m. s. | Mag. | | | | | | | | | | | | |
| July 21 | . . 17 37 | 17.48 | 8.0 | Aug. 9 | . . 17 46 | 5.52 | 8.0 | July 22 | . . 17 56 | 5.20 | 8.3 | July 26 | . . 18 5 | 58.60 | 8.2 | | | | | | | | | | | | | | |
| 22 | . . 18.00 | 7.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| WEISSE 713, -7° 49'. | | | | | (*)-34° 26'. | | | | | O. ARG. S. 17535, -27° 44'. | | | | | μ SAGITTARII, -21° 5'. | | | | | | | | | | | | | | |
| July 3 | . . 17 37 | 50.43 | 7.7 | June 24 | . . 17 46 | 32.77 | 7.8 | July 22 | . . 17 56 | 7.36 | 8.5 | June 24 | . . 18 6 | 20.89 | | | | | | | | | | | | | | | |
| 8 | . . 50.61 | 7.5 | | | | | | | | | | July 3 | . . 20.82 | | | | | | | | | | | | | | | | |
| (*)-34° 48'. | | | | | (*)-31° 59'. | | | | | (*)-24° 15'. | | | | | 22 . . 20.83 | | | | | | | | | | | | | | |
| July 24 | . . 17 38 | 57.43 | 7.5 | July 26 | . . 17 47 | 23.81 | 8.5 | July 26 | . . 17 56 | 20.34 | 8.0 | 27 | . . 20.85 | | (*)-18° 35'. | | | | | | | | | | | | | | |
| Aug. 9 | . . 57.19 | 7.2 | | | | | | | | | | July 17 | . . 18 9 | 32.44 | 8.5 | | | | | | | | | | | | | | |
| (*)-30° 55'. | | | | | (*)-31° 59'. | | | | | (*)-24° 15'. | | | | | 24 . . 32.72 | | | | | | | | | | | | | | |
| June 24 | . . 17 41 | 35.87 | 9.0 | July 26 | . . 17 47 | 29.78 | 8.3 | July 3 | . . 17 56 | 38.67 | 8.0 | (*)-17° 24'. | | | | | | | | | | | | | | | | | |
| μ HERCULIS, +27° 48'. | | | | | O. ARG. S. 17349, -26° 0'. | | | | | 8 . . 38.82 | | | | | July 22 | . . 18 9 | 58.72 | 6.0 | | | | | | | | | | | |
| June 6 | . . 17 41 | 36.30 | | July 15 | . . 17 47 | 52.31 | 8.3 | | | (*)-24° 11'. | | | | | LALANDE 33598, -18° 50'. | | | | | | | | | | | | | | |
| 26 | . . 36.35 | | | | | | | July 3 | . . 17 56 | 39.57 | 7.0 | July 26 | . . 18 10 | 33.48 | 7.0 | | | | | | | | | | | | | | |
| July 8 | . . 36.44 | | | (*)-40° 22'. | | | | | 8 . . 39.70 | | | | | | (*)-18° 50'. | | | | | | | | | | | | | | |
| Aug. 5 | . . 36.33 | | | July 22 | . . 17 48 | 5.83 | 8.0 | (*)-24° 15'. | | | | | July 26 | . . 18 10 | 34.48 | 9.0 | | | | | | | | | | | | | |
| (*)-30° 55'. | | | | 24 | . . 5.81 | 7.5 | | July 26 | . . 17 56 | 59.49 | 8.3 | 18 SAGITTARII, -30° 59'. | | | | | | | | | | | | | | | | | |
| July 26 | . . 17 42 | 8.48 | 7.0 | (*)-40° 22'. | | | | | (*)-23° 36'. | | | | | July 22 | . . 18 13 | 16.11 | | | | | | | | | | | | | |
| 27 | . . 8.51 | | | July 22 | . . 17 48 | 13.93 | 7.0 | July 15 | . . 17 57 | 15.31 | 8.5 | 26 | . . 16.00 | 7.0 | (*)-32° 14'. | | | | | | | | | | | | | | |
| (*)-30° 55'. | | | | | O. ARG. S. 17361, -27° 0'. | | | | | 17 | . . 15.13 | 8.2 | Aug. 9 . . 18 13 | | | | | 24.45 | 8.7 | | | | | | | | | | |
| June 24 | . . 17 42 | 50.21 | 8.2 | July 17 | . . 17 48 | 20.95 | 9.0 | (*)-37° 30'. | | | | | O. ARG. S. 18074, -17° 48'. | | | | | | | | | | | | | | | | |
| July 26 | . . 50.07 | 8.8 | | | | | | Aug. 9 . . 17 57 | | | | | 44.41 | 8.2 | July 17 | . . 18 13 | 24.76 | 8.3 | | | | | | | | | | | |
| 27 | . . 50.02 | 8.0 | | (*)-28° 4'. | | | | | B. A. C. 6128, -44° 58'. | | | | | (*)-32° 10'. | | | | | | | | | | | | | | | |
| (*)-30° 57'. | | | | June 24 | . . 17 50 | 19.02 | | July 27 | . . 18 0 | (40.94) | | Aug. 9 . . 18 17 | | | | | 28.23 | 8.5 | | | | | | | | | | | |
| June 24 | . . 17 43 | 4.46 | 8.0 | July 3 | . . 18.93 | 8.0 | | Aug. 5 | . . 41.65 | 7.2 | O. ARG. S. 18198, -21° 6'. | | | | | | | | | | | | | | | | | | |
| July 26 | . . 4.22 | 8.2 | | 27 | . . 18.92 | 8.0 | | ε TELESCOPII, -45° 58'. | | | | | July 3 | . . 18 18 | 14.20 | 8.0 | | | | | | | | | | | | | |
| 27 | . . 4.27 | 8.0 | | (*)-28° 2'. | | | | | July 24 | | | | | . . 18 2 | 1.33 | 8.2 | 27 | . . 14.30 | 8.2 | | | | | | | | | | |
| (*)-34° 44'. | | | | June 24 | . . 17 50 | 19.92 | | 26 | . . 1.11 | | B. A. C. 6145 (1st *), -30° 45'. | | | | | B. A. C. 6256, -31° 36'. | | | | | | | | | | | | | |
| July 3 | . . 17 43 | 36.81 | 7.0 | July 3 | . . 19.83 | 7.8 | | July 3 | | | | | . . 18 2 | 5.88 | 5.5 | July 15 | . . 18 19 | 33.22 | | | | | | | | | | | |
| 21 | . . 37.00 | | | 27 | . . 19.89 | 8.0 | | B. A. C. 6145 (2d *), -30° 45'. | | | | | 8 | . . 6.10 | 6.0 | 21 | . . 33.28 | 7.5 | | | | | | | | | | | |
| WEISSE (2) 1394, +36° 10'. | | | | | (*)-31° 25'. | | | | | July 3 | | | | | . . 18 2 | 5.99 | (*)-26° 40'. | | | | | | | | | | | | |
| July 24 | . . 17 43 | 37.24 | 7.5 | July 8 | . . 17 51 | 12.97 | | (*)33) WASHINGTON, -17° 14'. | | | | | O. ARG. S. 18198, -21° 6'. | | | | | | | | | | | | | | | | |
| WEISSE (2) 1398, +36° 12'. | | | | | 21 | . . 13.16 | 8.2 | July 22 | | | | | . . 18 2 | 54.14 | July 27 | | | | | . . 18 21 | 13.53 | 8.0 | | | | | | | |
| July 21 | . . 17 43 | 43.39 | 7.5 | 22 | . . 12.93 | 8.5 | (*)-17° 12'. | | | | | (*)-26° 40'. | | | | | July 27 | | | | | . . 18 21 | 13.65 | 7.0 | | | | | |
| B. A. C. 6029, -34° 45'. | | | | | 24 | . . 12.74 | 8.3 | July 22 | | | | | . . 18 3 | 5.78 | (*)-31° 38'. | | | | | | | | | | | | | | |
| July 3 | . . 17 43 | 57.44 | 6.0 | Aug. 9 | . . 12.75 | 8.5 | O. ARG. S. 17809, -19° 27'. | | | | | July 3 | | | | | . . 18 21 | 16.40 | 7.5 | | | | | | | | | | |
| 21 | . . 57.69 | | | O. ARG. S. 17466, -24° 9'. | | | | | July 17 | | | | | . . 18 4 | 55.10 | 7.0 | 21 | . . 16.74 | 7.0 | | | | | | | | | | |
| (*)-34° 47'. | | | | | July 27 | . . 17 53 | 16.62 | 8.0 | (*)-17° 12'. | | | | | Aug. 9 | | | | | . . 54.98 | B. A. C. 6283, -28° 53'. | | | | | | | | | |
| July 8 | . . 17 45 | 6.88 | 6.0 | July 15 | . . 17 53 | 21.63 | 9.0 | (*)-17° 12'. | | | | | O. ARG. S. 17817, -21° 3'. | | | | | Aug. 9 | | | | | . . 18 22 | 39.20 | 8.5 | | | | |
| Aug. 9 | . . 6.68 | | | 26 | . . 21.73 | 9.0 | | July 22 | | | | | . . 18 3 | 5.78 | July 24 | | | | | . . 18 5 | 15.51 | 8.5 | | | | | | | |
| (*)-34° 47'. | | | | | O. ARG. S. 17467, -24° 11'. | | | | | O. ARG. S. 17809, -19° 27'. | | | | | July 17 | | | | | . . 18 4 | 55.10 | 7.0 | | | | | | | |
| July 8 | . . 17 45 | 18.50 | | July 27 | . . 17 53 | 25.56 | 8.3 | O. ARG. S. 17809, -19° 27'. | | | | | Aug. 9 | | | | | . . 54.98 | B. A. C. 6301, -19° 3'. | | | | | | | | | | |
| Aug. 9 | . . 18.08 | 7.5 | | Aug. 9 | . . 25.35 | 8.5 | O. ARG. S. 17467, -24° 11'. | | | | | July 22 | | | | | . . 18 3 | 5.78 | July 17 | | | | | . . 18 25 | 11.29 | 7.0 | | | |
| (*)-34° 47'. | | | | | O. ARG. S. 17489, -24° 9'. | | | | | (*)-37° 44'. | | | | | Aug. 9 | | | | | . . 11.27 | Aug. 9 | | | | | . . 11.27 | | | |
| July 8 | . . 17 45 | 41.85 | | July 24 | . . 17 54 | 14.95 | 7.0 | (*)-37° 44'. | | | | | July 26 | | | | | . . 18 5 | 41.04 | 7.8 | July 17 | | | | | . . 18 25 | 11.29 | 7.0 | |
| Aug. 9 | . . 41.70 | | | (*)+36° 18'. | | | | | (*)-37° 44'. | | | | | July 26 | | | | | . . 18 5 | 41.04 | 7.8 | Aug. 9 | | | | | . . 11.27 | | |
| (*)-34° 47'. | | | | | July 21 | . . 17 54 | 22.71 | 6.0 | (*)-37° 44'. | | | | | July 26 | | | | | . . 18 5 | 41.04 | 7.8 | Aug. 9 | | | | | . . 11.27 | | |
| July 8 | . . 17 45 | 56.83 | | (*)-37° 44'. | | | | | (*)-37° 44'. | | | | | July 26 | | | | | . . 18 5 | 41.04 | 7.8 | Aug. 9 | | | | | . . 11.27 | | |

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|----------------------------|-----------|-------|-----|--------------------------------|-----------|-------|-----|-----------------------------|-----------|-------|-----|------------------------------|-----------|-------|-----|
| (*)-36° 51'. | | | | (*)-1° 6'. | | | | (*)-22° 9'. | | | | O. ARG. S. 19202, -29° 41'. | | | |
| 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | |
| July 21 | . . 18 25 | 12.41 | 7.5 | July 8 | . . 18 36 | 57.02 | | July 22 | . . 18 51 | 14.75 | 9.0 | July 8 | . . 19 4 | 3.86 | 9.0 |
| | | | | | | | | 26 | . . | 14.40 | | 22 | . . | 3.98 | 8.5 |
| | | | | | | | | | | | | 24 | . . | 3.96 | 8.5 |
| (*)-36° 47'. | | | | O. ARG. S. 18609, -21° 8'. | | | | WEISSE 1277, -9° 29'. | | | | LALANDE 36002, +38° 19'. | | | |
| July 21 | . . 18 25 | 15.47 | 7.0 | Aug. 9 | . . 18 37 | 14.21 | | July 15 | . . 18 51 | 29.81 | 8.2 | Oct. 3 | . . 19 4 | 22.70 | |
| 26 | . . | 15.10 | 8.0 | | | | | 27 | . . | 29.78 | 8.5 | | | | |
| ε SERPENTIS, -1° 5'. | | | | LACAILLE 7846, -40° 32'. | | | | (*)-8° 21'. | | | | LALANDE 36051, +37° 35'. | | | |
| July 15 | . . 18 25 | 32.84 | 5.5 | July 22 | . . 18 39 | 4.40 | 5.5 | July 17 | . . 18 52 | 2.90 | | Aug. 5 | . . 19 5 | 27.49 | 6.5 |
| | | | | 26 | . . | 4.18 | 5.5 | 21 | . . | 2.92 | 8.5 | | | | |
| B. A. C. 6308, -33° 4'. | | | | 6 AQUILÆ, -4° 52'. | | | | (*)-8° 21'. | | | | LACAILLE 8041, +37° 9'. | | | |
| July 27 | . . 18 25 | 57.25 | 7.5 | July 17 | . . 18 40 | 35.59 | 5.5 | July 17 | . . 18 52 | 18.87 | | Sept. 29 | . . 19 7 | 15.15 | 7.0 |
| | | | | | | | | 21 | . . | 18.99 | | Oct. 2 | . . | 15.21 | 6.5 |
| B. A. C. 6317, -33° 1'. | | | | O. ARG. S. 18683, -22° 13'. | | | | B. A. C. 6488, -15° 28'. | | | | (*)+2° 4'. | | | |
| July 27 | . . 18 27 | 18.94 | 6.5 | July 8 | . . 18 40 | 59.79 | 9.0 | July 15 | . . 18 54 | 28.26 | 6.5 | July 15 | . . 19 7 | 17.31 | 8.0 |
| | | | | 15 | . . | 59.69 | 8.5 | 22 | . . | 28.28 | 6.0 | | | | |
| 1 AQUILÆ, -8° 20'. | | | | LALANDE 34950, +36° 26'. | | | | 24 | . . | 28.39 | 6.0 | 21 AQUILÆ, +2° 3'. | | | |
| July 3 | . . 18 28 | 27.51 | | July 27 | . . 18 41 | 1.11 | 6.5 | 26 | . . | 28.24 | 6.0 | July 15 | . . 19 7 | 27.48 | 5.5 |
| 8 | . . | 27.57 | | | | | | 27 | . . | 28.24 | | 17 | . . | 27.46 | 6.0 |
| 15 | . . | 27.61 | | 31 SAGITTARI, -22° 4'. | | | | 12 AQUILÆ, -5° 55'. | | | | 24 | . . | 27.60 | 5.5 |
| 26 | . . | 27.56 | | July 17 | . . 18 44 | 41.37 | 6.5 | July 8 | . . 18 55 | 3.58 | 5.0 | Aug. 9 | . . | 27.45 | 5.5 |
| Aug. 9 | . . | 27.43 | 6.5 | | | | | Aug. 5 | . . | 3.48 | 5.0 | (*)-22° 15'. | | | |
| LALANDE 34412, +37° 20'. | | | | β LYRÆ, +33° 13'. | | | | RADCLIFFE 4208, +86° 32'. | | | | July 8 | . . 19 8 | 31.55 | 9.0 |
| July 17 | . . 18 28 | 37.26 | 7.5 | July 8 | . . 18 45 | 30.14 | 6.0 | Aug. 9 | . . 18 55 | 12.40 | 7.0 | 22 | . . | 31.42 | 9.0 |
| | | | | 21 | . . | 29.99 | | Sept. 27 | . . | 11.81 | | 26 | . . | 31.21 | 9.0 |
| LALANDE 34581, +37° 55'. | | | | 22 | . . | 30.09 | | (*)-15° 4'. | | | | 27 | . . | 31.45 | 9.0 |
| July 15 | . . 18 31 | 59.14 | | 24 | . . | 30.12 | | July 17 | . . 18 55 | 59.16 | 8.0 | LALANDE 36238, +36° 13'. | | | |
| 17 | . . | 59.12 | 7.5 | 26 | . . | 30.03 | | 21 | . . | 59.25 | 8.0 | Oct. 3 | . . 19 9 | 27.25 | 7.0 |
| | | | | 27 | . . | 30.10 | | 27 | . . | 59.15 | 7.8 | | | | |
| α LYRÆ, +38° 40'. | | | | (*)+73° 5'. | | | | (*)-18° 56'. | | | | WEISSE XIX, 187, -8° 55'. | | | |
| Aug. 5 | . . 18 32 | 44.39 | | Oct. 3 | . . 18 47 | 43.09 | | July 17 | . . 18 59 | 22.26 | 8.5 | Aug. 5 | . . 19 9 | 31.03 | 7.2 |
| 9 | . . | 44.35 | | | | | | ζ AQUILÆ, +13° 41'. | | | | (*)-19° 18'. | | | |
| (*)-25° 8'. | | | | (*)-33° 26'. | | | | Sept. 27 | . . 18 59 | 42.56 | | July 24 | . . 19 10 | 15.35 | 8.5 |
| July 21 | . . 18 32 | 48.73 | 9.0 | July 27 | . . 18 47 | 51.27 | 7.8 | 29 | . . | 42.57 | | 1 VULPECULÆ, +21° 10'. | | | |
| | | | | | | | | Oct. 2 | . . | 42.69 | | Sept. 29 | . . 19 10 | 53.03 | 5.5 |
| O. ARG. S. 18525, -25° 8'. | | | | (*)-33° 25'. | | | | 3 | . . | 42.69 | | Oct. 2 | . . | 53.10 | |
| July 8 | . . 18 33 | 9.57 | | July 27 | . . 18 48 | 11.94 | 7.8 | LAMONT 6587, -1° 19'. | | | | WEISSE 224, +0° 49'. | | | |
| | | | | | | | | July 8 | . . 18 59 | 50.06 | 7.7 | July 15 | . . 19 10 | 56.12 | 8.0 |
| LALANDE 34831, +72° 13'. | | | | LACAILLE 7926, -33° 29'. | | | | 15 | . . | 50.04 | 8.0 | WEISSE (2) 187, +38° 30'. | | | |
| July 26 | . . 18 34 | 38.68 | 8.3 | July 17 | . . 18 48 | 48.89 | 7.5 | 21 | . . | 50.03 | 8.2 | July 21 | . . 19 11 | 6.87 | 7.8 |
| 27 | . . | 38.70 | 8.2 | 21 | . . | 49.00 | 7.5 | (*)-13° 2'. | | | | 26 | . . | 6.89 | 7.0 |
| (*)-1° 6'. | | | | 24 | . . | 48.91 | 7.0 | July 24 | . . 19 0 | 25.66 | 8.0 | (*)-19° 18'. | | | |
| July 21 | . . 18 35 | 44.10 | 7.7 | (*)-33° 28'. | | | | O. ARG. S. 19104, -21° 59'. | | | | July 22 | . . 19 11 | 15.04 | 9.0 |
| | | | | July 17 | . . 18 48 | 49.49 | 8.5 | July 22 | . . 19 0 | 46.69 | 7.3 | 24 | . . | 15.35 | |
| B. A. C. 6375, +77° 26'. | | | | 21 | . . | 49.63 | 8.5 | 27 | . . | 46.68 | 8.0 | (*)+38° 30'. | | | |
| July 22 | . . 18 35 | 44.34 | 6.0 | B. A. C. 6469, +73° 55'. | | | | O. ARG. S. 19140, -15° 29'. | | | | July 21 | . . 19 11 | 29.09 | 8.0 |
| 24 | . . | 44.57 | | Sept. 28 | . . 18 48 | 51.75 | 5.5 | Aug. 5 | . . 19 1 | 56.70 | 8.3 | 26 | . . | 29.19 | 8.2 |
| 28 | . . | 44.10 | | 29 | . . | 51.68 | 5.5 | 9 | . . | 56.83 | 8.5 | 23 AQUILÆ (centre), +0° 51'. | | | |
| B. A. C. 6363, -39° 48'. | | | | Oct. 2 | . . | 51.68 | 5.5 | Sept. 28 | . . | 56.86 | 8.5 | July 15 | . . 19 12 | 13.88 | 6.0 |
| July 17 | . . 18 36 | 20.07 | 6.0 | δ ² LYRÆ, +36° 44'. | | | | B. A. C. 6554, -29° 42'. | | | | | | | |
| | | | | Aug. 9 | . . 18 50 | 10.16 | 6.0 | July 8 | . . 19 3 | 27.16 | 7.0 | | | | |
| LACAILLE 7831, -39° 51'. | | | | | | | | 15 | . . | 27.51 | 7.0 | | | | |
| July 17 | . . 18 36 | 22.15 | 7.0 | (*)-22° 8'. | | | | 21 | . . | 27.33 | 6.0 | | | | |
| | | | | July 8 | . . 18 50 | 59.78 | 8.0 | | | | | | | | |
| WEISSE 887, -1° 6'. | | | | 22 | . . | 59.93 | 8.0 | | | | | | | | |
| July 21 | . . 18 36 | 49.33 | 8.2 | 26 | . . | 59.91 | | | | | | | | | |

| | | | | | | | | | | | | | | | |
|-------------------------------------|-----------|-------|-----|-----------------------------|-----------|-------|-----|-------------------------------------|-----------|-------|-----|-----------------------------|-----------|-------|-----|
| 23 AQUILÆ (1st *), +0° 51'. | | | | B. A. C. 6663, +19° 38'. | | | | B. A. C. 6711, +38° 29'. | | | | O. ARG. S. 19880, -24° 41'. | | | |
| 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | |
| July 17 | . . 19 12 | 13.77 | | July 15 | . . 19 21 | 3.06 | 6.0 | July 22 | . . 19 29 | 17 27 | 6.5 | Oct. 11 | . . 19 35 | 7.32 | 7.5 |
| 27 | . . . | 13.96 | | 22 | . . . | 3.17 | 6.0 | Aug. 9 | . . . | 17.02 | | | | | |
| | | | | | | | | Oct. 2 | . . . | 17.13 | 6.5 | | | | |
| | | | | | | | | 12 | . . . | 17.17 | | | | | |
| 23 AQUILÆ (2d *), +0° 51'. | | | | O. ARG. S. 19600, -26° 0'. | | | | WEISSE 722, -10° 26'. | | | | (*)+36° 45'. | | | |
| July 17 | . . 19 12 | 13.91 | | Oct. 2 | . . 19 21 | 34.69 | 8.3 | Oct. 11 | . . 19 30 | 2.11 | 6.0 | July 8 | . . 19 35 | 37.13 | 8.5 |
| 27 | . . . | 14.02 | | | | | | | | | | | | | |
| | | | | O. ARG. S. 19609, -26° 0'. | | | | (*)+29° 31'. | | | | B. A. C. 6752, +71° 14'. | | | |
| 24 AQUILÆ, +0° 5'. | | | | Aug. 5 | . . 19 22 | 1.56 | 8.0 | July 15 | . . 19 30 | 6.29 | | Oct. 13 | . . 19 35 | 39.16 | |
| Aug. 9 | . . 19 12 | 30.25 | | | | | | | | | | 16 | . . . | 39.44 | |
| | | | | O. ARG. S. 19623, -19° 44'. | | | | κ AQUILÆ, -7° 18'. | | | | (*)+38° 2'. | | | |
| B. A. C. 6604, -24° 25'. | | | | Sept. 27 | . . 19 22 | 24.70 | 8.5 | July 17 | . . 19 30 | 13.14 | | July 21 | . . 19 39 | 18.15 | |
| Oct. 3 | . . 19 13 | 9.05 | 7.0 | 29 | . . . | 24.78 | 8.6 | 21 | . . . | 13.23 | | 26 | . . . | 17.78 | 8.8 |
| | | | | | | | | 27 | . . . | 13.17 | | | | | |
| f AQUILÆ, -5° 38'. | | | | O. ARG. S. 19629, -19° 41'. | | | | Oct. 9 | . . . | 13.17 | | LALANDE 37597, +38° 2'. | | | |
| Aug. 5 | . . 19 13 | 55.62 | | Sept. 27 | . . 19 22 | 46.66 | 8.3 | | | | | July 15 | . . 19 39 | 23.42 | 6.5 |
| | | | | 29 | . . . | 46.67 | 8.2 | | | | | 21 | . . . | 23.44 | |
| (*)-18° 33'. | | | | (*)+36° 58'. | | | | (*)+35° 56'. | | | | 24 | . . . | 23.72 | 6.5 |
| July 24 | . . 19 14 | 26.78 | 6.0 | July 8 | . . 19 23 | 9.32 | 8.0 | Oct. 3 | . . 19 30 | 19.47 | 8.2 | 26 | . . . | 23.81 | |
| | | | | 24 | . . . | 9.34 | 8.0 | | | | | | | | |
| | | | | 26 | . . . | 9.24 | 8.0 | (*)+38° 58'. | | | | O. ARG. S. 19941, -26° 47'. | | | |
| ρ ² SAGITTARI, -18° 33'. | | | | e AQUILÆ, +3° 2'. | | | | Oct. 3 | . . 19 30 | 21.98 | 8.2 | Aug. 9 | . . 19 39 | 24.29 | 7.0 |
| July 8 | . . 19 14 | 36.78 | 6.0 | Oct. 13 | . . 19 24 | 10.66 | | | | | | Sept. 27 | . . . | 24.26 | 7.5 |
| 17 | . . . | 36.73 | 6.0 | | | | | (*)-27° 39'. | | | | 28 | . . . | 24.29 | 7.5 |
| Sept. 27 | . . . | 36.81 | | (*)-20° 40'. | | | | July 8 | . . 19 30 | 42.78 | 7.0 | Oct. 12 | . . . | 24.38 | 8.0 |
| | | | | July 22 | . . 19 24 | 11.37 | 8.5 | | | | | γ AQUILÆ, +10° 19'. | | | |
| WEISSE 345, -8° 26'. | | | | (*)+36° 56'. | | | | (*)-10° 20'. | | | | July 8 | . . 19 40 | 21.85 | |
| July 21 | . . 19 15 | 36.92 | 8.0 | July 24 | . . 19 24 | 13.00 | 8.0 | Sept. 29 | . . 19 31 | 8.15 | 7.0 | 22 | . . . | 21.84 | |
| 26 | . . . | 36.77 | | 26 | . . . | 12.81 | 7.0 | O. ARG. S. 19809, -27° 39'. | | | | 27 | . . . | 21.85 | |
| LACAILLE 8090, -35° 12'. | | | | (*)+36° 58'. | | | | July 8 | . . 19 31 | 16.18 | 8.0 | Aug. 5 | . . . | 21.86 | |
| Sept. 29 | . . 19 15 | 39.25 | | July 24 | . . 19 24 | 45.73 | 9.0 | (*)-10° 26'. | | | | Sept. 20 | . . . | 21.88 | |
| Oct. 2 | . . . | 39.49 | 7.0 | | | | | Oct. 11 | . . 19 31 | 54.79 | 5.5 | 29 | . . . | 21.84 | |
| (*)-28° 57'. | | | | LALANDE 36878, -20° 40'. | | | | (*)-23° 37'. | | | | Oct. 11 | . . . | 21.82 | |
| July 22 | . . 19 16 | 12.01 | 8.5 | July 21 | . . 19 24 | 48.23 | | July 24 | . . 19 32 | 55.13 | 8.0 | O. ARG. S. 19960, -26° 58'. | | | |
| 27 | . . . | 11.82 | 9.0 | 22 | . . . | 48.17 | 7.5 | 26 | . . . | 55.11 | 7.5 | Oct. 2 | . . 19 40 | 43.54 | 8.0 |
| LALANDE 36557, -15° 15'. | | | | Aug. 5 | . . . | 47.98 | 7.5 | Aug. 5 | . . . | 55.11 | 7.5 | 3 | . . . | 43.54 | 8.0 |
| Aug. 5 | . . 19 17 | 50.10 | 7.0 | (*)-20° 40'. | | | | (*)-23° 56'. | | | | O. ARG. S. 20002, -26° 57'. | | | |
| Oct. 3 | . . . | 50.12 | 7.0 | July 21 | . . 19 25 | 5.69 | | Aug. 9 | . . 19 33 | 37.02 | 8.0 | July 24 | . . 19 43 | 20.41 | 9.0 |
| 50 SAGITTARI, -22° 1'. | | | | B. A. C. 6700, -21° 3'. | | | | Sept. 27 | . . . | 37.05 | 8.3 | Sept. 28 | . . . | 20.55 | |
| Sept. 29 | . . 19 18 | 55.41 | | July 8 | . . 19 28 | 15.36 | 5.5 | ε ¹ SAGITTARI, -16° 33'. | | | | (*)-10° 19'. | | | |
| | | | | 26 | . . . | 15.33 | 6.0 | Sept. 28 | . . 19 33 | 37.15 | 7.0 | Oct. 3 | . . 19 43 | 22.03 | 7.0 |
| δ AQUILÆ, +2° 52'. | | | | ζ AQUILÆ, -10° 50'. | | | | Oct. 9 | . . . | 37.12 | 7.0 | 12 | . . . | 22.02 | 6.5 |
| July 17 | . . 19 19 | 14.73 | | July 17 | . . 19 28 | 17.08 | 5.5 | O. ARG. S. 19857, -16° 34'. | | | | (*)+34° 59'. | | | |
| Aug. 9 | . . . | 14.73 | | 21 | . . . | 17.28 | 5.5 | Sept. 28 | . . 19 33 | 39.25 | 8.5 | July 15 | . . 19 43 | 25.32 | 8.0 |
| Oct. 12 | . . . | 14.70 | | | | | | Oct. 9 | . . . | 39.35 | 8.5 | | | | |
| 16 | . . . | 14.71 | | (*)-40° 2'. | | | | O. ARG. S. 19863, -26° 40'. | | | | LALANDE 37785, +34° 59'. | | | |
| 4 VULPECULÆ, +19° 38'. | | | | Sept. 28 | . . 19 28 | 43.56 | 8.3 | Oct. 3 | . . 19 34 | 5.79 | | Aug. 5 | . . 19 44 | 6.21 | 6.5 |
| July 22 | . . 19 20 | 2.14 | 5.5 | | | | | (*)+36° 45'. | | | | Oct. 2 | . . . | 6.07 | 6.5 |
| LALANDE 36732, +36° 56'. | | | | (*)-41° 44'. | | | | July 15 | . . 19 34 | 45.95 | | O. ARG. S. 20024, -27° 13'. | | | |
| July 8 | . . 19 20 | 6.72 | 7.5 | Aug. 5 | . . 19 29 | 2.91 | 7.5 | 21 | . . . | 46.14 | 7.5 | July 26 | . . 19 45 | 7.47 | 8.5 |
| 21 | . . . | 6.58 | 7.0 | Sept. 27 | . . . | 2.96 | | Sept. 29 | . . . | 45.94 | 8.3 | | | | |
| LALANDE 36774, +37° 0'. | | | | 9 VULPECULÆ, +19° 3'. | | | | Oct. 2 | . . . | 46.18 | 7.3 | O. ARG. S. 19863, -26° 40'. | | | |
| July 8 | . . 19 20 | 54.17 | 6.0 | July 24 | . . 19 29 | 8.09 | 5.0 | (*)+36° 45'. | | | | July 8 | . . 19 45 | 11.72 | 9.0 |
| 21 | . . . | 54.24 | | Sept. 29 | . . . | 7.95 | 6.0 | July 15 | . . 19 35 | 6.97 | | 21 | . . . | 11.99 | 9.2 |
| 24 | . . . | 54.37 | 7.0 | | | | | 21 | . . . | 6.94 | 7.5 | (*)+8° 7'. | | | |
| | | | | | | | | Sept. 29 | . . . | 6.79 | 8.1 | July 22 | . . 19 47 | 44.18 | 8.3 |
| | | | | | | | | Oct. 2 | . . . | 7.10 | 7.2 | | | | |

| | | | | | | | | | | | | | | | |
|-----------------------------------|-------|-------|------|--------------------------|-------|-------|------|---------------------------------|-------|---------|------|-----------------------------|-------|-------|------|
| ξ AQUILÆ, +8° 8'. | | | | (*)+34° 57'. | | | | (*)-9° 15'. | | | | B. A. C. 6969, +36° 21'. | | | |
| 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. |
| July 15 . . | 19 48 | 14.30 | 5.0 | July 22 . . | 19 55 | 9.73 | | July 8 . . | 20 3 | 46.48 | 8.3 | Sept. 20 . . | 20 10 | 0.81 | |
| 22 . . | 14 38 | 6.0 | | Sept. 27 . . | | 9.52 | | 22 . . | | (47.13) | | 27 . . | | 1.28 | 6.0 |
| | | | | | | | | 24 . . | | 47.13 | 9.0 | | | | |
| B. A. C. 6834, +60° 53'. | | | | (*)+34° 57'. | | | | (*)-14° 8'. | | | | 33 CYGNI, +56° 11'. | | | |
| Aug. 5 . . | 19 48 | 27.66 | 6.5 | July 22 . . | 19 55 | 16.31 | | Aug. 5 . . | 20 4 | 33.44 | | Oct. 3 . . | 20 10 | 30.95 | 5.0 |
| Sept. 28 . . | | 27.45 | 7.0 | 27 . . | | 16.13 | 8.0 | Sept. 27 . . | | 33.65 | 9.0 | 13 . . | | 30.78 | 5.5 |
| | | | | | | | | 28 . . | | 33.85 | 8.2 | | | | |
| β AQUILÆ, +6° 6'. | | | | (*)+34° 59'. | | | | O. ARG. S. 20299, -24° 39'. | | | | a^2 CAPRICORNI, -12° 56'. | | | |
| July 21 . . | 19 49 | 13.30 | | July 22 . . | 19 55 | 39.60 | 7.5 | July 26 . . | 20 4 | 35.61 | | July 8 . . | 20 11 | 10.31 | |
| Sept. 20 . . | | 13.29 | | | | | | Aug. 9 . . | | 35.45 | 8.5 | 22 . . | | 10.41 | |
| Oct. 3 . . | | 13.21 | | 15 VULPECULÆ, +27° 24'. | | | | Sept. 29 . . | | 35.67 | 9.0 | 24 . . | | 10.35 | |
| (*)-22° 43'. | | | | July 24 . . | 19 55 | 59.60 | 5.5 | Oct. 26 . . | | | | 26 . . | | 10.40 | |
| July 8 . . | 19 49 | 19.58 | 8.5 | 26 . . | | 59.42 | 5.5 | | | | | Oct. 2 . . | | 10.42 | |
| 24 . . | | 19.49 | 9.0 | (*)+36° 45'. | | | | July 15 . . | 20 5 | 5.41 | | 9 . . | | 10.45 | |
| 26 . . | | 19.44 | 9.0 | Oct. 11 . . | 19 56 | 23.39 | 8.2 | 22 . . | | 5.54 | 6.5 | 16 . . | | 10.39 | |
| O. ARG. S. 20011, -28° 59'. | | | | (*)+36° 45'. | | | | LALANDE 38708, +38° 46'. | | | | (*)+36° 44'. | | | |
| Aug. 9 . . | 19 51 | 7.81 | 7.5 | Aug. 5 . . | 19 56 | 41.83 | 6.5 | Oct. 2 . . | 20 5 | 22.74 | 6.5 | Oct. 18 . . | 20 11 | 10.79 | 8.0 |
| Oct. 3 . . | | 7.96 | 7.5 | Oct. 11 . . | | 41.75 | 7.0 | 3 . . | | 22.82 | 6.8 | | | | |
| WEISSE 1259, -14° 20'. | | | | (*)+34° 59'. | | | | WEISSE (2) 189, +38° 44'. | | | | κ CEPHEI (1st *), +77° 20'. | | | |
| Oct. 12 . . | 19 51 | 28.02 | 9.2 | July 8 . . | 19 57 | 21.76 | 7.0 | Oct. 12 . . | 20 5 | 46.79 | 9.0 | Oct. 11 . . | 20 13 | 1.31 | |
| O. ARG. S. 20124, -25° 26'. | | | | 22 . . | | 21.87 | 7.0 | 13 . . | | 46.81 | 8.5 | | | | |
| July 22 . . | 19 51 | 33.46 | 8.0 | Sept. 27 . . | | 21.61 | 7.5 | WEISSE XX, 81, -14° 9'. | | | | κ CEPHEI (2d *), +77° 20'. | | | |
| B. A. C. 6855, +16° 9'. | | | | Oct. 2 . . | | 21.58 | 7.0 | Sept. 27 . . | 20 5 | 51.41 | 8.0 | Oct. 12 . . | 20 13 | 3.95 | 9.5 |
| July 8 . . | 19 52 | 35.50 | 6.5 | 3 . . | | 21.93 | 6.5 | 28 . . | | 51.46 | 8.0 | 13 . . | | 3.49 | 9.5 |
| 24 . . | | 35.72 | 6.0 | (*)+34° 59'. | | | | WEISSE (2) 1729, +39° 0'. | | | | (*)-33° 6'. | | | |
| WEISSE (2) 1729, +39° 0'. | | | | July 8 . . | 19 57 | 43.06 | | Oct. 2 . . | | | | Aug. 9 . . | 20 13 | 22.19 | 7.0 |
| Sept. 28 . . | 19 53 | 14.20 | 7.8 | Oct. 3 . . | | 43.14 | 6.5 | (*)+26° 21'. | | | | Sept. 28 . . | | 22.37 | 7.2 |
| Oct. 13 . . | | 14.08 | 8.3 | τ AQUILÆ, +6° 56'. | | | | July 24 . . | | | | 29 . . | | 22.32 | 7.3 |
| γ SAGITTÆ, +19° 9'. | | | | Oct. 18 . . | 19 58 | 4.98 | | July 24 . . | 20 6 | 45.94 | 7.0 | | | | |
| July 26 . . | 19 53 | 14.46 | 4.5 | 64 SAGITTARI, -11° 57'. | | | | Oct. 16 . . | | 45.90 | | July 15 . . | 20 16 | 43.41 | |
| Aug. 5 . . | | 14.51 | 5.0 | Aug. 9 . . | 19 58 | 14.48 | 6.0 | (*)+38° 18'. | | | | Oct. 16 . . | | 43.48 | 6.0 |
| LALANDE 38175, +37° 46'. | | | | Sept. 28 . . | | 14.53 | 6.0 | (*)+38° 19'. | | | | (*)+36° 44'. | | | |
| Oct. 2 . . | 19 53 | 23.66 | 7.0 | Oct. 12 . . | | 14.50 | 6.0 | July 26 . . | 20 7 | 16.34 | | Oct. 9 . . | 20 16 | 51.64 | 8.5 |
| WEISSE (2) 1753, +39° 4'. | | | | (*)-19° 3'. | | | | July 26 . . | | | | (*)+64° 16'. | | | |
| July 15 . . | 19 53 | 48.19 | 8.0 | July 24 . . | 19 58 | 52.70 | 8.5 | July 26 . . | 20 7 | 22.51 | | July 26 . . | 20 17 | 0.73 | 8.0 |
| Oct. 13 . . | | 48.29 | 8.2 | 26 . . | | 52.61 | | (*)+38° 18'. | | | | Sept. 27 . . | | 0.66 | 8.3 |
| 63 SAGITTARI, -13° 59'. | | | | LACAILLE 8341, -36° 1'. | | | | July 8 . . | | | | Oct. 12 . . | | 0.88 | 8.3 |
| Oct. 16 . . | 19 54 | 1.72 | | Oct. 13 . . | 19 59 | 31.37 | 7.0 | 26 . . | | | | 18 . . | | 0.69 | |
| LALANDE 38202 (1st *), +37° 45'. | | | | (*)+38° 7'. | | | | (*)-13° 57'. | | | | B. A. C. 7023, -12° 6'. | | | |
| Aug. 9 . . | 19 54 | 6.00 | 7.0 | Oct. 16 . . | 20 0 | 38.31 | 6.5 | Aug. 5 . . | 20 8 | 46.69 | 8.2 | Oct. 3 . . | 20 18 | 18.46 | 6.5 |
| LALANDE 38202 (centre), +37° 45'. | | | | (*)-39° 5'. | | | | O. ARG. N. 20223, +48° 48'. | | | | 11 . . | | 18.36 | 7.0 |
| Oct. 2 . . | 19 54 | 5.84 | | Aug. 5 . . | 20 0 | 44.91 | 9.0 | Oct. 11 . . | 20 9 | 26.46 | | WEISSE (2) 641, +38° 48'. | | | |
| 9 . . | | 5.97 | 6.0 | LACAILLE 8354, -34° 14'. | | | | Oct. 12 . . | | 26.69 | 8.0 | July 24 . . | 20 18 | 22.78 | 8.5 |
| LALANDE 38202 (2d *), +37° 45'. | | | | Sept. 29 . . | 20 1 | 28.08 | 7.0 | (*)+38° 19'. | | | | Aug. 9 . . | | 22.62 | 8.2 |
| Aug. 9 . . | 19 54 | 6.07 | | Oct. 2 . . | | 27.91 | 7.0 | Aug. 5 . . | 20 8 | | | Sept. 20 . . | | 22.54 | |
| (*)-22° 27'. | | | | 64 AQUILÆ, -1° 2'. | | | | (*)-13° 57'. | | | | WEISSE (2) 643, +38° 48'. | | | |
| Oct. 3 . . | 19 54 | 17.99 | | July 15 . . | 20 1 | 37.57 | 6.0 | Aug. 9 . . | 20 9 | 34.01 | | July 24 . . | 20 18 | 26.32 | 7.0 |
| 12 . . | | 18.15 | 8.2 | 22 . . | | 37.64 | 6.0 | Sept. 27 . . | | 33.87 | | Aug. 9 . . | | 26.17 | 6.8 |
| | | | | Oct. 3 . . | | 37.64 | | 29 . . | | 34.14 | 9.5 | Sept. 20 . . | | 26.04 | |
| | | | | | | | | δ ³ CYGNI, +36° 24'. | | | | (*)+64° 17'. | | | |
| | | | | July 15 . . | 20 1 | 37.57 | 6.0 | Sept. 20 . . | 20 9 | 53.32 | 6.0 | Oct. 12 . . | 20 19 | 16.82 | 8.0 |
| | | | | 22 . . | | | | 27 . . | | 53.27 | 5.0 | 13 . . | | 16.47 | 8.3 |
| | | | | Oct. 3 . . | | | | | | | | 18 . . | | 16.60 | |

| | | | | | | | | | | | | | | | | |
|--------------------------|-------|----|-------|--------------------------|-------------------------------|----------|----------|---------------------------------|----------------------------------|----------|----------|--------------------------------|-----------------------------|----------|----------|-----|
| (*)-19° 57'. | | | | LACAILLE 8537, -29° 51'. | | | | (*)+37° 56'. | | | | WEISSE 1359, -14° 1'. | | | | |
| 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | 1876. | h. m. | s. | Mag. | |
| Sept. 28 | 20 | 19 | 53.56 | 8.0 | Oct. 18 | 20 | 35 42.82 | 6.5 | Oct. 3 | 20 | 47 18.98 | | Sept. 29 | 20 | 54 18.23 | 6.5 |
| 29 | | | 53.59 | 8.0 | 21 | | 42.91 | 6.5 | | | | | | | | |
| π CAPRICORNI, -18° 37'. | | | | B. A. C. 7167, +38° 37'. | | | | (*)+37° 56'. | | | | WEISSE 1370, -13° 58'. | | | | |
| July 15 | 20 | 20 | 13.33 | | Sept. 29 | 20 | 37 21.77 | 6.0 | Oct. 9 | 20 | 47 20.61 | | Oct. 3 | 20 | 54 51.75 | 8.5 |
| (*)+64° 17'. | | | | B. A. C. 7172, -4° 23'. | | | | (*)-19° 30'. | | | | WEISSE 1394, -12° 55'. | | | | |
| Oct. 13 | 20 | 20 | 13.45 | | Oct. 3 | 20 | 37 42.25 | 6.5 | Oct. 13 | 20 | 48 39.54 | 8.5 | Oct. 18 | 20 | 55 38.23 | 7.2 |
| 18 | | | 13.30 | | O. ARG. S. 20805, -24° 20'. | | | | 57 CYGNI, +43° 54'. | | | | (*)+37° 10'. | | | |
| 40 CYGNI, +38° 0'. | | | | Oct. 16 | 20 | 38 1.04 | 8.3 | Sept. 20 | 20 | 48 51.65 | | Oct. 21 | 20 | 56 2.24 | | |
| July 24 | 20 | 22 | 58.67 | | 52 CYGNI, +30° 16'. | | | | 28 | | 51.74 | 6.0 | 27 | | 2.14 | 7.5 |
| 26 | | | 58.53 | 5.5 | Sept. 28 | 20 | 40 32.55 | 5.5 | (*)-19° 31'. | | | | 2 EQUULEI (1st *), +6° 40'. | | | |
| B. A. C. 7076, +48° 32'. | | | | 29 | | 32.47 | | Oct. 13 | 20 | 49 1.51 | 8.3 | Oct. 12 | 20 | 56 5.62 | | |
| Oct. 3 | 20 | 24 | 41.25 | | } DELPHINI (1st *), +15° 39'. | | | | 21 | | 1.70 | 8.5 | 13 | | 5.47 | |
| 11 | | | 41.20 | 6.5 | Sept. 20 | 20 | 40 53.40 | 6.0 | B. A. C. 7255 (1st *), +4° 3'. | | | | 16 | | 5.59 | |
| LACAILLE 8471, -41° 56'. | | | | Oct. 12 | | 53.41 | | Sept. 29 | 20 | 49 27.95 | | 2 EQUULEI (centre), +6° 40'. | | | | |
| Aug. 9 | 20 | 25 | 4.80 | 6.5 | } DELPHINI (2d *), +15° 39'. | | | | B. A. C. 7255 (centre), +4° 3'. | | | | Oct. 7 | 20 | 56 5.66 | |
| Sept. 27 | | | 4.96 | 7.0 | Sept. 20 | 20 | 40 54.30 | 6.0 | Sept. 27 | 20 | 49 28.03 | 6.0 | Oct. 12 | 20 | 56 5.75 | |
| 28 | | | 4.82 | 7.0 | Oct. 12 | | 54.29 | | Oct. 11 | | 28.15 | 5.5 | 13 | | 5.68 | |
| B. A. C. 7080, -10° 17'. | | | | WEISSE 1023, -10° 12'. | | | | B. A. C. 7255 (2d *), +4° 3'. | | | | 16 | | 5.77 | | |
| Sept. 29 | 20 | 25 | 36.70 | 6.0 | Sept. 27 | 20 | 41 25.10 | 7.0 | Sept. 29 | 20 | 49 28.10 | | (*)+37° 10'. | | | |
| Oct. 9 | | | 36.71 | 6.0 | Oct. 3 | | 25.15 | 7.0 | (*)-19° 28'. | | | | Oct. 21 | 20 | 57 30.77 | 8.0 |
| (*)-21° 41'. | | | | (*)-15° 37'. | | | | (*)-19° 28'. | | | | 27 | | 30.77 | 8.2 | |
| Oct. 13 | 20 | 26 | 21.99 | 9.2 | Oct. 18 | 20 | 41 27.05 | 9.0 | Oct. 18 | 20 | 50 25.54 | 9.0 | (*)+37° 10'. | | | |
| 21 | | | 21.71 | 9.0 | (*)+33° 55'. | | | | (*) 0° 0'. | | | | Oct. 21 | 20 | 57 31.33 | 8.0 |
| ε DELPHINI, +10° 53'. | | | | Oct. 16 | 20 | 42 28.79 | 9.0 | Oct. 16 | 20 | 50 32.76 | 7.5 | 27 | | 31.23 | 8.2 | |
| July 15 | 20 | 27 | 17.18 | | 21 | | 28.38 | 9.0 | 27 | | 32.66 | 6.5 | (*)-32° 50'. | | | |
| 24 | | | 17.29 | | O. ARG. S. 20884, -22° 22'. | | | | WEISSE 1269, -0° 3'. | | | | Sept. 20 | 20 | 57 35.76 | 8.0 |
| 26 | | | 17.26 | | Oct. 27 | 20 | 42 38.83 | 8.0 | Oct. 16 | 20 | 50 49.89 | 6.0 | 27 | | 35.77 | 7.5 |
| Aug. 5 | | | 17.29 | | (*)-21° 35'. | | | | 27 | | 49.78 | 6.0 | η MICROSCOPII, -41° 52'. | | | |
| 9 | | | 17.30 | | Sept. 29 | 20 | 44 19.40 | 8.3 | B. A. C. 7269, +3° 42'. | | | | Sept. 28 | 20 | 58 20.84 | 6.0 |
| B. A. C. 7087, -14° 8'. | | | | (*)+38° 50'. | | | | Oct. 9 | 20 | 51 35.99 | 6.5 | 29 | | 21.00 | 5.5 | |
| Oct. 12 | 20 | 27 | 17.47 | 6.0 | Oct. 11 | 20 | 44 28.53 | 7.5 | (*)-19° 37'. | | | | Oct. 3 | | 20.88 | 5.5 |
| 18 | | | 17.48 | 6.5 | 13 | | 28.38 | 8.0 | Nov. 1 | 20 | 52 0.21 | 8.0 | Nov. 1 | | 20.94 | 5.0 |
| η DELPHINI, +12° 35'. | | | | LACAILLE 8609, -36° 40'. | | | | (*)-19° 39'. | | | | 2 PISCIS AUSTRALIS, -32° 50'. | | | | |
| Sept. 27 | 20 | 28 | 5.13 | | Oct. 16 | 20 | 45 48.25 | | Oct. 21 | 20 | 52 15.35 | 9.0 | Sept. 27 | 20 | 58 49.51 | 5.0 |
| 28 | | | 4.99 | 5.5 | 18 | | 48.28 | | (*)-14° 1'. | | | | O. ARG. S. 21115, -16° 4'. | | | |
| (*)+37° 25'. | | | | μ AQUARI, -9° 27'. | | | | Sept. 20 | 20 | 53 24.29 | 7.0 | Oct. 13 | 20 | 59 54.38 | 8.0 | |
| Oct. 13 | 20 | 29 | 41.97 | 8.0 | Sept. 27 | 20 | 45 57.82 | | LACAILLE 8638 (1st *), -43° 29'. | | | | 18 | | 54.53 | 8.0 |
| LACAILLE 8509, -36° 37'. | | | | 28 | | 57.82 | | Sept. 27 | 20 | 53 59.68 | | O. ARG. S. 21129, -22° 51'. | | | | |
| Oct. 18 | 20 | 31 | 56.33 | 6.5 | Oct. 27 | | 57.84 | | 28 | | 59.53 | | Oct. 11 | 20 | 59 46.84 | 7.0 |
| 21 | | | 56.46 | 6.5 | Nov. 1 | | 57.85 | | LACAILLE 8638 (2d *), -43° 29'. | | | | 12 | | 47.06 | 7.0 |
| (*)+27° 21'. | | | | 31 VULPECULÆ, +26° 37'. | | | | LACAILLE 8638 (2d *), -43° 29'. | | | | f ² CYGNI, +47° 8'. | | | | |
| Aug. 9 | 20 | 32 | 18.52 | 8.8 | Sept. 20 | 20 | 46 49.22 | 6.0 | Sept. 27 | 20 | 54 4.87 | | Oct. 9 | 20 | 58 19.99 | |
| Sept. 27 | | | 18.37 | 9.0 | 29 | | 48.96 | 5.5 | 28 | | 4.48 | 7.5 | (*)+70° 52'. | | | |
| Oct. 13 | | | 18.38 | | (*)+37° 56'. | | | | Oct. 3 | 20 | 47 17.24 | | Oct. 21 | 20 | 58 03 | 7.0 |
| (*)+27° 21'. | | | | Oct. 12 | 20 | 33 59.46 | 8.3 | (*)+37° 56'. | | | | | | | | |
| Oct. 13 | 20 | 32 | 27.24 | 9.5 | 16 | | 59.61 | 8.2 | | | | | | | | |
| B. A. C. 7130, -2° 50'. | | | | | | | | | | | | | | | | |
| Sept. 20 | 20 | 32 | 46.01 | 7.0 | | | | | | | | | | | | |
| 28 | | | 46.13 | 6.0 | | | | | | | | | | | | |
| Oct. 3 | | | 46.05 | | | | | | | | | | | | | |
| (*)+37° 47'. | | | | | | | | | | | | | | | | |
| Oct. 12 | 20 | 33 | 59.46 | 8.3 | | | | | | | | | | | | |
| 16 | | | 59.61 | 8.2 | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | |
|---------------------------|-----------|-------|-----|---------------------------------------|-----------|-------|-----|----------------------------|-----------|-------|-----|---------------------------|-----------|-------|-----|
| (*)-12° 15'. | | | | O. ARG. S. 21290, -22° 31'. | | | | (*)+38° 6'. | | | | B. A. C. 7517, -15° 21'. | | | |
| 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | |
| Sept. 20 | . . 21 4 | 2.96 | 7.8 | Oct. 16 | . . 21 11 | 46.54 | 8.0 | Oct. 18 | . . 21 19 | 34.92 | 8.5 | Oct. 11 | . . 21 31 | 26.04 | 6.5 |
| 27 | . . . | 3.12 | 7.5 | | | | | Nov. 7 | . . . | 35.15 | 8.5 | 27 | . . . | 25.96 | 7.5 |
| B. A. C. 7349, -40° 46'. | | | | θ ¹ MICROSCOPII, -41° 20'. | | | | (*)+38° 4'. | | | | 5 PEGASI, +18° 44'. | | | |
| Oct. 13 | . . 21 4 | 15.23 | 6.0 | Oct. 13 | . . 21 12 | 49.23 | 6.5 | Nov. 3 | . . 21 20 | 4.46 | 8.3 | Sept. 20 | . . 21 31 | 57.24 | |
| 16 | . . . | 15.33 | 6.0 | WEISSE (2) 322, +38° 17'. | | | | 8 | . . . | 4.27 | 8.3 | LACAILLE 8873, -35° 6'. | | | |
| LALANDE 41086, +38° 13'. | | | | Nov. 1 | . . 21 14 | 24.87 | | (*)+35° 18'. | | | | Oct. 16 | . . 21 32 | 59.28 | 6.5 |
| Nov. 22 | . . 21 4 | 17.63 | | 3 | . . . | 25.00 | 6.5 | Oct. 31 | . . 21 21 | 11.43 | 7.0 | 18 | . . . | 59.23 | 7.5 |
| B. A. C. 7363, +70° 52'. | | | | WEISSE (2) 328, +38° 16'. | | | | (*)-23° 46'. | | | | α AQUARI, +1° 41'. | | | |
| Oct. 12 | . . 21 5 | 38.40 | | Nov. 1 | . . 21 14 | 42.09 | | Sept. 27 | . . 21 22 | 47.83 | | Nov. 22 | . . 21 | 15 | 71 |
| 27 | . . . | 38.15 | | 3 | . . . | 42.22 | 8.5 | 28 | . . . | 47.78 | 9.0 | (*)-35° 6'. | | | |
| 31 | . . . | 38.51 | | (*)+48° 44'. | | | | Oct. 3 | . . . | 47.75 | 8.5 | Oct. 12 | . . 21 33 | 27.38 | 8.2 |
| (*)-12° 20'. | | | | Sept. 28 | . . 21 15 | 19.88 | 7.5 | (*)-23° 44'. | | | | 16 | . . . | 27.17 | 8.2 |
| Sept. 28 | . . 21 5 | 40.74 | 8.2 | 34 VULPECULÆ, +23° 19'. | | | | Sept. 28 | . . 21 22 | 59.08 | 9.5 | 18 | . . . | 27.25 | 8.3 |
| 29 | . . . | 40.87 | | Sept. 20 | . . 21 15 | 28.01 | 7.0 | Oct. 12 | . . . | 59.31 | | WEISSE (2) 816, +42° 43'. | | | |
| (*)-12° 17'. | | | | Oct. 3 | . . . | 27.92 | 6.0 | 13 | . . . | 59.37 | 8.0 | Sept. 27 | . . 21 33 | 36.94 | |
| Sept. 20 | . . 21 5 | 41.33 | 8.3 | Nov. 22 | . . . | 28.01 | | 16 | . . . | 59.53 | 9.2 | 28 | . . . | 36.82 | |
| 27 | . . . | 41.50 | 8.3 | (*)+48° 48'. | | | | B. A. C. 7467, -25° 43'. | | | | Nov. 1 | . . . | 37.27 | |
| 28 | . . . | 41.38 | 8.3 | Sept. 27 | . . 21 16 | 1.84 | | Nov. 8 | . . 21 23 | 15.97 | 6.5 | RUMKER 9349, -15° 24'. | | | |
| 29 | . . . | 41.46 | | 1 PEGASI, +19° 17'. | | | | 22 | . . . | 16.05 | | Oct. 21 | . . 21 34 | 40.84 | 7.0 |
| LACAILLE 8737, -41° 2'. | | | | Sept. 29 | . . 21 16 | 21.11 | | (*)-16° 25'. | | | | 41 CAPRICORNI, -23° 50'. | | | |
| Oct. 16 | . . 21 7 | 16.16 | 6.2 | Oct. 9 | . . . | 21.07 | | Oct. 18 | . . 21 24 | 8.00 | 9.0 | Oct. 27 | . . 21 34 | 56.87 | 5.0 |
| 18 | . . . | 16.06 | 6.0 | (*)+48° 48'. | | | | 2 PEGASI, +23° 4'. | | | | Nov. 3 | . . . | 56.80 | |
| ζ CYGNI, +29° 43'. | | | | Sept. 27 | . . 21 16 | 25.22 | | Sept. 20 | . . 21 24 | 19.82 | 5.5 | 4 | . . . | 56.95 | |
| Nov. 3 | . . 21 7 | 39.63 | | WEISSE 346, -11° 9'. | | | | 29 | . . . | 19.75 | | κ CAPRICORNI, -19° 26'. | | | |
| WEISSE (2) 137, +19° 43'. | | | | Oct. 11 | . . 21 16 | 29.37 | 8.0 | β AQUARI, -6° 7'. | | | | Oct. 31 | . . 21 35 | 43.89 | 5.5 |
| Oct. 3 | . . 21 7 | 41.32 | | 12 | . . . | 29.27 | 8.0 | Oct. 11 | . . 21 25 | 1.88 | | WEISSE (2) 871, +34° 5'. | | | |
| 11 | . . . | 41.47 | 8.0 | 18 | . . . | 29.31 | 8.0 | 31 | . . . | 1.80 | | Nov. 8 | . . 21 35 | 48.29 | |
| 77 DRACONIS, +77° 33'. | | | | 21 | . . . | 29.17 | 8.0 | (*)-25° 45'. | | | | (*)+34° 6'. | | | |
| Oct. 21 | . . 21 7 | 56.30 | 6.0 | 27 | . . . | 29.27 | 7.5 | Nov. 3 | . . 21 26 | 34.39 | 8.4 | Nov. 8 | . . 21 36 | 6.13 | 9.0 |
| 27 | . . . | 56.17 | | WEISSE 357, -11° 14'. | | | | β CEPHEI (1st *), +70° 1'. | | | | (*)+36° 58'. | | | |
| Nov. 1 | . . . | 56.69 | | Oct. 13 | . . 21 17 | 2.90 | 9.0 | Oct. 16 | . . 21 27 | 0.97 | 8.2 | Nov. 1 | . . 21 36 | 59.18 | 8.0 |
| 29 CAPRICORNI, -15° 41'. | | | | 16 | . . . | 2.95 | | (*)+38° 2'. | | | | ε PEGASI, +9° 18'. | | | |
| Nov. 22 | . . 21 8 | 52.87 | | 18 AQUARI, -13° 25'. | | | | Nov. 8 | . . 21 28 | 41.99 | 9.2 | Sept. 20 | . . 21 38 | 5.70 | |
| B. A. C. 7378, -20° 41'. | | | | Oct. 31 | . . 21 17 | 24.91 | 6.0 | B. A. C. 7509, +75° 50'. | | | | 27 | . . . | 5.81 | |
| Sept. 20 | . . 21 9 | 37.83 | 8.0 | Nov. 1 | . . . | 24.79 | 6.0 | Sept. 29 | . . 21 28 | 58.85 | 6.5 | Oct. 3 | . . . | 5.70 | |
| τ CYGNI, +19° 17'. | | | | WEISSE 364, -11° 10'. | | | | Oct. 18 | . . . | 58.78 | 7.0 | 9 | . . . | 5.73 | |
| Sept. 29 | . . 21 9 | 50.30 | 5.0 | Oct. 11 | . . 21 17 | 32.52 | 8.5 | 21 | . . . | 58.72 | | 11 | . . . | 5.76 | |
| Oct. 9 | . . . | 50.36 | | 12 | . . . | 32.64 | 8.5 | Nov. 1 | . . . | 59.02 | | 12 | . . . | 5.77 | |
| LACAILLE 8760, -39° 21'. | | | | B. A. C. 7437, +23° 43'. | | | | ρ CYGNI, +45° 2'. | | | | 16 | . . . | 5.72 | |
| Sept. 27 | . . 21 9 | 59.20 | 6.5 | Oct. 3 | . . 21 18 | 23.56 | 5.5 | Nov. 22 | . . 21 29 | 19.16 | | 18 | . . . | 5.74 | |
| 28 | . . . | 59.17 | 6.5 | 27 | . . . | 23.61 | 6.0 | (*)+38° 4'. | | | | 27 | . . . | 5.73 | |
| LACAILLE 8764, -41° 34'. | | | | Nov. 22 | . . . | 23.56 | | Sept. 27 | . . 21 29 | 20.29 | 9.2 | 31 | . . . | 5.75 | |
| Oct. 18 | . . 21 11 | 32.32 | 7.0 | (*)+25° 48'. | | | | 28 | . . . | 19.95 | 8.5 | Nov. 3 | . . . | 5.74 | |
| 15 AQUARI, -5° 3'. | | | | Oct. 21 | . . 21 18 | 41.25 | 8.5 | Nov. 3 | . . . | 20.69 | 8.5 | 7 | . . . | 5.71 | |
| Oct. 12 | . . 21 11 | 40.72 | 5.5 | (*)+38° 4'. | | | | ξ AQUARI, -8° 25'. | | | | Dec. 7 | . . . | 5.77 | |
| Nov. 22 | . . . | 40.68 | | Nov. 3 | . . 21 18 | 52.86 | 8.2 | Nov. 4 | . . 21 31 | 9.01 | | B. A. C. 7565, +40° 34'. | | | |
| | | | | 8 | . . . | 52.85 | 9.0 | | | | | Sept. 28 | . . 21 33 | 7.29 | 5.5 |
| | | | | | | | | | | | | 29 | . . . | 7.38 | 6.0 |

| | | | | | | | | | | | | | | | |
|----------------------------|-----------|---------|-----|------------------------------|-----------|-------|-----|----------------------------|-----------|-------|-----|-----------------------------|-----------|-------|-----|
| B. A. C. 7584, +24° 59'. | | | | WEISSE (2) 1196, +35° 33'. | | | | (*)-27° 28'. | | | | B. A. C. 7744, -5° 20'. | | | |
| 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | |
| Sept. 29 | . . 21 40 | 19.22 | 6.5 | Nov. 3 | . . 21 50 | 3.99 | 6.0 | Oct. 21 | . . 21 58 | 11.05 | 9.0 | Oct. 11 | . . 22 6 | 16.29 | 6.0 |
| Oct. 11 | . . . | 19.27 | 7.0 | | | | | | | | | 12 | . . . | 16.42 | 6.5 |
| Nov. 4 | . . . | 19.38 | 5.5 | B. A. C. 7644, +71° 54'. | | | | α AQUARI, -0° 55'. | | | | 24 CEPHEI, +71° 42'. | | | |
| B. A. C. 7586, +24° 58'. | | | | Nov. 4 | . . 21 50 | 30.83 | | Sept. 26 | . . 21 59 | 24.91 | | Sept. 28 | . . 22 7 | 25.37 | 5.5 |
| Sept. 29 | . . 21 40 | 45.21 | 5.5 | 7 | . . . | 30.18 | | 27 | . . . | 24.84 | | 29 | . . . | 25.11 | |
| Oct. 11 | . . . | 45.23 | 6.5 | 79 DRACONIS, +73° 6'. | | | | 28 | . . . | 24.88 | | Oct. 9 | . . . | 25.54 | 5.0 |
| Nov. 4 | . . . | 45.35 | 6.5 | Sept. 26 | . . 21 51 | 19.65 | | 29 | . . . | 24.91 | | 18 | . . . | 25.11 | |
| (*)-18° 57'. | | | | LACAILLE 8981, -29° 39'. | | | | Dec. 7 | . . . | 24.90 | | O. ARG. S. 22013, -24° 37'. | | | |
| Oct. 31 | . . 21 41 | 25.03 | 8.5 | Nov. 22 | . . 21 51 | 21.85 | | 23 PEGASI, +28° 21'. | | | | Oct. 21 | . . 22 7 | 50.92 | 6.5 |
| Nov. 1 | . . . | 24.99 | 8.3 | RUMKER 163, -21° 20'. | | | | Nov. 7 | . . 21 59 | 57.59 | | B. A. C. 7759, +60° 9'. | | | |
| (*)-24° 14'. | | | | Nov. 1 | . . 21 51 | 23.78 | 9.0 | ξ CEPHEI (1st *), +64° 1'. | | | | Nov. 4 | . . 22 7 | 56.45 | 6.0 |
| Oct. 3 | . . 21 41 | 52.76 | 8.5 | 8 | . . . | 23.95 | | Sept. 20 | . . 22 0 | 10.94 | | PIAZZI 33, +16° 35'. | | | |
| 18 | . . . | 52.71 | 8.2 | (*)-21° 15'. | | | | Oct. 11 | . . . | 11.10 | | Nov. 7 | . . 22 8 | 20.90 | |
| WEISSE (2) 1031, +36° 0'. | | | | Oct. 16 | . . 21 52 | 48.58 | | 31 | . . . | 11.42 | | 42 AQUARI, -13° 27'. | | | |
| Nov. 22 | . . 21 42 | 54.68 | | (*)-12° 36'. | | | | Nov. 8 | . . . | 11.34 | | Nov. 3 | . . 22 10 | 9.48 | 6.0 |
| B. A. C. 7599, -13° 18'. | | | | Oct. 18 | . . 21 53 | 40.89 | 9.0 | ξ CEPHEI (2d *), +64° 1'. | | | | 22 | . . . | 9.52 | 6.0 |
| Nov. 3 | . . 21 42 | 58.76 | | 21 | . . . | 40.67 | 9.2 | Sept. 20 | . . 22 0 | 11.86 | | B. A. C. 7772, -2° 15'. | | | |
| 8 | . . . | 58.88 | 5.5 | Nov. 3 | . . . | 41.00 | 9.5 | Oct. 11 | . . . | 11.98 | | Sept. 26 | . . 22 10 | 10.27 | 5.5 |
| (*)+39° 1'. | | | | η PISCIS AUSTRALIS, -29° 2'. | | | | 31 | . . . | 12.40 | | Oct. 3 | . . . | 10.31 | 6.0 |
| Oct. 21 | . . 21 44 | 57.56 | 8.7 | Sept. 20 | . . 21 53 | 42.58 | 5.0 | Nov. 8 | . . . | 12.29 | | 11 | . . . | 10.27 | 6.0 |
| 27 | . . . | 57.56 | 9.0 | 29 | . . . | 42.62 | 6.0 | (*)+53° 8'. | | | | θ AQUARI, -8° 24'. | | | |
| LACAILLE 8945, -36° 36'. | | | | O. ARG. S. 21800, -20° 56'. | | | | Oct. 12 | . . 22 0 | 17.40 | 8.3 | Sept. 27 | . . 22 10 | 17.34 | |
| Sept. 27 | . . 21 45 | 16.24 | 6.7 | Nov. 1 | . . 21 54 | 1.32 | | 16 | . . . | 17.02 | 8.0 | Oct. 27 | . . . | 17.35 | |
| 28 | . . . | 16.24 | 7.5 | WEISSE (2) 1331, +34° 1'. | | | | O. ARG. N. 23385, +53° 1'. | | | | O. ARG. S. 22051, -21° 7'. | | | |
| WEISSE (2) 1100, +39° 1'. | | | | Nov. 7 | . . 21 54 | 53.47 | | Nov. 22 | . . 22 1 | 25.42 | 7.2 | Oct. 21 | . . 22 11 | 9.65 | |
| Oct. 3 | . . 21 45 | 45.65 | 8.0 | WEISSE 1253, -12° 37'. | | | | B. A. C. 7732, +82° 15'. | | | | 44 AQUARI, -6° 0'. | | | |
| 31 | . . . | 45.66 | | Sept. 27 | . . 21 55 | 0.89 | 8.5 | Oct. 3 | . . 22 2 | 34.66 | | Oct. 31 | . . 22 10 | 38.05 | 6.0 |
| B. A. C. 7614, +38° 57'. | | | | Oct. 27 | . . . | 0.86 | 8.2 | 18 | . . . | 33.73 | | O. ARG. S. 22060, -21° 7'. | | | |
| Oct. 18 | . . 21 45 | 56.97 | 7.0 | WEISSE 1255, -12° 37'. | | | | 21 | . . . | 36.67 | | Oct. 21 | . . 22 11 | 43.23 | 8.0 |
| WEISSE (2) 1102, +38° 57'. | | | | Sept. 27 | . . 21 55 | 1.85 | 8.5 | Nov. 4 | . . . | 35.17 | | 45 AQUARI, -13° 55'. | | | |
| Oct. 3 | . . 21 45 | 57.21 | 6.0 | Oct. 27 | . . . | 1.91 | 8.2 | B. A. C. 7735, +82° 15'. | | | | Nov. 8 | . . 22 12 | 21.34 | |
| 31 | . . . | 57.33 | | LACAILLE 9003, -27° 58'. | | | | Oct. 3 | . . 22 2 | 41.42 | | O. ARG. S. 22070, -24° 25'. | | | |
| WEISSE 1063, -5° 55'. | | | | Oct. 3 | . . 21 55 | 36.69 | 7.0 | 18 | . . . | 40.26 | | Nov. 4 | . . 22 12 | 33.54 | 8.2 |
| Sept. 20 | . . 21 46 | 6.58 | | 11 | . . . | 36.73 | 7.0 | 21 | . . . | 39.94 | | 47 AQUARI, -22° 13'. | | | |
| 29 | . . . | 6.73 | | 29 AQUARI (1st *), -17° 38'. | | | | Nov. 4 | . . . | 41.43 | | Nov. 27 | . . 22 14 | 45.87 | 6.0 |
| μ CAPRICORNI, -14° 8'. | | | | Nov. 22 | . . 21 55 | 39.14 | | (*)+36° 47'. | | | | (*)-35° 7'. | | | |
| Sept. 26 | . . 21 46 | 32.00 | | 29 AQUARI (2d *), -17° 78'. | | | | Sept. 28 | . . 22 3 | 49.61 | 8.3 | Sept. 28 | . . 22 14 | 46.70 | |
| Nov. 1 | . . . | 32.02 | | Nov. 22 | . . 21 55 | 39.14 | | 29 | . . . | 49.60 | 8.3 | Oct. 12 | . . . | 46.84 | 7.0 |
| 3 | . . . | 31.90 | | Nov. 22 . . 21 55 39.38 | | | | Oct. 27 | . . . | 49.68 | 8.0 | 16 | . . . | 46.78 | 7.0 |
| 4 | . . . | 31.99 | | B. A. C. 7678, +79° 42'. | | | | Nov. 7 | . . . | 49.59 | 8.2 | 18 | . . . | 46.75 | 6.5 |
| 7 | . . . | 32.14 | | Oct. 9 | . . 21 56 | 12.74 | 6.0 | (*)+71° 44'. | | | | (*)-35° 7'. | | | |
| 22 | . . . | 32.01 | | 12 | . . . | 12.92 | 6.5 | Sept. 26 | . . 22 4 | 52.19 | | Sept. 28 | . . 22 14 | 53.77 | |
| Dec. 7 | . . . | 31.99 | | 31 | . . . | 13.19 | | Oct. 9 | . . . | 52.33 | 6.0 | Oct. 12 | . . . | 54.02 | 7.0 |
| LACAILLE 8952, -36° 38'. | | | | Nov. 4 | . . . | 12.68 | | (*)-12° 14'. | | | | 16 | . . . | 54.02 | 6.5 |
| Sept. 27 | . . 21 46 | 52.37 | 6.0 | B. A. C. 7675, -27° 26'. | | | | Oct. 16 | . . 22 5 | 34.96 | 8.5 | 18 | . . . | 54.08 | 7.0 |
| Oct. 11 | . . . | 52.54 | 6.5 | Oct. 9 | . . 21 56 | 12.74 | 6.0 | 31 | . . . | 34.94 | 8.5 | (*)-35° 7'. | | | |
| Nov. 8 | . . . | 52.37 | 6.5 | 12 | . . . | 12.92 | 6.5 | O. ARG. S. 21972, -22° 8'. | | | | Sept. 28 | . . 22 14 | 53.77 | |
| (*)-21° 22'. | | | | 31 | . . . | 13.19 | | Nov. 8 | . . 22 5 | 55.27 | 8.5 | Oct. 12 | . . . | 54.02 | 7.0 |
| Oct. 3 | . . 21 49 | (40.50) | 9.0 | Nov. 1 | . . 21 57 | 33.31 | 7.5 | O. ARG. S. 21980, -22° 8'. | | | | 16 | . . . | 54.02 | 6.5 |
| 18 | . . . | 40.15 | 8.5 | B. A. C. 7675, -27° 26'. | | | | Nov. 8 | . . 22 6 | 2.31 | 8.5 | 18 | . . . | 54.08 | 7.0 |
| 21 | . . . | 40.11 | 9.0 | Nov. 1 | . . 21 57 | 33.31 | 7.5 | O. ARG. S. 21980, -22° 8'. | | | | (*)-35° 7'. | | | |

| | | | | | | | | | | | | | | | |
|---------------------------------|-----------|-------|-----|------------------------------|-----------|-------|-----|-----------------------------|-----------|-------|-----|-----------------------------|-----------|-------|-----|
| (*)-8° 6'. | | | | 37 PEGASI, +3° 47'. | | | | WEISSE (2) 764, +36° 40'. | | | | λ AQUARI, -8° 14'. | | | |
| 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | | 1876. | h. m. s. | Mag. | |
| Oct. 11 | . . 22 15 | 44.75 | 8.8 | Nov. 1 | . . 22 23 | 41.86 | 6.0 | Oct. 27 | . . 22 33 | 54.82 | | Sept. 20 | . . 22 46 | 8.65 | |
| 31 | . . . | 44.64 | 8.5 | 4 | . . . | 41.81 | 6.0 | | | | | Oct. 3 | . . . | 8.63 | |
| (*)-8° 6'. | | | | O. ARG. S. 22197, -23° 42'. | | | | ζ PEGASI, +10° 11'. | | | | 9 | . . . | 8.69 | |
| Oct. 11 | . . 22 15 | 59.08 | 8.5 | Oct. 16 | . . 22 24 | 24.40 | 7.3 | Sept. 20 | . . 22 35 | 16.61 | | Dec. 21 | . . . | 8.66 | |
| 31 | . . . | 59.00 | 9.0 | 27 | . . . | 24.46 | 7.0 | Oct. 3 | . . . | 16.61 | | LACAILLE 9292, -40° 4'. | | | |
| WEISSE (2) 349, +36° 36'. | | | | B. A. C. 7861, -10° 15'. | | | | 9 | . . . | 16.60 | | Nov. 7 | . . 22 46 | 27.60 | 6.5 |
| Nov. 3 | . . 22 16 | 40.03 | 9.0 | Sept. 26 | . . 22 27 | 34.55 | 6.0 | 31 | . . . | 16.70 | | 22 | . . . | 27.52 | 6.5 |
| 4 | . . . | 40.22 | 9.0 | Oct. 3 | . . . | 34.77 | 6.0 | Nov. 3 | . . . | 16.68 | | LALANDE 44848, +35° 22'. | | | |
| 8 | . . . | 40.10 | 9.0 | 4 | . . . | 34.55 | 6.5 | 8 | . . . | 16.67 | | Oct. 12 | . . 22 48 | 56.40 | |
| (*)+36° 36'. | | | | (*)-28° 12'. | | | | 22 | . . . | 16.66 | | 27 | . . . | 56.42 | 8.0 |
| Nov. 3 | . . 22 17 | 26.16 | 8.5 | Oct. 16 | . . 22 28 | 10.77 | 9.0 | Dec. 7 | . . . | 16.60 | | (*)+35° 19'. | | | |
| LALANDE 43717, +36° 1'. | | | | Nov. 1 | . . . | 10.71 | 9.0 | Oct. 16 | . . 22 35 | 56.13 | 5.5 | Oct. 12 | . . 22 49 | 13.32 | |
| Sept. 26 | . . 22 17 | 20.72 | | 22 | . . . | 10.92 | 9.0 | (*)+50° 47'. | | | | 18 | . . . | 13.27 | |
| Oct. 3 | . . . | 20.58 | 6.0 | (*)-28° 14'. | | | | Nov. 4 | . . 22 38 | 7.82 | 8.3 | 27 | . . . | 13.43 | |
| (*)+36° 36'. | | | | Oct. 27 | . . 22 28 | 11.31 | | (*)-14° 18'. | | | | (*)+35° 21'. | | | |
| Nov. 3 | . . 22 17 | 26.16 | | η AQUARI, -0° 45'. | | | | Nov. 8 | . . 22 38 | 17.13 | | Oct. 12 | . . 22 49 | 15.93 | |
| 50 AQUARI, -14° 20'. | | | | Sept. 28 | . . 22 28 | 58.99 | | (*)-14° 16'. | | | | 18 | . . . | 15.83 | |
| Nov. 7 | . . 22 17 | 48.47 | 6.0 | Oct. 11 | . . . | 58.98 | | Oct. 12 | . . 22 38 | 23.49 | 8.3 | WEISSE 1017, -10° 56'. | | | |
| B. A. C. 7810 (1st *), +66° 5'. | | | | 12 | . . . | 59.06 | | (*)-14° 18'. | | | | Sept. 26 | . . 22 50 | 19.19 | 7.5 |
| Sept. 28 | . . 22 18 | 3.92 | | Nov. 8 | . . . | 59.04 | | Nov. 8 | . . 22 38 | 23.49 | 8.3 | Oct. 31 | . . . | 19.17 | 7.2 |
| Oct. 9 | . . . | 4.31 | | 226 CEPHEI, +75° 36'. | | | | O. ARG. S. 22383, -21° 28'. | | | | LALANDE 44860, +21° 2'. | | | |
| Nov. 1 | . . . | 4.14 | 6.5 | Oct. 18 | . . 22 30 | 4.93 | | Oct. 12 | . . 22 38 | 24.39 | 9.0 | Oct. 16 | . . 22 50 | 27.61 | 7.5 |
| B. A. C. 7810 (2d *), +66° 5'. | | | | Dec. 7 | . . . | 5.31 | | (*)-14° 18'. | | | | Nov. 1 | . . . | 27.46 | 8.0 |
| Sept. 28 | . . 22 18 | 4.70 | | 8 LACERTÆ (1st *), +38° 58'. | | | | O. ARG. S. 22514, -26° 48'. | | | | 16 LACERTÆ, +40° 56'. | | | |
| Oct. 9 | . . . | 4.85 | | Nov. 3 | . . 22 30 | 21.35 | | Oct. 3 | . . 22 38 | 35.75 | | Dec. 21 | . . 22 50 | 44.02 | |
| Nov. 1 | . . . | 4.72 | 8.0 | 8 LACERTÆ (2d *), +38° 58'. | | | | 17 | . . . | 35.57 | 9.0 | O. ARG. S. 22514, -26° 48'. | | | |
| π AQUARI, +0° 45'. | | | | Nov. 3 | . . 22 30 | 21.51 | | Nov. 7 | . . . | 35.88 | 8.5 | Nov. 8 | . . 22 51 | 2.17 | |
| Oct. 16 | . . 22 18 | 56.64 | | WEISSE (2) 672, +37° 11'. | | | | (*)-14° 18'. | | | | 22 | . . . | 2.42 | 7.5 |
| 18 | . . . | 56.56 | | Oct. 9 | . . 22 30 | 48.14 | 7.0 | Oct. 18 | . . 22 38 | 45.82 | | (*)-26° 50'. | | | |
| 27 | . . . | 56.63 | | 31 | . . . | 48.13 | 7.0 | 31 | . . . | 45.67 | 8.5 | Nov. 22 | . . 22 51 | 3.79 | 8.3 |
| Dec. 7 | . . . | 56.66 | | Nov. 22 | . . . | 48.00 | 6.7 | Nov. 8 | . . . | 45.99 | | LALANDE 44918, +38° 43'. | | | |
| (*)+36° 33'. | | | | (*)+37° 10'. | | | | (*)+50° 47'. | | | | Oct. 16 | . . 22 39 | 5.81 | 7.0 |
| Nov. 3 | . . 22 20 | 55.14 | 9.0 | Nov. 1 | . . 22 30 | 48.83 | 8.5 | Oct. 21 | . . . | 5.65 | 7.0 | Nov. 4 | . . 22 51 | 53.24 | |
| LALANDE 43871, +39° 1'. | | | | LACAILLE 9196, -39° 8'. | | | | B. A. C. 7941, +80° 44'. | | | | Dec. 7 | . . . | 53.02 | |
| Nov. 22 | . . 22 21 | 39.11 | 7.5 | Oct. 3 | . . 22 31 | 46.48 | 6.5 | Nov. 1 | . . 22 39 | 6.71 | | LACAILLE 9336, -23° 28'. | | | |
| LACAILLE 9142, -22° 43'. | | | | Nov. 7 | . . . | 46.61 | 6.0 | 22 | . . . | 6.55 | | Nov. 1 | . . 22 54 | 42.75 | 6.0 |
| Oct. 21 | . . 22 21 | 59.63 | | (*)-28° 54'. | | | | (*)+50° 47'. | | | | LACAILLE 9338, -23° 6'. | | | |
| 26 CEPHEI, +64° 30'. | | | | Oct. 16 | . . 22 31 | 55.89 | 8.0 | Dec. 7 | . . 22 40 | 21.20 | 7.0 | Oct. 16 | . . 22 54 | 53.68 | 6.7 |
| Sept. 20 | . . 22 23 | 5.81 | | 21 | . . . | 55.78 | | O. ARG. N. 24689, +57° 53'. | | | | 27 | . . . | 53.79 | 6.5 |
| 26 | . . . | 6.10 | | 9 LACERTÆ, +50° 54'. | | | | Nov. 7 | . . 22 42 | 35.96 | 8.3 | 31 | . . . | 53.59 | 7.0 |
| 28 | . . . | 6.14 | | Nov. 4 | . . 22 32 | 17.28 | 5.0 | 8 | . . . | 36.09 | 9.0 | 2 ANDROMEDÆ, +42° 6'. | | | |
| Oct. 9 | . . . | 6.23 | 5.5 | PIAZZI 169, +3° 53'. | | | | LACAILLE 9271, -33° 28'. | | | | Dec. 21 | . . 22 56 | 53.72 | |
| 12 | . . . | 6.20 | | Sept. 26 | . . 22 32 | 33.08 | 6.0 | Oct. 12 | . . 22 43 | 4.25 | 6.0 | WEISSE 1204, -12° 50'. | | | |
| (*)-31° 5'. | | | | Oct. 12 | . . . | 33.00 | 6.5 | 27 | . . . | 4.41 | 6.0 | Dec. 7 | . . 22 57 | 59.72 | 8.0 |
| Oct. 3 | . . 22 23 | 12.73 | 8.2 | LALANDE 44319, +36° 41'. | | | | LACAILLE 9286, -39° 57'. | | | | α PEGASI, +14° 32'. | | | |
| 11 | . . . | 12.78 | 8.2 | Oct. 27 | . . 22 33 | 28.18 | | Oct. 16 | . . 22 45 | 22.69 | 7.0 | Sept. 26 | . . 22 58 | 35.10 | |
| Nov. 8 | . . . | 12.82 | 7.8 | | | | | Nov. 22 | . . . | 22.80 | 7.0 | Oct. 11 | . . . | 35.09 | |

WEISSE 1232, -11° 6'.

1876.

h. m. s.

Mag.

Oct. 16

.

22

59

24.81

6.5

31

.

24.71

7.0

Nov. 1

.

24.77

6.5

7

.

24.76

6.5

(*)-8° 27'.

Nov. 22

.

22

59

26.04

9.0

1 CASSIOPEÆ, +58° 45'.

Dec. 7

.

23

1

22.79

LALANDE 45323, +38° 14'.

Oct. 6

.

23

3

6.58

7.5

27

.

6.80

7.5

31

.

6.71

7.0

LALANDE 45326, -14° 19'.

Dec. 19

.

23

3

49.86

7.0

π CEPHEI, +74° 43'.

Dec. 21

.

23

3

57.30

5.0

WEISSE (2) 34, +36° 11'.

Nov. 7

.

23

4

5.83

7.5

WEISSE (2) 35, +36° 10'.

Nov. 7

.

23

4

9.25

7.0

WEISSE 47, +2° 29'.

Nov. 8

.

23

4

54.09

8.0

22

.

54.11

7.5

O. ARG. S. 22666, -18° 3'.

Nov. 1

.

23

5

50.83

8.3

4

.

50.64

8.2

O. ARG. S. 22670, -18° 2'.

Nov. 1

.

23

6

2.14

8.5

4

.

2.04

8.4

7 ANDROMEDÆ, +48° 43'.

Oct. 31

.

23

6

52.70

5.5

7

.

52.64

26

.

52.17

O. ARG. S. 22712, -22° 57'.

Sept. 26

.

23

9

6.42

8.5

Oct. 18

.

6.53

27

.

6.56

8.2

Nov. 7

.

6.60

8.5

B. A. C. 8094, -4° 10'.

Nov. 8

.

23

9

10.95

6.5

29

.

10.96

6.0

61 PEGASI, +27° 33'.

Nov. 22

.

23

9

43.00

6.0

Dec. 21

.

42.99

LALANDE 45588, +37° 16'.

Dec. 7

.

23

11

0.69

7.0

WEISSE 185, +12° 24'.

1876.

h. m. s.

Mag.

Dec. 19

.

23

11

11.91

6.0

φ GRUIS, -41° 30'.

Oct. 12

.

23

11

18.72

16

.

18.04

Nov. 1

.

18.82

(*)-6° 15'.

Sept. 24

.

23

11

21.23

9.0

Oct. 31

.

21.15

8.2

Nov. 4

.

21.13

8.0

(*)-6° 20'.

Oct. 31

.

23

11

31.37

8.5

Nov. 4

.

31.35

8.3

α CEPHEI, +67° 26'.

Oct. 18

.

23

13

32.71

Nov. 29

.

32.56

Dec. 1

.

32.37

5

.

32.18

12 ANDROMEDÆ, +37° 29'.

Oct. 31

.

23

14

54.23

6.0

Nov. 7

.

54.21

6.0

8

.

54.31

5.5

Dec. 21

.

54.16

64 PEGASI, +31° 7'.

Dec. 19

.

23

15

51.87

LALANDE 45758, -1° 6'.

Nov. 1

.

23

16

0.61

8.0

22

.

0.58

7.8

(*)+66° 21'.

Sept. 26

.

23

17

13.35

Nov. 4

.

13.60

8.0

67 PEGASI, +31° 41'.

Dec. 1

.

23

18

46.95

7

.

46.78

5.5

21

.

46.53

(*)+66° 17'.

Nov. 7

.

23

19

43.09

9.2

(*)+66° 18'.

Sept. 26

.

23

20

24.34

8.0

Oct. 27

.

23.97

8.0

Nov. 7

.

23.87

7.5

LALANDE 45892, -15° 5'.

Dec. 19

.

23

20

28.56

RADCLIFFE 6081, +54° 11'.

Nov. 8

.

23

21

24.10

7.2

22

.

23.83

8.0

(*)+54° 8'.

Nov. 8

.

23

21

24.15

8.5

θ PISCUM, +5° 42'.

1876.

h. m. s.

Mag.

Oct. 12

.

23

21

40.67

16

.

40.73

18

.

40.65

Dec. 1

.

40.80

5

.

40.58

B. A. C. 8180, +69° 39'.

Oct. 31

.

23

22

2.73

6.0

Nov. 1

.

2.80

5.0

4

.

3.37

11 PISCUM, -2° 28'.

Dec. 7

.

23

23

5.09

6.0

21

.

5.08

12 PISCUM, -1° 44'.

Dec. 19

.

23

23

8.81

7.0

26

.

8.76

LALANDE 46097, +37° 37'.

Nov. 29

.

23

25

53.69

β⁴ AQUARI, -21° 37'.

Dec. 1

.

23

26

47.23

5

.

46.96

6.0

21

.

47.07

5.5

WEISSE 528, +15° 12'.

Oct. 18

.

23

28

14.87

9.0

31

.

14.89

9.2

LACAILLE 9524, -35° 46'.

Nov. 1

.

23

28

18.16

6.5

LALANDE 46188, +37° 5'.

Nov. 7

.

23

28

34.45

6.0

22

.

34.54

7.0

Dec. 7

.

34.66

6.5

19

.

34.51

15 PISCUM, +0° 38'.

Dec. 26

.

23

29

8.29

6.0

B. A. C. 8225, -15° 47'.

Nov. 29

.

23

31

36.04

6.0

Dec. 1

.

36.23

5

.

36.09

6.5

75 PEGASI, +17° 43'.

Sept. 26

.

23

31

41.24

5.0

Oct. 18

.

41.11

6.0

18 ANDROMEDÆ, +49° 43'.

Oct. 31

.

23

33

8.18

5.5

Nov. 7

.

8.10

22

.

8.09

ι PISCUM, +4° 58'.

Oct. 16

.

23

33

34.38

27

.

34.45

Nov. 1

.

34.37

4

.

34.32

8

.

34.39

Dec. 16

.

34.38

μ SCULPTORIS, -32° 45'.

1876.

h. m. s.

Mag.

Dec. 21

.

23

34

7.39

26

.

7.52

A¹ AQUARI, -18° 43'.

Dec. 5

.

23

35

8.40

7

.

8.47

5.5

ω² AQUARI, -15° 15'.

Dec. 6

.

23

36

17.40

19

.

17.41

B. A. C. 8252, +52° 26'.

Nov. 7

.

23

37

3.52

6.0

77 PEGASI, +9° 38'.

Nov. 29

.

23

37

3.62

LALANDE 46496 (1st *), +6° 32'.

Oct. 31

.

23

37

37.17

LALANDE 46496 (2d *), +6° 32'.

Oct. 31

.

23

37

37.22

B. A. C. 8257, +6° 30'.

Nov. 22

.

23

38

29.23

6.0

Dec. 7

.

29.32

16

.

29.40

7.0

21

.

29.18

7.5

ι² AQUARI (1st *), -19° 22'.

Nov. 4

.

23

39

34.26

Dec. 5

.

34.27

26

.

34.42

ι² AQUARI (2d *), -19° 22'.

Nov. 4

.

23

39

34.51

Dec. 5

.

34.50

26

.

34.74

O. ARG. S. 23052, -17° 23'.

Dec. 1

.

23

41

45.83

7.5

19

.

45.84

7.5

B. A. C. 8273, +67° 7'.

Sept. 26

.

23

41

59.93

5.0

Oct. 18

.

59.72

Nov. 1

.

59.82

5.5

GROOMBRIDGE 4142, +63° 6'.

Nov. 7

.

23

42

6.36

7.5

B. A. C. 8274, -7° 2'.

Dec. 21

.

23

42

10.10

(*)+63° 6'.

Nov. 7

.

23

42

14.16

9.0

79 PEGASI, +28° 8'.

Nov. 22

.

23

43

22.89

6.0

Dec. 26

.

23.02

| | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|---|-------|-------|--|----------|---|-------|-------------------------------------|------|----------|---|---|-------|------|----------|---|-------|-------|------|
| B. A. C. 8285, $-10^{\circ} 40'$. | | | | LALANDE 46836, $+38^{\circ} 34'$. | | | | 1 CETI, $-16^{\circ} 32'$. | | | | B. A. C. 8355 (2d *), $+65^{\circ} 25'$. | | | | | | | |
| 1876. | | h. m. | s. | Mag. | 1876. | | h. m. | s. | Mag. | 1876. | | h. m. | s. | Mag. | 1876. | | h. m. | s. | Mag. |
| Oct. 27 | . | 23 43 | 50.83 | 6.0 | Oct. 31 | . | 23 47 | 47.56 | 6.5 | Dec. 19 | . | 23 51 | 58.41 | | Sept. 26 | . | 23 56 | 18.36 | |
| 31 | . | | 50.69 | 6.0 | Nov. 22 | . | | 47.56 | | | | | | | Dec. 5 | . | | 17.97 | |
| Nov. 4 | . | | 50.62 | | | | | | | | | | | | | | | | |
| Dec. 16 | . | | 50.63 | | | | | | | | | | | | | | | | |
| O. ARG. S. 23082, $-19^{\circ} 0'$. | | | | B. A. C. 8311, $-0^{\circ} 35'$. | | | | ω PISCUM, $+6^{\circ} 13'$. | | | | LACAILLE 9701, $-35^{\circ} 27'$. | | | | | | | |
| Dec. 5 | . | 23 44 | 22.44 | 7.0 | Nov. 4 | . | 23 48 | 25.84 | | Oct. 18 | . | 23 52 | 56.59 | | Nov. 1 | . | 23 56 | 39.03 | 7.0 |
| 7 | . | | 22.49 | 7.0 | Dec. 7 | . | | 25.79 | 6.0 | 27 | . | | 56.62 | | 7 | . | | 39.07 | 7.0 |
| | | | | | | | | 25.80 | 5.5 | 31 | . | | 56.64 | | | | | | |
| B. A. C. 8296, $+20^{\circ} 58'$. | | | | LALANDE 46873, $+37^{\circ} 23'$. | | | | Nov. 4 | | | | LALANDE 47298, $+36^{\circ} 30'$. | | | | | | | |
| Nov. 1 | . | 23 46 | 5.80 | | Dec. 26 | . | 23 48 | 47.13 | | 7 | . | | 56.73 | | Dec. 12 | . | 23 57 | 19.57 | 8.0 |
| Dec. 1 | . | | 5.71 | 6.5 | | | | | | 22 | . | | 56.65 | | | | | | |
| 19 | . | | 5.69 | 7.0 | | | | | | 8 | . | | 56.66 | | | | | | |
| (*) $+21^{\circ} 3'$. | | | | (*) $-22^{\circ} 38'$. | | | | Dec. 1 | | | | 2 CETI, $-18^{\circ} 2'$. | | | | | | | |
| Nov. 1 | . | 23 46 | 22.31 | 7.0 | Dec. 7 | . | 23 51 | 26.16 | 9.0 | 12 | . | | 56.54 | | Oct. 31 | . | 23 57 | 23.14 | 5.5 |
| 21 | . | | 22.10 | 7.0 | | | | | | 13 | . | | 56.69 | | Dec. 13 | . | | 23.10 | 5.0 |
| WEISSE 934, $+4^{\circ} 27'$. | | | | O. ARG. S. 23156, $-22^{\circ} 38'$. | | | | 30 PISCUM, $-6^{\circ} 47'$. | | | | B. A. C. 8360, $-17^{\circ} 13'$. | | | | | | | |
| Oct. 18 | . | 23 46 | 51.66 | | Sept. 26 | . | 23 51 | 45.46 | | Dec. 15 | . | 23 55 | 35.88 | | Dec. 26 | . | 23 57 | 58.52 | |
| | | | | | Dec. 5 | . | | 45.62 | | 16 | . | | 35.89 | | | | | | |
| (*) $+28^{\circ} 21'$. | | | | B. A. C. 8355 (1st *), $+65^{\circ} 25'$. | | | | Oct. 18 | | | | 86 PEGASI, $+12^{\circ} 42'$. | | | | | | | |
| | | | | | | | | | | Sept. 26 | . | 23 56 | 16.03 | | Dec. 16 | . | 23 59 | 20.19 | |
| | | | | | | | | | | Dec. 5 | . | | 15.65 | | | | | | |

RIGHT ASCENSIONS, NORTH-POLAR DISTANCES, AND SEMI-DIAMETERS
OF THE
SUN, MOON, AND PLANETS;
DEDUCED FROM
OBSERVATIONS WITH THE TRANSIT CIRCLE
AND
COMPARED WITH THE TABLES.
1876.

RIGHT ASCENSIONS, NORTH-POLAR DISTANCES, AND SEMI-DIAMETERS

OF THE

SUN, MOON, AND PLANETS.

SUN.

| Date. | Observer. | Limb. | Apparent Right Ascension of Center. | | | Corr'n to Am. Eph. | Sidereal Time of Transit of Semi-diameter. | | Corr'n to Am. Eph. | Limb. | Geocentric N. P. Distance of Center. | | | Corr'n to Am. Eph. | Vertical Semi-diameter. | | Corr'n to Am. Eph. |
|-------|-----------|-------|-------------------------------------|----|-------|--------------------|--|-------|--------------------|-------|--------------------------------------|----|------|--------------------|-------------------------|------|--------------------|
| | | | h. | m. | s. | s. | m. | s. | s. | | ° | ' | " | " | ' | " | " |
| 1876. | | | | | | | | | | | | | | | | | |
| Jan. | | | 19 | 43 | 21.31 | — 0.07 | I | 10.13 | — 0.08 | . | 111 | 20 | 1.6 | + 2.3 | 16 | 17.2 | — 0.8 |
| 14 | E. | . | 20 | 13 | 13.77 | — 0.03 | I | 9.38 | — 0.14 | . | 109 | 56 | 1.1 | — 0.0 | | 17.4 | — 0.0 |
| 21 | P. | . | 20 | 25 | 50.98 | — 0.03 | I | 9.17 | — 0.02 | . | 109 | 14 | 21.2 | + 1.6 | | 18.9 | + 1.8 |
| 24 | S. | . | 20 | 34 | 11.82 | — 0.07 | I | 8.98 | + 0.01 | . | 108 | 44 | 45.5 | + 0.8 | | 17.0 | + 0.2 |
| 26 | E. | . | . | . | . | . | . | . | . | . | 108 | 13 | 51.5 | + 3.6 | | 16.1 | — 0.5 |
| 28 | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| Feb. | | | 21 | 15 | 6.48 | + 0.01 | I | 7.70 | — 0.13 | . | 105 | 57 | 30.6 | + 0.5 | | 14.6 | — 0.8 |
| 5 | S. | . | . | . | . | . | . | . | . | . | 105 | 20 | 33.7 | — 0.5 | | 14.3 | — 0.8 |
| 7 | E. | . | 21 | 27 | 6.66 | + 0.08 | I | 7.45 | — 0.03 | . | 105 | 1 | 43.3 | + 0.6 | | 14.8 | — 0.1 |
| 8 | F. | . | 21 | 42 | 55.56 | + 0.02 | . | . | . | . | 103 | 43 | 48.6 | — 1.3 | | 13.5 | — 0.7 |
| 12 | F. | I | 21 | 58 | 32.73 | + 0.26 | I | 6.59 | — 0.03 | . | 102 | 22 | 22.1 | + 1.4 | | 11.7 | — 1.7 |
| 16 | F. | . | 22 | 2 | 24.91 | — 0.01 | I | 6.49 | — 0.02 | . | 102 | 1 | 26.9 | — 0.7 | | 12.9 | — 0.3 |
| 17 | S. | . | 22 | 6 | 16.53 | — 0.16 | I | 6.32 | — 0.09 | . | 101 | 40 | 23.0 | + 0.2 | | 11.7 | — 1.2 |
| 18 | P. | . | 22 | 10 | 7.68 | — 0.09 | I | 6.24 | — 0.07 | . | 101 | 19 | 7.3 | + 0.3 | | 11.6 | — 1.1 |
| 19 | E. | . | 22 | 25 | 25.56 | — 0.04 | I | 5.91 | — 0.02 | . | 99 | 52 | 21.5 | + 1.2 | | 12.0 | + 0.2 |
| 23 | E. | . | 22 | 29 | 13.56 | + 0.07 | I | 5.85 | + 0.01 | . | 99 | 30 | 14.3 | — 0.8 | | 10.2 | — 1.4 |
| 24 | F. | . | 22 | 33 | 0.74 | — 0.04 | I | 5.75 | — 0.01 | . | 99 | 8 | 1.1 | — 0.3 | | 11.3 | — 0.0 |
| 25 | S. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| Mar. | | | 22 | 55 | 32.62 | — 0.06 | I | 5.25 | — 0.05 | . | 96 | 52 | 5.4 | + 3.1 | | 9.2 | — 0.7 |
| 2 | E. | . | 22 | 59 | 16.20 | + 0.03 | I | 5.18 | — 0.05 | . | 96 | 28 | 57.7 | — 2.7 | | 7.6 | — 2.1 |
| 3 | F. | . | 23 | 2 | 59.17 | — 0.02 | I | 5.07 | — 0.09 | . | 96 | 5 | 53.3 | + 0.2 | | 8.1 | — 1.3 |
| 4 | S. | . | 23 | 10 | 23.81 | — 0.07 | I | 4.98 | — 0.06 | . | 95 | 19 | 26.2 | + 1.3 | | 7.6 | — 1.3 |
| 6 | P. | . | 23 | 21 | 27.88 | — 0.01 | I | 4.76 | — 0.12 | . | 94 | 9 | 13.1 | + 0.7 | | 6.0 | — 2.2 |
| 9 | P. | II | 0 | 5 | 19.34 | — 0.03 | . | . | . | . | 89 | 25 | 22.6 | + 0.9 | | 3.9 | — 1.0 |
| 21 | P. | . | 0 | 8 | 57.60 | — 0.05 | I | 4.50 | + 0.01 | . | 89 | 1 | 42.3 | + 0.5 | | 3.8 | — 0.8 |
| 22 | E. | . | 0 | 27 | 8.43 | + 0.02 | I | 4.50 | + 0.04 | . | 87 | 3 | 55.3 | + 1.4 | | 3.3 | + 0.1 |
| 27 | F. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| April | | | 0 | 45 | 19.59 | — 0.03 | I | 4.49 | — 0.02 | . | 85 | 7 | 34.9 | + 0.5 | 16 | 2.4 | + 0.6 |
| 5 | S. | . | 0 | 59 | 54.54 | + 0.11 | I | 4.53 | — 0.09 | . | 83 | 36 | 2.7 | — 1.8 | 15 | 58.6 | — 2.2 |
| 6 | P. | . | 1 | 3 | 33.55 | — 0.01 | I | 4.49 | — 0.16 | . | 83 | 13 | 28.9 | + 1.0 | | 59.5 | — 1.0 |
| 8 | F. | . | 1 | 10 | 52.58 | + 0.12 | I | 4.71 | — 0.01 | . | . | . | . | . | | . | . |
| 10 | P. | . | 1 | 18 | 12.28 | — 0.06 | I | 4.67 | — 0.13 | S. | 81 | 44 | 12.4 | — 2.0 | | . | . |
| 11 | E. | . | 1 | 21 | 52.65 | — 0.06 | I | 4.81 | — 0.03 | . | 81 | 22 | 15.5 | — 0.3 | | 58.0 | — 1.1 |
| 12 | F. | . | 1 | 25 | 33.59 | + 0.19 | I | 4.82 | — 0.07 | . | 81 | 0 | 23.5 | — 2.2 | | 59.0 | + 0.2 |
| 15 | E. | . | . | . | . | . | . | . | . | . | 79 | 55 | 49.5 | — 0.1 | | 58.5 | + 0.5 |
| 17 | S. | . | 1 | 44 | 2.20 | + 0.03 | I | 5.06 | — 0.08 | . | 79 | 13 | 34.3 | + 0.1 | | 56.6 | — 0.9 |
| 19 | E. | . | 1 | 51 | 28.40 | — 0.06 | I | 5.25 | — 0.01 | . | 78 | 32 | 0.7 | 0.0 | | 56.4 | + 1.1 |
| 20 | F. | . | 1 | 55 | 12.32 | + 0.08 | I | 5.24 | — 0.08 | . | 78 | 11 | 31.1 | + 0.5 | | 54.7 | — 2.0 |
| 29 | S. | . | 2 | 29 | 7.39 | + 0.10 | I | 5.89 | — 0.08 | . | 75 | 16 | 22.6 | + 0.5 | | 53.4 | — 1.1 |
| May | | | 2 | 36 | 45.25 | 0.00 | I | 6.09 | — 0.04 | . | 74 | 40 | 0.4 | + 0.9 | | 53.4 | — 0.6 |
| 1 | E. | . | 2 | 48 | 15.75 | — 0.12 | I | 6.27 | — 0.10 | . | 73 | 47 | 21.7 | + 1.2 | | 52.7 | — 0.6 |
| 4 | P. | . | . | . | . | . | . | . | . | . | 73 | 30 | 19.1 | — 0.4 | | 52.7 | — 0.4 |
| 5 | E. | . | 3 | 23 | 17.90 | — 0.05 | I | 7.04 | — 0.07 | . | 71 | 24 | 27.7 | + 1.2 | | 50.7 | — 0.7 |
| 13 | P. | . | 3 | 31 | 11.51 | — 0.01 | I | 7.14 | — 0.13 | . | 70 | 55 | 59.6 | + 0.4 | | 49.7 | — 1.3 |
| 15 | P. | . | 3 | 51 | 5.62 | + 0.03 | I | 7.56 | — 0.10 | . | 69 | 50 | 34.4 | + 1.9 | | 48.7 | — 1.3 |
| 20 | P. | I | 3 | 59 | 7.06 | — 0.07 | . | . | . | . | 69 | 26 | 46.9 | + 2.5 | | 48.5 | — 1.2 |
| 22 | S. | . | 4 | 3 | 8.70 | 0.00 | I | 7.82 | — 0.06 | . | 69 | 15 | 22.6 | + 0.8 | | 50.8 | + 1.3 |
| 23 | P. | . | 4 | 27 | 28.40 | + 0.07 | I | 8.24 | — 0.04 | . | 68 | 14 | 45.2 | + 1.4 | | 47.6 | — 1.0 |
| 29 | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| June | | | 4 | 39 | 43.95 | — 0.06 | I | 8.33 | — 0.13 | . | 67 | 49 | 29.8 | + 1.4 | | 46.6 | — 0.6 |
| 1 | P. | . | 4 | 43 | 49.92 | — 0.07 | I | 8.47 | — 0.04 | . | 67 | 41 | 48.9 | — 0.5 | | 48.1 | — 0.0 |
| 2 | E. | . | 4 | 47 | 56.40 | + 0.06 | I | 8.50 | — 0.06 | . | 67 | 34 | 32.9 | — 0.8 | | 46.3 | — 1.7 |
| 3 | F. | . | 6 | 27 | 28.51 | + 0.15 | I | 8.86 | — 0.02 | . | 66 | 41 | 34.3 | + 1.1 | | 45.4 | — 0.8 |
| 27 | F. | . | 6 | 31 | 37.20 | + 0.02 | I | 8.79 | — 0.06 | . | 66 | 44 | 31.1 | + 2.1 | | 45.1 | — 1.0 |
| 28 | S. | . | 6 | 35 | 45.69 | — 0.07 | I | 8.71 | — 0.11 | . | 66 | 47 | 51.7 | + 2.4 | | 45.0 | — 1.1 |
| 29 | P. | . | 6 | 39 | 54.04 | — 0.05 | I | 8.84 | + 0.05 | . | 66 | 51 | 35.2 | + 1.4 | | 44.7 | — 1.4 |
| 30 | E. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |

SUN.

| Date. | Observer. | Limb. | Apparent Right Ascension of Center. | | | Corr'n to Am. Eph. | Sidereal Time of Transit of Semi-diameter. | | | Corr'n to Am. Eph. | Limb. | Geocentric N. P. Distance of Center. | | | Corr'n to Am. Eph. | Vertical Semi-diameter. | | | Corr'n to Am. Eph. |
|-------|-----------|-------|-------------------------------------|----|---------|--------------------|--|-------|--------|--------------------|-------|--------------------------------------|----|------|--------------------|-------------------------|--------|-------|--------------------|
| | | | h. | m. | s. | s. | m. | s. | s. | | | ° | ' | " | " | ' | " | " | |
| 1876. | | | | | | | | | | | | | | | | | | | |
| July | | | | | | | | | | | | | | | | | | | |
| 1 | F. | . | 6 | 44 | 2.22 | + 0.06 | 1 | 8.70 | — 0.05 | . | | 66 | 55 | 43.1 | + 0.4 | 15 | 44.3 | — 1.8 | |
| 3 | P. | . | 6 | 52 | 17.35 | — 0.08 | 1 | 8.58 | — 0.10 | . | | 67 | 5 | 14.0 | + 1.3 | | 44.4 | — 1.7 | |
| 6 | P. | . | 7 | 4 | 37.76 | — 0.11 | 1 | 8.44 | — 0.09 | . | | 67 | 22 | 27.9 | + 1.2 | | 45.1 | — 1.1 | |
| 10 | S. | . | . | . | . | . | . | . | . | . | | 67 | 50 | 53.3 | + 0.4 | | 44.7 | — 1.6 | |
| 11 | P. | . | 7 | 25 | 4.36 | — 0.02 | 1 | 8.14 | — 0.11 | . | | 67 | 58 | 58.4 | + 1.2 | | 44.8 | — 1.5 | |
| 12 | F. | . | 7 | 29 | 8.50 | + 0.08 | 1 | 8.21 | + 0.02 | . | | 68 | 7 | 25.9 | + 1.9 | | 45.3 | — 1.1 | |
| 18 | S. | . | 7 | 53 | 22.48 | — 0.26 | 1 | 7.68 | — 0.07 | . | | 69 | 5 | 51.9 | + 1.0 | | 46.1 | — 0.6 | |
| 19 | P. | . | 7 | 57 | 23.21 | — 0.11 | 1 | 7.54 | — 0.13 | . | | 69 | 16 | 52.6 | + 1.5 | | 45.6 | — 1.2 | |
| 20 | E. | . | 8 | 1 | 23.34 | — 0.02 | 1 | 7.57 | — 0.02 | . | | 69 | 28 | 14.1 | + 1.7 | | 46.4 | — 0.4 | |
| 21 | F. | . | 8 | 5 | 22.88 | + 0.03 | 1 | 7.47 | — 0.04 | . | | 69 | 39 | 52.8 | — 1.5 | | 46.0 | — 0.9 | |
| 22 | S. | . | 8 | 9 | 21.80 | + 0.03 | 1 | 7.37 | — 0.06 | . | | 69 | 51 | 57.7 | + 1.0 | | 45.8 | — 1.2 | |
| 25 | F. | . | 8 | 21 | 15.04 | + 0.05 | 1 | 7.19 | + 0.02 | . | | 70 | 30 | 4.8 | + 0.7 | | 46.7 | — 0.6 | |
| 26 | S. | . | 8 | 25 | 11.61 | + 0.09 | 1 | 7.05 | — 0.04 | . | | 70 | 43 | 27.6 | + 1.9 | | 46.2 | — 1.2 | |
| 27 | P. | . | 8 | 29 | 7.38 | — 0.04 | 1 | 6.84 | — 0.16 | . | S. | 70 | 57 | 6.3 | 0.0 | | . | . | . |
| Aug. | | | | | | | | | | | | | | | | | | | |
| 9 | E. | . | 9 | 19 | 18.38 | + 0.01 | 1 | 5.90 | 0.00 | . | | 74 | 21 | 40.6 | + 0.4 | | 49.3 | 0.0 | |
| 15 | F. | . | 9 | 41 | 55.36 | + 0.17 | 1 | 5.40 | 0.00 | . | | 76 | 11 | 5.0 | + 1.5 | | 49.7 | — 0.6 | |
| 21 | E. | . | 10 | 4 | 13.72 | + 0.04 | 1 | 4.86 | — 0.12 | . | | 78 | 8 | 24.2 | — 0.7 | | 50.8 | — 0.6 | |
| 26 | F. | . | 10 | 22 | 36.60 | + 0.17 | 1 | 4.64 | — 0.04 | . | | 79 | 51 | 24.6 | — 0.6 | | 52.1 | — 0.4 | |
| 28 | E. | . | 10 | 29 | 54.72 | + 0.07 | 1 | 4.64 | + 0.07 | . | N. | 80 | 33 | 47.3 | + 0.7 | | . | . | . |
| 30 | F. | . | 10 | 37 | 11.46 | + 0.06 | 1 | 4.52 | + 0.05 | . | | 81 | 16 | 43.1 | — 0.3 | | 52.4 | — 1.0 | |
| Sept. | | | | | | | | | | | | | | | | | | | |
| 2 | F. | . | 10 | 48 | 4.13 | + 0.02 | 1 | 4.38 | + 0.04 | . | | 82 | 22 | 10.0 | — 0.3 | | 53.2 | — 0.9 | |
| 4 | S. | . | 10 | 55 | 17.91 | + 0.02 | 1 | 4.21 | — 0.25 | . | | 83 | 6 | 26.8 | + 1.2 | | 55.1 | + 0.5 | |
| 15 | F. | . | 11 | 34 | 52.06 | + 0.21 | 1 | 4.04 | — 0.02 | . | | 87 | 16 | 50.0 | 0.0 | | 58.1 | + 0.7 | |
| 20 | S. | . | 11 | 52 | 49.10 | + 0.09 | 1 | 4.00 | — 0.07 | . | | 89 | 13 | 16.8 | + 1.1 | | 59.4 | + 0.7 | |
| 28 | S. | . | 12 | 21 | 37.35 | + 0.03 | 1 | 4.17 | — 0.10 | . | | 92 | 20 | 26.8 | — 0.8 | | 15 0.8 | — 0.1 | |
| 29 | P. | . | 12 | 25 | 14.10 | — 0.09 | 1 | 4.20 | — 0.11 | . | | 92 | 43 | 49.2 | + 0.3 | | 16 0.2 | — 1.0 | |
| Oct. | | | | | | | | | | | | | | | | | | | |
| 2 | S. | . | 12 | 36 | 6.42 | + 0.02 | 1 | 4.40 | — 0.05 | . | | 93 | 53 | 40.7 | — 0.5 | | 1.4 | — 0.6 | |
| 3 | P. | . | 12 | 39 | 44.39 | — 0.03 | 1 | 4.41 | — 0.09 | . | | 94 | 16 | 53.8 | + 0.3 | | 0.6 | — 1.7 | |
| 6 | S. | . | 12 | 50 | 40.66 | + 0.01 | 1 | 4.60 | — 0.06 | . | | 95 | 26 | 11.7 | + 0.1 | | 2.2 | — 1.0 | |
| 7 | P. | . | 12 | 54 | 20.08 | — 0.13 | 1 | 4.64 | — 0.08 | . | | 95 | 49 | 9.3 | — 0.4 | | 2.1 | — 1.3 | |
| 9 | P. | . | 13 | 1 | 40.69 | + 0.03 | 1 | 4.76 | — 0.09 | . | | 96 | 34 | 52.8 | 0.0 | | 2.0 | — 0.2 | |
| 12 | P. | . | 13 | 12 | 45.10 | + 0.09 | 1 | 4.94 | + 0.16 | . | | 97 | 42 | 46.5 | — 1.7 | | 3.7 | — 1.1 | |
| 13 | F. | . | . | . | . | . | . | . | . | . | | 98 | 5 | 12.9 | — 1.7 | | 5.5 | + 0.5 | |
| 17 | F. | II | 13 | 31 | 23.34 | + 0.12 | . | . | . | . | N. | 99 | 33 | 48.1 | — 1.4 | | . | . | . |
| 19 | P. | . | 13 | 38 | 54.74 | + 0.03 | 1 | 5.62 | — 0.05 | . | | 100 | 17 | 18.8 | + 0.2 | | 6.3 | — 0.4 | |
| 24 | E. | . | 13 | 57 | 54.69 | — 0.09 | 1 | 6.14 | — 0.02 | . | | 102 | 3 | 13.8 | — 0.4 | | 7.6 | — 0.4 | |
| 27 | P. | . | 14 | 9 | 27.09 | — 0.07 | 1 | 6.39 | — 0.09 | . | | 103 | 4 | 36.7 | + 0.2 | | 7.7 | — 1.2 | |
| Nov. | | | | | | | | | | | | | | | | | | | |
| 1 | E. | . | 14 | 28 | 56.12 | 0.00 | 1 | 6.98 | — 0.06 | . | | 104 | 42 | 41.9 | + 0.7 | | 8.8 | — 1.3 | |
| 2 | F. | . | 14 | 32 | 52.33 | + 0.05 | 1 | 7.14 | — 0.02 | . | | 105 | 1 | 36.4 | — 0.4 | | 10.6 | + 0.2 | |
| 4 | P. | . | 14 | 40 | 46.99 | — 0.08 | 1 | 7.28 | — 0.12 | . | | 105 | 38 | 43.8 | — 0.1 | | 9.3 | — 1.5 | |
| 8 | P. | . | 14 | 56 | 46.79 | — 0.02 | 1 | 7.76 | — 0.12 | . | | 106 | 49 | 49.3 | + 0.1 | | 9.9 | — 1.9 | |
| 9 | E. | . | 15 | 0 | 48.94 | + 0.03 | 1 | 7.94 | — 0.06 | . | | 107 | 6 | 53.6 | — 0.4 | | 11.2 | — 0.8 | |
| 10 | S. | . | 15 | 4 | 51.97 | + 0.09 | 1 | 8.00 | — 0.12 | . | | 107 | 23 | 41.5 | + 0.2 | | 9.9 | — 2.3 | |
| 13 | E. | . | 15 | 17 | 5.99 | + 0.02 | 1 | 8.50 | + 0.02 | . | | 108 | 12 | 14.5 | + 0.3 | | 11.2 | — 1.6 | |
| 22 | F. | . | 15 | 54 | (34.27) | + 0.35 | 1 | 9.56 | + 0.06 | . | | 110 | 19 | 54.1 | — 1.7 | | 13.1 | — 1.6 | |
| 24 | S. | . | 16 | 3 | 2.20 | 0.00 | 1 | 9.64 | — 0.07 | . | | 110 | 44 | 19.4 | + 0.4 | | 14.7 | — 0.3 | |
| Dec. | | | | | | | | | | | | | | | | | | | |
| 6 | P. | . | 16 | 54 | 49.34 | — 0.10 | 1 | 10.66 | — 0.10 | . | | 112 | 36 | 40.8 | — 1.8 | | 15.3 | — 1.5 | |
| 7 | E. | . | 16 | 59 | 12.23 | — 0.03 | 1 | 10.74 | — 0.09 | . | | 112 | 43 | 17.6 | — 0.5 | | 17.1 | + 0.1 | |
| 13 | S. | . | 17 | 25 | 38.44 | — 0.13 | 1 | 11.06 | — 0.08 | . | | 113 | 13 | 22.5 | + 1.1 | | 17.3 | — 0.3 | |
| 15 | E. | . | 17 | 34 | 30.00 | — 0.11 | 1 | 11.22 | + 0.01 | . | | 113 | 19 | 40.6 | — 1.1 | | 17.6 | — 0.1 | |
| 19 | E. | . | 17 | 52 | 15.70 | + 0.08 | 1 | 11.26 | — 0.03 | . | | 113 | 26 | 44.2 | — 0.4 | | 16.9 | — 1.1 | |
| 27 | E. | . | 18 | 27 | 47.88 | — 0.06 | 1 | 11.25 | + 0.01 | . | | 113 | 18 | 12.7 | + 0.1 | | 19.5 | + 1.1 | |

MOON.

| Date. | Mean Time of Transit of Center. | | | Observer. | Limb. | Apparent Right Ascension of Center. | | | Correction to Tables of— | | Limb. | Geocentric N. P. Distance of Center. | | | Correction to Tables of— | |
|---------|---------------------------------|-------|------|-----------|-------|-------------------------------------|----|-------|--------------------------|---------|-------|--------------------------------------|----|------|--------------------------|---------|
| | | | | | | | | | Peirce. | Hansen. | | | | | Peirce. | Hansen. |
| 1876. | h. | m. | s. | | | h. | m. | s. | | | | ° | ' | " | | |
| Jan. 12 | 14 | 7 | 51.6 | S. | II | 9 | 36 | 21.75 | — | 0.34 | S. | 72 | 13 | 38.2 | — | 0.9 |
| 14 | 15 | 45 | 56.5 | E. | II | 11 | 22 | 35.85 | — | 0.14 | S. | 84 | 49 | 10.7 | + | 6.6 |
| 20 | 20 | 11 | 7.1 | S. | II | 16 | 12 | 9.31 | — | 0.41 | S. | 115 | 47 | 53.8 | — | 16.1 |
| 30 | 3 | 23 | 10.2 | E. | I | 0 | 0 | 52.40 | — | 0.09 | S. | 89 | 52 | 55.7 | — | 4.1 |
| 31 | 4 | 7 | 12.4 | F. | I | 0 | 48 | 58.41 | + | 0.01 | S. | 83 | 24 | 28.2 | — | 3.4 |
| Feb. 2 | 5 | 43 | 23.7 | P. | I | 2 | 33 | 18.64 | + | 0.37 | S. | 71 | 19 | 15.1 | + | 1.6 |
| 4 | 7 | 38 | 2.6 | F. | I | 4 | 36 | 9.50 | + | 0.20 | S. | 63 | 0 | 51.0 | — | 3.8 |
| 5 | 8 | 42 | 7.5 | S. | I | 5 | 44 | 21.49 | + | 0.23 | N. | 61 | 27 | 20.5 | + | 1.4 |
| 10 | 13 | 33.96 | | P. | . | . | . | . | . | . | S. | 81 | 35 | 5.4 | + | 2.0 |
| 16 | 18 | 4 | 19.4 | F. | II | 15 | 51 | 27.82 | — | 0.34 | S. | 114 | 51 | 56.0 | — | 1.7 |
| 18 | 19 | 44 | 49.6 | P. | II | 17 | 40 | 7.63 | — | 0.39 | . | . | . | . | . | . |
| 19 | 20 | 36 | 41.2 | E. | II | 18 | 36 | 4.39 | — | 0.26 | . | . | . | . | . | . |
| Mar. 2 | 5 | 31.25 | | E. | . | . | . | . | . | . | S. | 63 | 46 | 40.2 | + | 11.3 |
| 3 | 6 | 32 | 48.7 | F. | I | 5 | 21 | 8.40 | + | 0.21 | N. | 61 | 37 | 4.4 | + | 5.0 |
| 4 | 7 | 36 | 14.7 | S. | I | 6 | 28 | 41.42 | — | 0.01 | N. | 61 | 28 | 46.5 | + | 1.1 |
| 5 | 8 | 38 | 43.9 | P. | I | 7 | 35 | 17.44 | — | 0.17 | N. | 63 | 24 | 33.8 | + | 1.2 |
| 6 | 9 | 37 | 52.1 | E. | I | 8 | 38 | 31.91 | — | 0.18 | N. | 67 | 10 | 25.7 | + | 1.0 |
| 9 | 12 | 10 | 1.1 | P. | . | 11 | 22 | 55.44 | — | 0.07 | N. | 85 | 3 | 22.5 | + | 0.3 |
| 13 | 15 | 8 | 38.3 | P. | II | 14 | 37 | 48.32 | — | 0.24 | S. | 109 | 16 | 50.9 | + | 3.0 |
| 20 | 20 | 57 | 57.3 | P. | II | 20 | 55 | 40.55 | — | 0.59 | . | . | . | . | . | . |
| 29 | 3 | 25 | 13.7 | P. | I | 3 | 55 | 33.04 | + | 0.26 | S. | 64 | 49 | 9.2 | — | 1.2 |
| 31 | 5 | 29.96 | | F. | . | . | . | . | . | . | N. | 61 | 17 | 46.1 | + | 4.5 |
| April 1 | 6 | 32 | 33.1 | S. | I | 7 | 15 | 12.79 | — | 0.17 | N. | 62 | 36 | 27.3 | + | 2.3 |
| 2 | 7 | 31.88 | | P. | . | . | . | . | . | . | N. | 65 | 47 | 9.1 | + | 0.4 |
| 4 | 9 | 17.19 | | P. | . | . | . | . | . | . | N. | 76 | 8 | 1.7 | + | 8.2 |
| 5 | 10 | 4 | 8.8 | S. | I | 11 | 3 | 9.51 | — | 0.08 | N. | 82 | 26 | 8.0 | — | 1.6 |
| 6 | 10 | 48 | 49.2 | P. | I | 11 | 51 | 53.79 | + | 0.10 | N. | 88 | 59 | 22.2 | + | 0.3 |
| 8 | 12 | 16 | 11.8 | F. | II | 13 | 27 | 23.83 | — | 0.13 | S. | 101 | 36 | 23.1 | + | 1.5 |
| 9 | 13 | 1 | 1.5 | S. | II | 14 | 16 | 17.45 | — | 0.22 | S. | 107 | 7 | 32.8 | — | 1.7 |
| 10 | 13 | 47 | 37.9 | P. | II | 15 | 6 | 58.14 | — | 0.32 | S. | 111 | 47 | 33.9 | + | 1.1 |
| 12 | 15 | 26 | 51.8 | F. | II | 16 | 54 | 21.38 | — | 0.45 | S. | 117 | 42 | 53.6 | + | 0.2 |
| 14 | 17 | 10 | 9.6 | P. | II | 18 | 45 | 49.32 | — | 0.36 | N. | 118 | 10 | 27.1 | — | 0.8 |
| 18 | 20 | 21 | 16.9 | P. | II | 22 | 13 | 14.23 | — | 0.51 | N. | 103 | 41 | 19.1 | + | 3.4 |
| 19 | 21 | 5 | 27.5 | F. | II | 23 | 1 | 28.58 | — | 0.27 | . | . | . | . | . | . |
| 29 | 5 | 26 | 40.5 | S. | I | 7 | 59 | 32.97 | — | 0.17 | N. | 65 | 45 | 21.1 | + | 1.8 |
| 30 | 6 | 30 | 19.1 | P. | I | 9 | 0 | 17.42 | — | 0.36 | N. | 69 | 2 | 16.6 | + | 0.2 |
| May 3 | 8 | 46 | 50.4 | S. | I | 11 | 36 | 1.97 | — | 0.15 | N. | 86 | 54 | 59.6 | — | 1.2 |
| 4 | 9 | 29 | 55.4 | P. | I | 12 | 23 | 10.53 | — | 0.12 | N. | 93 | 19 | 30.7 | + | 0.4 |
| 19 | 21 | 11 | 3.4 | P. | II | 1 | 5 | 22.11 | + | 0.04 | . | . | . | . | . | . |
| 29 | 6 | 0 | 5.8 | E. | I | 10 | 31 | 20.45 | — | 0.21 | N. | 78 | 46 | 8.6 | — | 0.4 |
| 31 | 7 | 29 | 20.3 | S. | I | 12 | 8 | 42.70 | — | 0.21 | N. | 91 | 34 | 6.2 | — | 1.2 |
| June 1 | 8 | 11 | 58.9 | P. | I | 12 | 55 | 24.86 | — | 0.21 | N. | 97 | 46 | 28.1 | + | 0.3 |
| 5 | 11 | 15.03 | | P. | I | . | . | . | . | . | S. | 116 | 3 | 9.2 | — | 0.1 |
| 29 | 6 | 53 | 40.0 | P. | I | 13 | 27 | 16.74 | — | 0.22 | N. | 101 | 59 | 44.8 | — | 0.3 |
| 30 | 7 | 37 | 49.6 | E. | I | 14 | 15 | 30.19 | — | 0.38 | N. | 107 | 19 | 43.3 | + | 1.2 |
| July 2 | 9 | 11 | 47.2 | S. | I | 15 | 57 | 36.28 | — | 0.51 | N. | 115 | 17 | 34.0 | + | 2.4 |
| 5 | 11 | 44 | 51.4 | P. | . | 18 | 42 | 55.47 | — | 0.06 | S. | 117 | 54 | 27.2 | + | 5.8 |
| 7 | 13 | 23 | 19.7 | P. | II | 20 | 29 | 32.92 | — | 0.25 | N. | 112 | 52 | 58.6 | + | 3.2 |
| 26 | 4 | 49 | 21.7 | S. | I | 13 | 9 | 5.13 | — | 0.34 | N. | 100 | 1 | 41.5 | + | 3.4 |
| 27 | 5 | 34 | 7.1 | P. | I | 13 | 57 | 54.41 | — | 0.46 | N. | 105 | 43 | 47.0 | + | 3.1 |
| Aug. 6 | 13 | 33 | 57.0 | F. | II | 22 | 38 | 28.71 | — | 0.19 | N. | 99 | 49 | 28.6 | + | 0.7 |
| 26 | 5 | 51 | 4.2 | F. | I | 16 | 13 | 10.95 | — | 0.56 | N. | 116 | 22 | 58.4 | + | 1.1 |
| 28 | 7 | 34 | 5.7 | E. | I | 18 | 4 | 22.56 | — | 0.98 | N. | 118 | 37 | 13.3 | — | 0.8 |
| Sept. 2 | 11 | 31 | 40.1 | F. | I | 22 | 22 | 18.74 | — | 0.25 | S. | 101 | 48 | 43.2 | + | 3.0 |
| 25 | 6 | 17 | 27.1 | P. | I | 18 | 37 | 54.88 | — | 0.61 | . | . | . | . | . | . |
| 28 | 8 | 42 | 19.3 | S. | I | 21 | 15 | 0.48 | — | 0.59 | S. | 109 | 6 | 1.2 | + | 4.0 |
| 29 | 9 | 26 | 25.5 | P. | I | 22 | 3 | 10.47 | — | 0.45 | S. | 104 | 3 | 43.7 | — | 2.3 |
| Oct. 2 | 11 | 34 | 50.8 | S. | . | 0 | 23 | 46.43 | — | 0.30 | S. | 85 | 43 | 47.4 | + | 2.0 |
| 3 | 12 | 19 | 53.9 | P. | . | 1 | 12 | 53.64 | — | 0.28 | N. | 79 | 21 | 14.5 | + | 1.2 |
| 9 | 18 | 2 | 58.6 | . | II | 7 | 20 | 33.99 | + | 0.14 | S. | 63 | 11 | 19.1 | + | 0.2 |
| 10 | 19 | 2 | 5.5 | S. | II | 8 | 23 | 47.17 | — | 0.16 | S. | 66 | 42 | 55.3 | + | 2.1 |
| 11 | 19 | 57 | 5.5 | F. | II | 9 | 22 | 52.71 | — | 0.01 | . | . | . | . | . | . |
| 13 | 21 | 36 | 6.7 | S. | II | 11 | 10 | 3.35 | — | 0.00 | . | . | . | . | . | . |
| 21 | 5 | 48 | 30.5 | E. | I | 20 | 3 | 13.53 | — | 0.97 | S. | 114 | 33 | 12.3 | + | 3.8 |
| 27 | 8 | 2 | 15.8 | P. | I | 22 | 29 | 10.46 | — | 0.58 | S. | 100 | 51 | 22.9 | + | 6.4 |
| 31 | 10 | 58 | 32.4 | S. | I | 1 | 41 | 42.26 | + | 0.09 | S. | 75 | 56 | 15.3 | + | 2.7 |

| MOON. | | | | | | | | | | | | | | | | |
|--------|---------------------------------|----|------|-----------|-------|-------------------------------------|----|-------|--------------------------|---------|-------|--------------------------------------|----|------|--------------------------|---------|
| Date. | Mean Time of Transit of Center. | | | Observer. | Limb. | Apparent Right Ascension of Center. | | | Correction to Tables of— | | Limb. | Geocentric N. P. Distance of Center. | | | Correction to Tables of— | |
| | | | | | | | | | Peirce. | Hansen. | | | | | Peirce. | Hansen. |
| 1876. | h. | m. | s. | | | h. | m. | s. | s. | s. | | ° | ' | " | " | " |
| Nov. 1 | 11 | 50 | 5.8 | E. | . | 2 | 37 | 20.51 | — 0.02 | — 0.60 | N. | 70 | 15 | 38.6 | + 1.0 | + 3.4 |
| 5 | 15 | 56 | 15.0 | E. | II | 6 | 59 | 56.55 | + 0.02 | — 1.08 | S. | 62 | 37 | 9.5 | — 1.3 | — 3.5 |
| 7 | 17 | 53 | 35.8 | S. | II | 9 | 5 | 29.73 | + 0.05 | — 0.97 | S. | 70 | 15 | 53.0 | — 2.5 | — 7.7 |
| 8 | 18 | 45 | 18.6 | P. | II | 10 | 1 | 17.65 | + 0.02 | — 0.95 | S. | 75 | 57 | 21.9 | + 2.3 | — 3.3 |
| 9 | 19 | 33 | 19.5 | E. | II | 10 | 53 | 22.92 | — 0.07 | — 0.98 | S. | 82 | 17 | 31.8 | + 1.0 | — 4.6 |
| 22 | 5 | 13 | 19.2 | F. | I | 21 | 22 | 16.57 | — 0.30 | — 0.66 | S. | 108 | 0 | 32.9 | + 2.0 | + 1.7 |
| 24 | 6 | 37 | 21.6 | S. | I | 22 | 54 | 25.91 | — 0.39 | — 0.23 | S. | 97 | 24 | 49.1 | + 4.5 | + 3.0 |
| 27 | 8 | 46 | 10.9 | S. | I | 1 | 15 | 26.06 | — 0.43 | — 0.35 | S. | 78 | 53 | 14.5 | + 6.7 | + 3.9 |
| 28 | 9 | 35 | 15.1 | P. | I | 2 | 8 | 34.88 | — 0.25 | — 0.39 | S. | 72 | 56 | 51.7 | + 3.8 | + 2.8 |
| 29 | 10 | 29 | 37.1 | E. | I | 3 | 7 | 2.39 | — 0.13 | — 0.55 | . | . | . | . | . | . |
| Dec. 2 | 13 | 41 | 27.7 | P. | II | 6 | 31 | 14.15 | + 0.60 | — 0.73 | N. | 62 | 4 | 1.7 | — 0.4 | — 8.5 |
| 3 | 14 | 46 | 16.3 | E. | II | 7 | 40 | 9.95 | + 0.32 | — 0.82 | S. | 64 | 28 | 42.6 | + 0.7 | — 2.7 |
| 5 | 16 | 41 | 9.7 | S. | II | 9 | 43 | 15.34 | — 0.25 | — 0.93 | S. | 74 | 15 | 28.8 | — 5.3 | — 9.2 |
| 19 | 3 | 9 | 12.8 | E. | I | 21 | 4 | 16.91 | — 0.52 | — 0.18 | . | . | . | . | . | . |
| 21 | 4 | 33 | 18.7 | S. | I | 22 | 36 | 29.70 | — 0.28 | — 0.01 | S. | 99 | 22 | 49.7 | + 1.6 | + 1.7 |
| 26 | 8 | 12 | 31.2 | P. | I | 2 | 36 | 1.00 | — 0.38 | — 0.34 | . | . | . | . | . | . |
| 27 | 9 | 8 | 37.7 | E. | I | 3 | 36 | 13.33 | — 0.50 | — 0.54 | S. | 65 | 38 | 13.8 | + 2.9 | + 3.6 |
| 31 | 13 | 29 | 31.7 | E. | II | 8 | 13 | 36.40 | + 0.28 | — 0.91 | S. | 66 | 35 | 59.7 | + 0.6 | — 4.9 |

MERCURY.

| Date. | Observer. | Part observed. | Apparent Right Ascension of Center. | Corr'n to Am. Eph. | Sidereal Time of Transit of Semi-diameter. | Corr'n to Am. Eph. | Part observed. | Geocentric N. P. Distance of Center. | Corr'n to Am. Eph. | Vertical Semi-diameter. | Corr'n to Am. Eph. |
|------------------|-----------|----------------|-------------------------------------|--------------------|--|--------------------|----------------|--------------------------------------|--------------------|-------------------------|--------------------|
| | | | h. m. s. | s. | s. | " | | ° ' " | " | " | " |
| 1876. Jan. 26 | E. | I | 21 47 12.48 | - 0.09 | . . | . . | C | 103 39 15.1 | - 0.9 | . . | . . |
| Feb. 5 | S. | I | 22 4 53.64 | + 0.17 | . . | . . | S | 99 15 10.2 | + 1.5 | . . | . . |
| Mar. 26 | F. | II | 23 8 20.40 | + 0.15 | . . | . . | N | 98 5 11.8 | - 1.1 | . . | . . |
| 30 | F. | II | 23 31 51.81 | + 0.25 | . . | . . | N | 95 39 36.0 | - 0.1 | . . | . . |
| April 5 | P. | II | 0 9 9.86 | + 0.15 | . . | . . | C | 91 27 20.5 | + 0.4 | . . | . . |
| 9 | P. | II | 0 35 33.45 | + 0.05 | . . | . . | C | 88 18 40.0 | + 0.9 | . . | . . |
| 10 | E. | . | 0 42 22.33 | - 0.02 | 0.20 | + 0.02 | C | 87 29 13.8 | + 1.2 | . . | . . |
| 29 | S. | C | 3 1 31.90 | - 0.19 | . . | . . | C | 71 57 5.4 | + 5.1 | . . | . . |
| May 1 | E. | I | 3 18 8.21 | - 0.25 | . . | . . | C | 70 30 16.1 | + 3.0 | . . | . . |
| 4 | P. | I | 3 42 36.74 | - 0.20 | . . | . . | C | 68 36 42.3 | + 3.6 | . . | . . |
| 13 | P. | I | 4 48 16.69 | - 0.18 | . . | . . | C | 65 10 3.5 | + 2.5 | . . | . . |
| 15 | P. | I | 5 0 34.17 | - 0.09 | . . | . . | . | 64 50 14.7 | + 3.3 | 3.6 | + 0.1 |
| 20 | P. | I | 5 26 43.19 | - 0.18 | . . | . . | C | 64 35 9.7 | + 2.0 | . . | . . |
| 22 | P. | I | 5 35 11.43 | - 0.23 | . . | . . | . | 64 41 4.7 | + 2.1 | 3.1 | - 1.1 |
| 23 | S. | I | 5 38 58.18 | - 0.34 | . . | . . | C | 64 46 13.6 | + 1.0 | . . | . . |
| 29 | E. | I | 5 54 54.52 | - 0.41 | . . | . . | C | 65 43 0.0 | + 2.7 | . . | . . |
| June 1 | P. | I | 5 58 21.08 | - 0.41 | . . | . . | C | 66 24 21.8 | + 1.3 | . . | . . |
| 27 | S. | II | 5 22 17.68 | - 0.40 | . . | . . | N | 71 16 47.2 | + 2.0 | . . | . . |
| July 10 | P. | II | 5 55 35.26 | - 0.19 | . . | . . | . | 68 49 22.9 | + 1.1 | 3.8 | 0.0 |
| 11 | F. | II | 6 0 35.83 | - 0.10 | . . | . . | . | 68 35 42.4 | + 0.8 | 3.4 | - 0.3 |
| 18 | P. | II | 6 44 51.50 | - 0.31 | . . | . . | C | 67 24 55.4 | + 2.7 | . . | . . |
| 19 | E. | II | 6 52 22.94 | - 0.45 | . . | . . | C | 67 20 43.5 | + 0.4 | . . | . . |
| 21 | S. | C | 7 8 11.00 | - 0.12 | . . | . . | C | 67 18 47.0 | + 0.5 | . . | . . |
| 26 | P. | II | 7 50 48.85 | - 0.15 | . . | . . | C | 67 57 22.9 | + 1.9 | . . | . . |
| Aug. 21 | E. | I | 11 3 43.73 | + 0.01 | . . | . . | C | 82 59 56.8 | + 0.2 | . . | . . |
| 26 | F. | II | 11 33 3.26 | - 0.31 | . . | . . | . | 86 44 10.9 | + 1.8 | 2.7 | + 0.1 |
| 28 | E. | C | 11 44 7.00 | - 0.03 | . . | . . | C | 88 12 19.5 | - 0.3 | . . | . . |
| Sept. 4 | S. | C | 12 20 7.08 | + 0.01 | . . | . . | C | 93 8 30.8 | + 1.8 | . . | . . |
| 28 | S. | I | 13 41 58.24 | - 0.02 | . . | . . | N | 104 26 7.5 | + 0.4 | . . | . . |
| Oct. 3 | P. | I | 13 41 27.68 | - 0.08 | . . | . . | N | 104 18 24.7 | + 2.7 | . . | . . |
| 18 | P. | II | 12 53 10.57 | + 0.28 | . . | . . | . | . . . | . . | . . | . . |
| 23 | E. | II | 12 51 46.93 | + 0.15 | . . | . . | S | 94 2 35.3 | + 3.5 | . . | . . |
| 26 | P. | II | 13 2 40.59 | + 0.06 | . . | . . | . | 91 29 10.6 | + 2.6 | 3.3 | - 0.3 |
| 31 | E. | II | 13 23 36.94 | + 0.05 | . . | . . | . | 96 27 40.5 | + 1.2 | 3.0 | - 0.2 |
| Nov. 3 | P. | II | 13 39 4.12 | + 0.04 | . . | . . | . | 98 5 5.2 | + 0.5 | 2.9 | - 0.1 |
| 7 | P. | II | 14 1 31.13 | + 0.08 | . . | . . | . | 100 28 15.8 | + 0.1 | 3.5 | + 0.7 |
| 8 | E. | C | 14 7 21.14 | + 0.19 | . . | . . | C | 101 5 3.2 | + 3.5 | . . | . . |

VENUS.

| Date. | Observer. | Part obs'd. | Apparent Right Ascension of Center. | | | Correction to— | | Sid. Time of Transit of Semi-diam. | Corr'n to Am. Eph. | Part obs'd. | Geocentric N. P. Distance of Center. | Corrections to— | | Vertical Semi-diameter. | Corr'n to Am. Eph. | | | | |
|-------|-----------|-------------|-------------------------------------|----|----|----------------|----------------------|------------------------------------|--------------------|-------------|--------------------------------------|-----------------|----------------------|-------------------------|--------------------|------|-------|-------|-------|
| | | | h. | m. | s. | Am. Eph. | Le Verrier's Tables. | | | | | Am. Eph. | Le Verrier's Tables. | | | | | | |
| 1876. | | | | | | | | | | | | | | | | | | | |
| Jan. | 14 | E. | I | 21 | 38 | 6.83 | — | 0.26 | — | 0.32 | N. | 105 53 9.5 | + | 3.1 | + | 3.1 | .. | .. | |
| | 21 | P. | I | 22 | 11 | 40.04 | — | 0.08 | — | 0.14 | . | 102 51 39.7 | + | 3.9 | + | 4.0 | 6.4 | + 0.3 | |
| | 24 | S. | I | 22 | 25 | 44.43 | + | 0.05 | — | 0.02 | . | 101 28 34.2 | + | 4.0 | + | 4.1 | 8.4 | + 2.2 | |
| | 26 | E. | I | 22 | 35 | 1.37 | — | 0.18 | — | 0.24 | . | 100 31 37.6 | + | 1.3 | + | 1.3 | .. | .. | |
| Feb. | 5 | S. | I | 23 | 20 | 28.02 | — | 0.21 | — | 0.26 | S. | 95 33 7.8 | + | 3.3 | + | 3.4 | .. | .. | |
| | 7 | E. | . | . | . | . | . | . | . | . | S. | 94 31 18.4 | + | 0.7 | + | 0.8 | 6.5 | 0.0 | |
| | 8 | F. | I | 23 | 33 | 50.19 | — | 0.04 | — | 0.09 | S. | 94 0 18.4 | + | 4.7 | + | 4.7 | .. | .. | |
| | 16 | F. | I | 0 | 9 | 4.62 | — | 0.00 | — | 0.03 | S. | 89 49 4.2 | + | 0.2 | + | 0.1 | .. | .. | |
| | 17 | S. | I | 0 | 13 | 27.06 | — | 0.11 | — | 0.15 | S. | 89 17 33.3 | + | 2.0 | + | 2.1 | .. | .. | |
| | 18 | P. | I | 0 | 17 | 49.42 | — | 0.06 | — | 0.11 | S. | 88 46 1.4 | + | 2.5 | + | 2.6 | .. | .. | |
| | 19 | E. | I | 0 | 22 | 11.40 | — | 0.17 | — | 0.22 | . | 88 14 27.4 | — | 0.2 | 0.0 | 6.8 | 0.0 | | |
| | 23 | E. | I | 0 | 39 | 38.47 | — | 0.12 | — | 0.16 | . | 86 8 50.4 | + | 2.7 | + | 2.7 | 8.0 | + 1.1 | |
| | 25 | S. | I | 0 | 48 | 21.62 | — | 0.16 | — | 0.19 | S. | 85 6 25.8 | + | 2.9 | + | 2.9 | .. | .. | |
| | Mar. | 6 | E. | I | 1 | 32 | 4.86 | — | 0.17 | — | 0.23 | . | 80 2 28.9 | + | 3.7 | + | 3.9 | 7.6 | + 0.2 |
| 9 | | P. | I | 1 | 45 | 17.10 | — | 0.09 | — | 0.13 | S. | 78 35 3.9 | + | 1.9 | + | 1.9 | .. | .. | |
| 21 | | P. | I | 2 | 35 | 48.16 | — | 0.04 | — | 0.08 | S. | 73 11 36.5 | + | 0.7 | + | 0.5 | .. | .. | |
| 22 | | E. | I | 2 | 43 | 19.23 | — | 0.20 | — | 0.24 | S. | 72 46 57.2 | + | 2.5 | + | 2.3 | .. | .. | |
| April | 6 | P. | I | 3 | 52 | 12.63 | — | 0.06 | — | 0.11 | . | 67 30 28.8 | + | 2.0 | + | 2.0 | 9.2 | + 0.1 | |
| | 10 | P. | I | 4 | 10 | 49.26 | — | 0.02 | — | 0.03 | . | 66 25 29.4 | + | 1.7 | + | 1.7 | 9.0 | — 0.4 | |
| | 11 | E. | I | 4 | 15 | 28.63 | — | 0.08 | — | 0.10 | S. | 66 10 37.5 | + | 0.3 | + | 4.2 | .. | .. | |
| | 12 | F. | I | 4 | 20 | 8.22 | — | 0.03 | — | 0.06 | . | 65 56 23.4 | + | 2.2 | + | 2.2 | 9.5 | — 0.1 | |
| | 15 | E. | . | . | . | . | . | . | . | . | S. | 65 17 4.6 | + | 1.8 | + | 1.9 | .. | .. | |
| | 17 | S. | I | 4 | 43 | 24.21 | — | 0.21 | — | 0.27 | . | 64 53 52.1 | + | 4.2 | + | 4.3 | 9.2 | — 0.8 | |
| | 29 | S. | I | 5 | 38 | 21.76 | — | 0.14 | — | 0.23 | S. | 63 25 8.5 | + | 3.3 | + | 3.4 | .. | .. | |
| May | 1 | E. | I | 5 | 47 | 16.33 | — | 0.03 | — | 0.11 | . | . | . | + | .. | + | .. | 12.1 | + 0.2 |
| | 4 | P. | I | 6 | 0 | 25.47 | — | 0.06 | — | 0.11 | . | 63 13 46.5 | + | 3.0 | + | 3.0 | 13.4 | + 0.1 | |
| | 13 | P. | I | 6 | 37 | 55.13 | — | 0.07 | — | 0.13 | . | 63 28 49.9 | + | 2.0 | + | 2.2 | 13.7 | + 0.1 | |
| | 15 | P. | I | 6 | 45 | 45.39 | — | 0.06 | — | 0.13 | . | 63 37 54.2 | + | 2.3 | + | 2.5 | 13.7 | + 0.1 | |
| | 20 | P. | I | 7 | 4 | 22.37 | — | 0.05 | — | 0.05 | . | 64 8 10.6 | + | 2.7 | + | 2.9 | 14.6 | + 0.1 | |
| | 23 | S. | I | 7 | 14 | 47.09 | — | 0.32 | — | 0.34 | . | 64 32 10.9 | + | 2.2 | + | 2.5 | 15.9 | + 0.8 | |
| | 29 | E. | I | 7 | 33 | 37.05 | — | 0.08 | — | 0.19 | N. | 65 28 46.0 | + | 4.3 | + | 4.6 | .. | .. | |
| June | 1 | P. | I | 7 | 41 | 52.88 | — | 0.00 | — | 0.06 | . | 66 0 53.3 | + | 2.1 | + | 2.7 | 17.8 | + 1.6 | |
| | 2 | E. | I | 7 | 44 | 26.54 | — | 0.16 | — | 0.20 | . | 66 12 4.2 | + | 2.2 | + | 2.9 | 17.8 | + 0.4 | |
| | 3 | F. | . | . | . | . | . | . | . | . | 66 23 25.9 | + | 1.3 | + | 2.0 | 17.5 | — 0.3 | | |
| | 27 | F. | I | 8 | 7 | 22.08 | + | 0.08 | — | 0.06 | N. | 71 8 32.4 | + | 2.4 | + | 2.8 | .. | .. | |
| | 29 | P. | I | 8 | 5 | 3.69 | + | 0.04 | — | 0.05 | N. | 71 29 13.5 | + | 2.0 | + | 2.7 | .. | .. | |
| July | 19 | E. | II | 7 | 16 | 32.10 | + | 0.14 | — | 0.01 | N. | 73 50 3.2 | + | 1.5 | + | 2.5 | .. | .. | |
| | 21 | S. | II | 7 | 12 | 8.10 | + | 0.27 | + | 0.08 | N. | 73 54 57.1 | + | 2.3 | + | 3.0 | .. | .. | |
| | 24 | F. | II | 7 | 6 | 28.44 | + | 0.24 | + | 0.12 | . | 73 59 18.7 | + | 0.9 | + | 1.4 | 26.8 | + 2.0 | |
| | 25 | S. | II | 7 | 4 | 52.21 | + | 0.16 | + | 0.06 | N. | 74 0 2.5 | + | 2.7 | + | 3.3 | .. | .. | |
| Aug. | 8 | E. | II | 6 | 59 | 21.08 | + | 0.02 | — | 0.02 | . | . | . | .. | .. | .. | .. | .. | |
| | 20 | E. | II | 7 | 17 | 29.74 | + | 0.01 | — | 0.09 | . | 73 8 37.2 | 0.0 | — | 0.1 | 19.6 | + 0.2 | | |
| Sept. | 14 | F. | II | 8 | 35 | 38.02 | + | 0.06 | — | 0.05 | . | 74 2 30.8 | — | 0.6 | — | 1.0 | 13.7 | + 0.2 | |
| | 18 | F. | II | 8 | 50 | 59.73 | — | 0.02 | — | 0.11 | . | 74 35 25.4 | — | 2.1 | — | 2.6 | 12.6 | — 0.2 | |
| | 19 | S. | II | 8 | 54 | 54.53 | + | 0.04 | — | 0.05 | S. | 74 44 52.0 | + | 0.1 | + | 0.6 | .. | .. | |
| | 26 | F. | II | 9 | 22 | 56.27 | + | 0.06 | — | 0.02 | . | 76 3 48.4 | — | 1.2 | — | 1.7 | 12.1 | + 0.3 | |
| | 27 | S. | II | 9 | 27 | 1.07 | — | 0.02 | — | 0.11 | S. | 76 16 57.2 | — | 0.6 | — | 1.2 | .. | .. | |
| | 28 | P. | II | 9 | 31 | 6.92 | — | 0.01 | — | 0.11 | . | 76 30 33.7 | + | 0.1 | — | 0.4 | 11.7 | + 0.2 | |
| Oct. | 1 | S. | II | 9 | 43 | 29.82 | + | 0.06 | — | 0.10 | . | 77 14 3.1 | — | 0.6 | — | 1.2 | .. | .. | |
| | 2 | P. | II | 9 | 47 | 38.86 | — | 0.10 | — | 0.19 | . | 77 29 27.4 | + | 0.2 | — | 0.4 | 10.9 | — 0.2 | |
| | 5 | S. | II | 10 | 0 | 10.67 | — | 0.02 | — | 0.09 | . | 78 18 14.4 | — | 0.3 | — | 0.8 | .. | .. | |
| | 6 | P. | II | 10 | 4 | 22.62 | + | 0.11 | + | 0.04 | . | 78 35 21.2 | — | 0.4 | — | 0.9 | 11.5 | + 0.9 | |
| | 8 | P. | II | 10 | 12 | 47.72 | — | 0.04 | — | 0.13 | . | 79 10 48.7 | — | 1.2 | — | 1.7 | 11.0 | + 0.6 | |
| | 11 | P. | II | 10 | 25 | 29.38 | + | 0.18 | + | 0.10 | . | 80 7 0.4 | — | 1.1 | — | 1.9 | 10.6 | + 0.4 | |
| | 12 | F. | II | 10 | 29 | 43.91 | + | 0.10 | — | 0.01 | S. | 80 26 32.2 | + | 0.9 | + | 0.1 | .. | .. | |
| | 13 | S. | II | 10 | 33 | 58.81 | + | 0.01 | — | 0.10 | S. | 80 46 24.5 | + | 1.2 | + | 0.3 | .. | .. | |
| | 18 | P. | II | 10 | 55 | 18.52 | + | 0.11 | + | 0.01 | . | 82 30 55.3 | — | 0.4 | — | 1.1 | 10.1 | + 0.5 | |
| | 23 | E. | II | 11 | 16 | 44.58 | + | 0.04 | — | 0.05 | S. | 84 23 16.6 | 0.0 | — | 0.9 | .. | .. | | |
| | 26 | P. | II | 11 | 29 | 39.16 | 0.00 | — | 0.08 | .. | . | 85 33 55.2 | — | 0.6 | — | 1.6 | 9.9 | + 0.9 | |
| | 31 | E. | II | 11 | 51 | 15.52 | — | 0.03 | — | 0.09 | S. | 87 36 15.6 | + | 1.8 | + | 1.2 | .. | .. | |
| | Nov. | 1 | F. | II | 11 | 55 | 35.84 | + | 0.10 | + | 0.04 | . | 88 1 17.6 | + | 1.1 | + | 0.5 | .. | .. |
| 7 | | P. | II | 12 | 21 | 44.71 | + | 0.11 | + | 0.04 | . | 90 34 42.4 | — | 1.6 | — | 2.4 | 8.2 | — 0.1 | |
| 8 | | E. | II | 12 | 26 | 7.49 | — | 0.03 | — | 0.11 | . | 91 0 43.2 | — | 0.5 | — | 1.4 | 8.8 | + 0.6 | |
| 9 | | S. | II | 12 | 30 | 30.91 | + | 0.03 | — | 0.06 | . | 91 26 48.4 | — | 0.2 | — | 1.2 | 8.2 | 0.0 | |
| 12 | | E. | II | 12 | 43 | 43.96 | + | 0.02 | — | 0.07 | . | 92 45 29.3 | + | 1.7 | + | 0.6 | 8.7 | + 0.7 | |
| 23 | | S. | II | 13 | 32 | 57.55 | + | 0.04 | — | 0.03 | . | 97 34 9.5 | + | 1.7 | + | 1.2 | 8.0 | + 0.5 | |
| Dec. | 4 | S. | II | 14 | 23 | 48.34 | + | 0.22 | + | 0.17 | . | 102 10 27.9 | + | 2.2 | + | 1.8 | 7.3 | + 0.2 | |
| | 12 | S. | II | 15 | 2 | 6.28 | — | 0.04 | — | 0.11 | . | 105 13 44.9 | + | 2.4 | + | 1.9 | 7.4 | + 0.6 | |
| | 19 | F. | II | 15 | 36 | 38.67 | + | 0.01 | — | 0.05 | . | 107 35 44.4 | + | 1.7 | + | 1.1 | 6.5 | — 0.1 | |
| | 26 | E. | II | 16 | 12 | 8.79 | + | 0.13 | + | 0.07 | . | 109 35 55.0 | + | 1.3 | + | 1.0 | 6.2 | — 0.2 | |

JUPITER.

| Date. | Observer. | Part observed. | Apparent Right Ascension of Center. | Corr'n to Am. Eph. | Sidereal Time of Transit of Semi-diameter. | Corr'n to Am. Eph. | Part observed. | Geocentric N. P. Distance of Center. | Corr'n to Am. Eph. | Vertical Semi-diameter. | Corr'n to Am. Eph. |
|---------|-----------|----------------|-------------------------------------|--------------------|--|--------------------|----------------|--------------------------------------|--------------------|-------------------------|--------------------|
| 1876. | | | h. m. s. | s. | s. | s. | | ° ' " | " | " | " |
| Jan. 20 | S. | . . | 15 41 34.31 | + 0.67 | 1.19 | - 0.03 | . . | 108 40 27.6 | - 0.2 | 14.8 | - 1.5 |
| Feb. 18 | P. | . . | 15 55 41.68 | + 0.81 | 1.34 | + 0.02 | . . | 109 21 49.1 | - 2.7 | 19.0 | + 1.4 |
| Mar. 13 | P. | . . | 16 0 24.93 | + 0.71 | 1.36 | - 0.07 | . . | 109 32 51.7 | - 1.0 | 19.7 | + 0.7 |
| 21 | P. | . . | 16 0 22.40 | + 0.75 | 1.44 | - 0.02 | . . | 109 31 50.4 | - 2.9 | 19.8 | + 0.3 |
| April 4 | F. | . . | 15 58 19.48 | + 0.94 | 1.53 | - 0.01 | . . | 109 24 39.8 | - 1.0 | 21.8 | + 1.6 |
| 6 | P. | . . | 15 57 50.14 | + 0.93 | 1.48 | - 0.04 | . . | 109 23 4.8 | - 1.8 | 20.9 | + 0.6 |
| 10 | P. | . . | 15 56 43.18 | + 0.84 | 1.54 | 0.00 | . . | 109 19 32.0 | - 2.8 | 22.0 | + 1.5 |
| May 4 | P. | . . | 15 46 51.82 | + 0.89 | 1.53 | - 0.07 | . . | 108 49 0.2 | - 1.1 | 22.2 | + 0.8 |
| 23 | S. | . . | 15 37 4.20 | + 0.89 | 1.68 | + 0.07 | . . | 108 18 15.9 | - 3.0 | 23.3 | + 1.8 |
| 27 | S. | . . | 15 35 1.71 | + 0.82 | 1.63 | + 0.03 | . . | 108 11 51.0 | - 0.5 | 22.6 | + 1.1 |
| 29 | E. | . . | 15 34 1.80 | + 0.84 | 1.64 | + 0.04 | . . | 108 8 40.1 | - 1.6 | 22.5 | + 1.0 |
| 31 | S. | . . | 15 33 2.94 | + 0.87 | 1.57 | - 0.03 | . . | 108 5 33.4 | - 1.8 | 21.8 | + 0.4 |
| June 1 | P. | . . | 15 32 33.93 | + 0.86 | 1.55 | - 0.05 | . . | 108 4 1.4 | - 2.0 | 21.9 | + 0.5 |
| 5 | P. | . . | 15 30 41.34 | + 0.86 | 1.58 | - 0.01 | . . | 107 55 6.6 | - 0.8 | 21.4 | + 0.1 |
| 30 | E. | . . | 15 21 55.14 | + 0.74 | 1.50 | - 0.09 | . . | 107 31 31.9 | - 1.1 | 20.9 | + 0.5 |
| July 2 | S. | . . | 15 21 29.92 | + 0.90 | 1.52 | + 0.01 | . . | 107 30 25.4 | - 1.7 | 21.0 | + 0.7 |
| 22 | S. | . . | 15 19 53.12 | + 0.80 | 1.41 | - 0.02 | . . | 107 29 23.8 | - 1.2 | 19.6 | + 0.4 |
| 26 | S. | . . | 15 20 8.90 | + 0.77 | 1.36 | - 0.05 | . . | 107 31 25.9 | + 0.3 | 18.7 | - 0.3 |

SATURN.

| | | | | | | | | | | | |
|---------|----|-----|-------------|--------|------|--------|-----|-------------|-------|------|-------|
| Aug. 6 | F. | . . | 22 34 37.94 | - 1.33 | 0.64 | + 0.01 | . . | 100 56 30.3 | +17.6 | 9.4 | + 0.5 |
| 26 | F. | . . | 22 29 9.50 | - 1.48 | 0.68 | + 0.03 | . . | 101 30 47.2 | +19.1 | 9.4 | + 0.5 |
| 28 | E. | . . | | . . | . . | . . | . . | 101 34 15.0 | +19.6 | 9.9 | + 1.0 |
| Sept. 2 | F. | . . | 22 27 9.74 | - 1.52 | 0.64 | - 0.01 | . . | 101 42 46.5 | +20.3 | 10.4 | + 1.5 |
| 4 | S. | . . | 22 26 35.78 | - 1.57 | 0.64 | - 0.01 | . . | 101 46 7.3 | +20.7 | 10.1 | + 1.2 |
| 20 | S. | . . | 22 22 19.80 | - 1.72 | 0.73 | + 0.08 | . . | 102 10 38.2 | +19.9 | 10.0 | + 1.2 |
| 27 | F. | . . | 22 20 42.16 | - 1.76 | 0.70 | + 0.06 | . . | 102 19 37.3 | +20.3 | 10.8 | + 2.0 |
| Oct. 2 | S. | . . | 22 19 39.84 | - 1.87 | 0.70 | + 0.06 | . . | 102 25 13.3 | +21.5 | 9.4 | + 0.6 |
| 13 | F. | . . | 22 17 48.96 | - 1.93 | 0.62 | - 0.01 | . . | 102 34 44.3 | +21.5 | 8.8 | + 0.2 |
| 17 | F. | . . | 22 17 18.68 | - 1.85 | 0.68 | + 0.05 | . . | 102 37 9.4 | +20.1 | 10.7 | + 2.1 |
| 18 | S. | . . | 22 17 11.93 | - 1.90 | 0.68 | + 0.05 | . . | 102 37 42.0 | +21.5 | 8.9 | + 0.3 |
| 24 | E. | . . | 22 16 39.34 | - 2.11 | 0.58 | - 0.04 | . . | 102 39 0.6 | +19.1 | 9.1 | + 0.6 |
| 27 | P. | . . | 22 16 28.56 | - 1.82 | 0.62 | 0.00 | . . | 102 40 42.0 | +20.1 | 9.1 | + 0.7 |
| 31 | S. | . . | 22 16 19.09 | - 1.97 | 0.60 | - 0.02 | . . | 102 41 6.9 | +22.7 | 8.6 | + 0.2 |
| *Nov. 1 | E. | . . | 22 16 17.77 | - 1.93 | 0.59 | - 0.02 | . . | 102 41 3.1 | +19.0 | 9.6 | + 1.2 |
| 7 | S. | . . | 22 16 17.91 | - 1.91 | 0.63 | + 0.02 | . . | 102 40 17.3 | +21.0 | 8.4 | + 0.1 |
| 22 | F. | . . | 22 17 20.76 | - 1.84 | 0.64 | + 0.05 | . . | 102 32 23.2 | +22.8 | 10.2 | + 2.1 |
| 24 | S. | . . | 22 17 35.70 | - 1.94 | 0.65 | + 0.06 | . . | 102 30 41.8 | +20.5 | 8.5 | + 0.4 |

*Nov. 1 Titan.

URANUS.

| Date. | Observer. | Part observed. | Apparent Right Ascension of Center. | Corr'n to Am. Eph. | Sidereal Time of Transit of Semi-diameter. | Corr'n to Am. Eph. | Part observed. | Geocentric N. P. Distance of Center. | Corr'n to Am. Eph. | Vertical semi-diameters. | Corr'n to Am. Eph. |
|---------|-----------|----------------|-------------------------------------|--------------------|--|--------------------|----------------|--------------------------------------|--------------------|--------------------------|--------------------|
| | | | h. m. s. | s. | s. | s. | | ° ' " | " | " | " |
| 1876. | | | | | | | | | | | |
| Jan. 12 | S. | . | 9 26 37.27 | - 0.04 | . | . | . | 74 9 46.9 | - 0.2 | . | . |
| 14 | E. | . | 9 26 19.29 | - 0.08 | 0.19 | - 0.06 | . | 74 8 19.2 | + 0.1 | 2.1 | + 0.2 |
| 20 | S. | . | 9 25 23.10 | 0.60 | . | . | . | 74 3 45.8 | + 0.9 | . | . |
| 25 | P. | . | 9 24 33.86 | - 0.01 | . | . | . | 73 59 49.5 | + 1.6 | . | . |
| Feb. 2 | P. | . | 9 23 12.23 | - 0.03 | . | . | . | 73 53 21.7 | + 2.3 | . | . |
| 16 | F. | . | 9 20 47.40 | - 0.10 | . | . | . | 73 42 3.4 | - 0.1 | . | . |
| 17 | S. | . | 9 20 37.37 | + 0.05 | . | . | . | . | . | . | . |
| 18 | P. | . | 9 20 27.14 | - 0.04 | . | . | . | 73 40 30.5 | + 0.4 | . | . |
| 19 | E. | . | 9 20 17.10 | 0.00 | . | . | . | 73 39 45.3 | + 1.5 | . | . |
| Mar. 3 | F. | . | 9 18 12.88 | + 0.02 | . | . | . | 73 30 20.9 | 0.0 | . | . |
| 4 | S. | . | 9 18 3.92 | - 0.06 | . | . | . | 73 29 40.7 | - 0.5 | . | . |
| 5 | P. | . | 9 17 55.20 | + 0.68 | . | . | . | 73 29 4.0 | + 2.0 | . | . |
| 6 | E. | . | 9 17 46.55 | - 0.01 | 0.22 | + 0.09 | . | 73 28 24.4 | + 0.8 | . | . |
| 9 | P. | . | 9 17 21.39 | + 0.03 | . | . | . | 73 26 31.8 | - 0.3 | . | . |
| 13 | P. | . | 9 16 49.67 | + 0.01 | . | . | . | 73 24 13.7 | + 1.0 | . | . |
| 21 | P. | . | 9 15 53.37 | - 0.06 | . | . | . | 73 20 10.8 | + 1.5 | . | . |
| April 1 | S. | . | 9 14 54.29 | + 0.08 | . | . | . | 73 16 0.0 | - 0.9 | . | . |
| 2 | P. | . | 9 14 49.97 | + 0.01 | . | . | . | 73 15 44.4 | + 0.8 | . | . |
| 5 | S. | . | 9 14 38.51 | + 0.11 | . | . | . | 73 14 56.5 | - 0.9 | . | . |
| 6 | P. | . | 9 14 35.01 | + 0.66 | . | . | . | 73 14 42.9 | - 1.0 | . | . |
| 10 | P. | . | 9 14 23.15 | 0.00 | . | . | . | 73 13 59.3 | + 0.4 | . | . |
| 12 | F. | . | 9 14 18.53 | + 0.04 | . | . | . | 73 13 43.9 | + 1.9 | . | . |
| 15 | E. | . | 9 14 13.00 | - 0.06 | 0.16 | + 0.03 | . | 73 13 25.2 | + 1.4 | 2.2 | + 0.3 |
| 18 | P. | . | 9 14 9.45 | - 0.08 | . | . | . | 73 13 14.7 | + 0.4 | . | . |
| 19 | E. | . | 9 14 8.68 | - 0.10 | 0.14 | + 0.01 | . | 73 13 13.3 | + 0.2 | 2.1 | + 0.3 |
| 20 | F. | . | 9 14 8.25 | + 0.01 | 0.18 | + 0.05 | . | 73 13 12.7 | - 0.1 | . | . |
| 22 | P. | . | 9 14 7.76 | - 0.05 | . | . | . | 73 13 15.7 | + 0.5 | . | . |
| 26 | P. | . | 9 14 9.37 | - 0.14 | . | . | . | 73 13 32.7 | + 1.2 | . | . |
| May 1 | E. | . | 9 14 16.44 | - 0.03 | . | . | . | 73 14 15.7 | + 2.0 | . | . |
| Nov. 8 | P. | . | 9 48 19.88 | - 0.07 | . | . | . | 75 58 29.5 | + 0.1 | . | . |
| Dec. 12 | F. | . | 9 48 46.48 | - 0.14 | . | . | . | 75 59 11.9 | - 1.1 | . | . |
| 13 | S. | . | 9 48 43.55 | - 0.11 | . | . | . | 75 58 53.3 | - 1.7 | . | . |
| 20 | F. | . | 9 48 17.10 | - 0.09 | . | . | . | 75 56 20.8 | + 0.2 | . | . |

NEPTUNE.

| | | | | | | | | | | | |
|---------|----|---|------------|--------|---|---|---|--------------|---------|---|---|
| Sept. 2 | F. | . | 2 13 50.77 | + 0.05 | . | . | . | 78 27 28.6 | - 0.9 | . | . |
| 28 | S. | . | 2 11 57.13 | + 0.14 | . | . | . | 78 38 28.4 | - 1.7 | . | . |
| Oct. 3 | P. | . | 2 11 29.08 | + 0.21 | . | . | . | 78 41 5.6 | - 0.4 | . | . |
| 11 | F. | . | 2 10 41.03 | - 0.05 | . | . | . | 78 45 28.7 | + 1.7 | . | . |
| 12 | P. | . | 2 10 35.08 | + 0.18 | . | . | . | 78 46 0.7 | + 0.2 | . | . |
| 13 | F. | . | 2 10 28.69 | + 0.01 | . | . | . | 78 46 33.1 | - 1.0 | . | . |
| 17 | F. | . | 2 10 3.71 | - 0.20 | . | . | . | 78 48 48.5 | - 0.8 | . | . |
| 18 | S. | . | 2 9 57.26 | + 0.12 | . | . | . | 78 49 25.8 | + 2.5 | . | . |
| 27 | P. | . | 2 8 59.39 | + 0.09 | . | . | . | 78 54 30.0 | + 0.1 | . | . |
| 31 | S. | . | 2 8 33.77 | + 0.23 | . | . | . | 78 56 45.1 | + 0.2 | . | . |
| Nov. 1 | E. | . | . | . | . | . | . | 78 57 18.6 | + 0.3 | . | . |
| 5 | E. | . | 2 8 1.87 | + 0.23 | . | . | . | 78 59 31.2 | + 0.5 | . | . |
| 7 | S. | . | 2 7 49.19 | + 0.16 | . | . | . | 79 0 35.5 | - 0.2 | . | . |
| 22 | F. | . | . | . | . | . | . | 79 8 7.5 | - 1.1 | . | . |
| 27 | S. | . | 2 5 52.93 | + 0.13 | . | . | . | 79 10 (15.4) | (- 5.6) | . | . |
| 28 | P. | . | 2 5 47.83 | + 0.18 | . | . | . | 79 10 47.4 | + 1.2 | . | . |
| Dec. 5 | S. | . | 2 5 14.15 | + 0.17 | . | . | . | 79 13 29.5 | + 1.1 | . | . |
| 7 | E. | . | 2 5 5.24 | + 0.08 | . | . | . | 79 14 10.6 | + 0.6 | . | . |
| 13 | S. | . | 2 4 41.24 | + 0.17 | . | . | . | 79 16 0.3 | - 0.8 | . | . |
| 15 | E. | . | 2 4 33.07 | + 0.09 | . | . | . | 79 16 31.8 | - 1.4 | . | . |
| 19 | E. | . | 2 4 20.93 | + 0.10 | . | . | . | 79 17 29.8 | - 0.2 | . | . |
| 21 | S. | . | 2 4 15.14 | + 0.13 | . | . | . | 79 17 56.2 | + 1.7 | . | . |
| 27 | E. | . | 2 4 0.58 | + 0.20 | . | . | . | 79 18 51.5 | - 0.5 | . | . |

SMALL PLANETS.

CERES, (1).

NOTES.

| Date. | Observer. | Washington Mean Time. | Berlin Mean Time corrected for Aberration. | Apparent Right Ascension of Center. | Corr'n to Ephem. | Geocentric N. P. Distance of Center. | Corr'n to Ephem. |
|---------|-----------|--------------------------|--|---|---------------------|--|---------------------|
| 1876. | | h. m. | h. m. | h. m. s. | s. | ° ' " | " |
| Mar. 21 | P. | . . . | . . . | 14 54 42.60 | + 3.78 | 93 43 23.0 | + 38.6 |
| April 6 | P. | . . . | . . . | 14 46 33.90 | + 4.12 | . . . | . . . |
| 10 | P. | . . . | . . . | 14 43 40.44 | + 4.14 | 92 46 30.9 | + 41.2 |
| 18 | P. | . . . | . . . | 14 37 9.90 | + 4.10 | 92 26 37.7 | + 40.7 |
| 22 | P. | . . . | . . . | 14 33 39.69 | + 4.15 | 92 18 30.1 | + 41.6 |
| 25 | S. | . . . | . . . | 14 30 58.66 | + 4.26 | 92 13 23.1 | + 41.9 |
| 26 | P. | . . . | . . . | 14 30 4.46 | + 4.07 | 92 11 55.6 | + 41.1 |
| | | | | 14 23 48.67 | + 4.06 | 92 4 59.1 | + 40.9 |
| May 3 | S. | . . . | . . . | | | | |
| 4 | P. | . . . | . . . | 14 22 55.93 | + 4.07 | 92 4 31.3 | + 41.4 |
| 13 | E. | . . . | . . . | 14 15 27.80 | + 4.07 | 92 6 36.3 | + 40.0 |
| 23 | S. | . . . | . . . | 14 8 33.36 | + 3.75 | 92 22 51.0 | + 35.6 |
| 27 | S. | . . . | . . . | 14 6 20.86 | + 3.94 | 92 33 33.4 | + 36.0 |
| 29 | E. | . . . | . . . | 14 5 22.35 | + 3.82 | 92 39 44.3 | + 34.0 |
| 31 | S. | . . . | . . . | 14 4 29.22 | + 3.58 | 92 46 35.0 | + 38.0 |
| June 1 | P. | . . . | . . . | 14 4 4.98 | + 3.71 | 92 50 9.2 | + 36.6 |

PALLAS, (2).

| | | | | | | | |
|----------|----|-------|-------|-------------|--------|------------|-------|
| Mar. 21 | P. | . . . | . . . | 14 17 53.16 | - 1.32 | 77 6 5.7 | + 2.9 |
| April 15 | E. | . . . | . . . | 14 1 29.80 | - 1.37 | 69 41 33.2 | + 0.4 |
| 19 | E. | . . . | . . . | 13 58 21.14 | - 1.25 | 68 48 15.9 | + 0.8 |
| 20 | F. | . . . | . . . | . . . | . . . | 68 35 55.4 | + 0.4 |
| 22 | P. | . . . | . . . | 13 56 0.48 | - 1.35 | 68 12 29.0 | + 1.2 |
| 25 | S. | . . . | . . . | 13 53 42.64 | - 1.33 | 67 40 24.7 | + 2.0 |
| 26 | P. | . . . | . . . | 13 52 57.49 | - 1.42 | 67 30 32.4 | + 1.4 |
| May 3 | S. | . . . | . . . | 13 48 0.34 | - 1.19 | 66 33 8.2 | + 1.6 |
| 4 | P. | . . . | . . . | 13 47 20.95 | - 1.26 | 66 26 34.4 | + 1.5 |
| 13 | E. | . . . | . . . | 13 42 12.40 | - 1.23 | 65 44 59.7 | + 2.4 |
| 23 | S. | . . . | . . . | 13 38 21.93 | - 1.47 | 65 32 29.4 | + 1.7 |
| 27 | S. | . . . | . . . | 13 37 27.14 | - 1.13 | 65 36 12.2 | + 2.8 |
| 29 | E. | . . . | . . . | 13 37 7.93 | - 1.04 | 65 39 42.0 | + 2.9 |
| 31 | S. | . . . | . . . | 13 36 53.96 | - 1.19 | 65 44 13.0 | + 2.6 |
| June 1 | P. | . . . | . . . | 13 36 49.16 | - 1.19 | 65 46 50.1 | + 2.1 |

JUNO, (3).

| | | | | | | | |
|---------|-------|-------|-------|-------------|--------|------------|-------|
| Mar. 21 | P. | . . . | . . . | 12 41 1.87 | + 2.92 | 88 37 15.3 | + 7.0 |
| April 1 | S. | . . . | . . . | 12 32 22.53 | + 2.97 | 87 2 1.1 | + 7.4 |
| 5 | S. | . . . | . . . | 12 29 18.39 | + 2.96 | 86 31 11.2 | + 7.5 |
| 6 | P. | . . . | . . . | 12 28 33.42 | + 3.00 | 86 23 30.5 | + 7.2 |
| 10 | P. | . . . | . . . | 12 25 38.78 | + 2.98 | 85 54 6.1 | + 6.8 |
| 12 | F. | . . . | . . . | 12 24 15.20 | + 2.90 | 85 40 15.4 | + 8.3 |
| 15 | E. | . . . | . . . | 12 22 15.50 | + 2.90 | 85 20 32.5 | + 5.9 |
| 22 | P. | . . . | . . . | 12 18 7.70 | + 2.77 | 84 40 21.3 | + 5.0 |
| May 3 | S. | . . . | . . . | 12 13 20.60 | + 2.93 | 83 54 49.5 | + 6.3 |
| 4 | . . . | . . . | . . . | 12 13 1.33 | + 2.70 | 83 51 45.7 | + 5.4 |
| 23 | S. | . . . | . . . | 12 10 47.70 | + 2.32 | 83 26 29.8 | + 3.1 |

VESTA, (4).

| Date. | Observer. | Washington Mean Time. | Berlin Mean Time corrected for Aberration. | Apparent Right Ascension of Center. | Corr'n to Ephem. | Geocentric N. P. Distance of Center. | Corr'n to Ephem. |
|---------|-----------|--------------------------|--|---|---------------------|--|---------------------|
| 1876. | | h. m. | h. m. | h. m. s. | s. | ° ' " | " |
| Mar. 21 | P. | . . . | . . . | 12 57 59.67 | + 0.86 | 82 33 38.9 | + 6.5 |
| April 1 | S. | . . . | . . . | 12 48 13.53 | + 0.95 | 81 19 26.6 | + 6.7 |
| 5 | S. | . . . | . . . | 12 44 33.55 | + 0.86 | 80 57 15.4 | + 4.7 |
| 6 | P. | . . . | . . . | 12 43 39.17 | + 0.95 | 80 52 14.8 | + 5.9 |
| 8 | F. | . . . | . . . | 12 41 51.19 | + 0.77 | 80 42 51.5 | + 6.3 |
| 10 | P. | . . . | . . . | 12 40 55.53 | + 0.89 | 80 34 23.1 | + 7.0 |
| 12 | F. | . . . | . . . | 12 38 22.26 | + 0.86 | . . . | . . . |
| 15 | E. | . . . | . . . | . . . | . . . | 80 17 24.2 | + 6.6 |
| 19 | E. | . . . | . . . | 12 32 48.97 | + 0.86 | 80 8 24.6 | + 5.8 |
| 20 | F. | . . . | . . . | 12 32 5.72 | + 0.81 | 80 6 48.7 | + 5.1 |
| 25 | S. | . . . | . . . | 12 28 49.71 | + 0.79 | 80 2 56.7 | + 8.0 |
| 26 | P. | . . . | . . . | 12 28 14.79 | + 0.73 | 80 2 57.1 | + 7.2 |
| May 3 | S. | . . . | . . . | 12 24 55.71 | + 0.88 | 80 10 24.1 | + 6.1 |
| 23 | S. | . . . | . . . | 12 23 8.56 | + 0.70 | 81 34 27.9 | + 4.4 |
| 29 | E. | . . . | . . . | 12 25 48.97 | + 0.76 | 82 14 49.7 | + 5.5 |
| June 1 | P. | . . . | . . . | 12 26 0.44 | + 0.69 | 82 37 8.8 | + 6.3 |
| 2 | E. | . . . | . . . | 12 26 27.22 | + 0.59 | 82 44 53.4 | + 7.5 |

NOTES.

ASTRÆA, (5).

| | | | | | | | |
|----------|----|-------|-------|-------------|-----|-------------|-----|
| April 26 | P. | . . . | . . . | 16 11 7.62 | . . | 102 32 37.9 | . . |
| May 4 | P. | . . . | . . . | 16 4 49.84 | . . | 102 5 3.7 | . . |
| 23 | S. | . . . | . . . | 15 47 22.24 | . . | 101 11 5.8 | . . |
| 27 | S. | . . . | . . . | 15 43 44.62 | . . | 101 3 23.3 | . . |
| 29 | E. | . . . | . . . | 15 41 59.67 | . . | 101 0 12.1 | . . |

No ephemeris.

HEBE, (6).

| | | | | | | | |
|---------|----|---------|---------|-------------|--------|------------|--------|
| Feb. 12 | F. | 13 15.0 | 19 2.1 | 10 45 36.59 | + 3.69 | 76 2 14.2 | — 8.3 |
| 16 | F. | 12 56.0 | 18 43.2 | . . . | . . | 75 20 28.8 | — 5.9 |
| 17 | S. | 12 51.2 | 18 38.4 | 10 41 22.84 | + 3.88 | 75 9 58.0 | — 12.1 |
| 18 | P. | 12 46.3 | 18 33.5 | 10 40 30.21 | + 3.71 | 74 59 39.1 | — 8.3 |
| 19 | E. | 12 41.5 | 18 28.7 | 10 39 37.57 | + 3.95 | 74 49 19.7 | — 7.7 |
| Mar. 4 | S. | 11 34.1 | 17 21.0 | 10 27 9.89 | + 3.99 | 72 34 9.3 | — 10.8 |
| 5 | P. | 11 29.3 | 17 16.2 | 10 26 18.54 | + 3.85 | 72 25 32.8 | — 8.5 |
| 6 | E. | 11 24.5 | 17 11.3 | 10 25 27.93 | + 3.84 | 72 17 3.7 | — 9.0 |
| 9 | P. | 11 10.3 | 16 57.0 | 10 22 59.82 | + 3.80 | 71 52 40.0 | — 10.0 |

IRIS, (7).

| | | | | | | | |
|--------|----|---------|---------|-------------|--------|-------------|--------|
| May 23 | S. | 12 44.6 | 18 31.2 | 16 53 16.97 | + 2.68 | 113 55 26.7 | — 10.5 |
| 27 | S. | 12 24.8 | 18 11.5 | 16 49 13.04 | + 2.67 | 113 42 47.0 | — 10.3 |
| 29 | E. | 12 14.8 | 18 1.6 | 16 47 8.43 | + 2.67 | 113 36 7.3 | — 10.1 |
| 31 | S. | 12 5.9 | 17 52.7 | 16 45 2.78 | + 2.69 | 113 29 14.7 | — 10.7 |
| June 1 | P. | 11 58.9 | 17 45.7 | 16 43 59.63 | + 2.51 | 113 25 44.7 | — 10.8 |

FLORA, (8).

| | | | | | | | |
|---------|----|---------|---------|-------------|--------|-------------|--------|
| Aug. 26 | F. | 11 55.4 | 17 48.9 | 22 18 35.06 | +12.09 | . . . | . . . |
| 28 | E. | 11 45.8 | 17 39.3 | 22 16 43.94 | +12.17 | 109 14 58.0 | — 45.3 |
| Sept. 4 | S. | 11 12.0 | 17 5.5 | 22 10 24.83 | +12.05 | 110 7 59.9 | — 44.9 |

HYGEIA, (10).

| Date. | Observer. | Washington Mean Time. | Berlin Mean Time corrected for Aberration. | Apparent Right Ascension of Center. | Corr'n to Ephem. | Geocentric N. P. Distance of Center. | Corr'n to Ephem. |
|---------|-----------|--------------------------|--|---|---------------------|--|---------------------|
| 1876. | | h. m. | h. m. | h. m. s. | s. | ° ' " | " |
| Jan. 25 | P. | 10 52.9 | 16 35.0 | 7 12 7.26 | -11.81 | 68 10 34.4 | -165.1 |
| 26 | E. | 10 48.1 | 16 30.2 | 7 11 20.41 | -11.78 | 68 10 2.6 | -163.9 |

NOTES.

PARTHENOPE, (11).

| | | | | | | | |
|---------|----|---------|---------|------------|--------|------------|-------|
| Jan. 20 | S. | 13 23.0 | 19 10.4 | 9 22 52.28 | + 4.27 | 73 46 35.7 | + 4.0 |
| 21 | P. | 13 18.1 | 19 5.5 | 9 22 0.81 | + 4.24 | 73 40 50.0 | + 4.0 |
| 25 | P. | 12 58.9 | 18 46.4 | 9 18 26.39 | + 4.36 | 73 17 16.7 | + 2.6 |
| 31 | F. | 12 29.6 | 18 17.2 | 9 12 45.45 | + 4.41 | 72 41 17.8 | + 4.4 |
| Feb 2 | P. | 12 19.8 | 18 7.4 | 9 10 48.70 | + 4.26 | 72 29 17.7 | + 3.2 |
| 4 | F. | 12 10.0 | 17 57.6 | 9 8 51.85 | + 4.53 | 72 17 24.9 | + 3.3 |
| 12 | F. | 11 30.9 | 17 18.4 | 9 1 9.18 | + 4.60 | 71 31 47.6 | + 2.2 |
| 16 | S. | 11 11.5 | 16 58.9 | 8 57 28.35 | + 4.25 | 71 10 46.5 | + 5.9 |
| 17 | F. | 11 6.7 | 16 54.1 | 8 56 35.18 | + 4.36 | 71 5 39.4 | + 1.3 |
| 18 | P. | 11 1.8 | 16 49.2 | 8 55 42.62 | + 4.13 | 71 0 43.8 | + 2.3 |

EUNOMIA, (15).

| | | | | | | | |
|---------|----|---------|---------|-------------|--------|-------------|--------|
| April 6 | P. | 13 4.3 | 18 47.7 | 14 7 42.54 | . . | 120 29 57.9 | . . |
| 15 | E. | 12 20.9 | 18 4.6 | 13 59 40.74 | + 6.55 | 120 5 14.7 | + 27.2 |
| 19 | E. | 12 1.3 | 17 45.1 | 13 55 56.49 | + 6.56 | 119 49 26.6 | + 34.8 |
| 22 | P. | 11 46.8 | 17 30.7 | 13 53 7.38 | + 6.51 | 119 35 34.9 | + 30.2 |
| 26 | P. | 11 27.3 | 17 11.2 | 13 49 23.81 | + 6.39 | 119 14 56.1 | + 28.1 |
| May 3 | S. | 10 53.5 | 16 37.4 | 13 43 8.51 | + 6.50 | 118 33 43.6 | + 31.7 |
| 4 | P. | 10 48.8 | 16 32.7 | 13 42 17.23 | + 6.37 | 118 27 23.8 | + 22.2 |

No ephemeris.

THETIS, (17).

| | | | | | | | |
|---------|----|---------|-------|-------------|-----|-------------|-----|
| July 22 | S. | 11 32.5 | . . . | 19 37 35.32 | . . | 109 55 55.3 | . . |
|---------|----|---------|-------|-------------|-----|-------------|-----|

No ephemeris.

MELPOMENE, (18).

| | | | | | | | |
|----------|----|---------|---------|-------------|--------|------------|-------|
| April 25 | S. | 13 33.9 | 19 21.3 | 15 52 16.47 | + 2.33 | 94 19 13.3 | + 3.3 |
| May 3 | S. | 12 55.7 | 18 43.5 | 15 45 36.54 | + 2.25 | 93 31 51.0 | + 2.2 |
| 4 | P. | 12 50.9 | 18 38.7 | 15 44 42.57 | + 2.32 | 93 26 19.0 | + 3.9 |
| 13 | E. | 12 7.0 | 17 55.0 | 15 36 10.41 | + 2.53 | 92 41 18.2 | + 5.1 |
| 23 | S. | 11 17.9 | 17 6.0 | 15 26 24.07 | + 2.34 | 92 4 58.4 | + 4.3 |
| 27 | S. | 10 58.4 | 16 46.4 | 15 22 38.45 | + 2.45 | 91 55 24.5 | + 5.6 |
| 29 | E. | 10 48.7 | 16 36.7 | 15 20 49.43 | + 2.39 | 91 51 44.4 | + 4.3 |
| 31 | S. | 10 39.2 | 16 27.1 | 15 19 3.51 | + 2.26 | 91 48 51.5 | + 3.6 |

THEMIS, (24).

| | | | | | | | |
|----------|----|---------|---------|-------------|--------|-------------|-------|
| April 25 | S. | 13 19.5 | 19 3.9 | 15 37 53.80 | . . | 109 45 15.2 | . . |
| 26 | P. | 13 14.8 | 18 59.2 | 15 37 10.92 | . . | 109 43 4.6 | . . |
| May 3 | S. | 12 42.0 | 18 26.6 | 15 31 52.97 | - 0.16 | 109 26 39.8 | - 2.6 |
| 4 | P. | 12 37.3 | 18 21.9 | 15 31 5.40 | - 0.26 | 109 24 11.3 | 0.0 |
| 13 | E. | 11 54.6 | 17 39.2 | 15 23 47.92 | - 0.02 | 109 0 5.2 | - 0.8 |
| 23 | S. | 11 7.4 | 16 51.8 | 15 15 50.77 | - 0.03 | 108 32 11.2 | - 1.2 |
| 27 | S. | 10 48.7 | 16 32.9 | 15 12 53.17 | - 0.10 | 108 21 24.2 | - 1.2 |
| 29 | E. | 10 39.4 | 16 23.6 | 15 11 29.07 | + 0.27 | 108 16 11.4 | - 1.6 |
| June 1 | P. | 10 25.5 | 16 9.5 | 15 9 28.20 | + 1.41 | 108 8 42.3 | + 5.9 |

No ephemeris.

PHOCÆA, (25).

NOTES.

| Date. | Observer. | Washington Mean Time | Berlin Mean Time corrected for Aberration. | Apparent Right Ascension of Center. | Corr'n to Ephem. | Geocentric N. P. Distance of Center. | Corr'n to Ephem. |
|---------|-----------|-------------------------|--|---|---------------------|--|---------------------|
| | | h. m. | h. m. | h. m. s. | s. | ° ' " | " |
| 1876. | | | | | | | |
| Oct. 11 | F. | 12 37.5 | 18 29.2 | 2 2 4.09 | + 5.54 | 72 34 19.3 | + 13.5 |
| 12 | P. | 12 32.6 | 18 24.3 | 2 1 11.85 | + 5.67 | 72 51 28.1 | + 13.1 |
| 13 | F. | 12 27.9 | 18 19.6 | 2 0 19.26 | + 5.94 | 73 8 46.2 | + 13.9 |
| 17 | F. | 12 8.5 | 18 0.2 | 1 56 44.65 | + 5.75 | 74 18 55.1 | + 14.6 |
| 18 | S. | 12 3.7 | 17 55.4 | 1 55 50.70 | + 5.71 | 74 36 35.2 | + 12.8 |
| 27 | P. | 11 20.5 | 17 12.0 | 1 47 58.22 | + 5.55 | 77 15 10.7 | + 10.3 |
| Nov. 1 | E. | 10 56.9 | 16 48.2 | 1 43 59.50 | + 5.59 | 78 39 55.9 | + 10.2 |
| 5 | E. | 10 38.3 | 16 29.4 | 1 41 7.48 | + 5.47 | 79 44 25.6 | + 12.3 |
| 7 | S. | 10 29.1 | 16 20.0 | 1 39 48.92 | + 5.38 | 80 15 12.8 | + 7.8 |

EUTERPE, (27).

| | | | | | | | |
|---------|----|---------|---------|------------|--------|------------|--------|
| Jan. 31 | F. | 13 22.0 | 19 14.7 | 10 5 18.74 | + 1.68 | 75 55 13.9 | + 9.8 |
| Feb. 2 | P. | 13 12.3 | 19 5.0 | 10 3 32.81 | + 1.71 | 75 43 27.9 | + 9.8 |
| 18 | P. | 11 53.9 | 17 46.5 | 9 48 2.55 | + 1.86 | 74 9 44.2 | + 12.0 |
| 19 | E. | 11 49.2 | 17 41.8 | 9 47 4.77 | + 2.03 | 74 4 21.2 | + 10.1 |
| Mar. 3 | F. | 10 46.9 | 16 39.0 | 9 35 59.10 | + 2.12 | 73 7 10.9 | + 11.4 |
| 4 | S. | 10 42.3 | 16 34.4 | 9 35 17.41 | + 2.16 | 73 3 53.1 | + 10.2 |

AMPHITRITE, (29).

| | | | | | | | |
|----------|----|---------|---------|-------------|--------|------------|-------|
| Sept. 27 | F. | 11 48.3 | 17 38.2 | . . . | . . . | 86 22 48.9 | - 3.8 |
| 28 | S. | 11 43.1 | 17 33.0 | 0 16 19.37 | + 0.54 | 86 25 51.9 | - 4.5 |
| 29 | P. | 11 38.3 | 17 28.2 | 0 15 22.42 | + 0.51 | 86 28 57.8 | - 3.5 |
| Oct. 2 | S. | 11 23.6 | 17 13.5 | 0 12 32.99 | + 0.57 | 86 38 11.6 | - 4.4 |
| 3 | P. | 11 18.7 | 17 8.5 | 0 11 37.15 | + 0.57 | 86 41 17.0 | - 3.3 |
| 11 | F. | 10 41.2 | 16 31.0 | 0 4 32.04 | + 0.73 | 87 4 48.2 | - 4.9 |
| 12 | P. | 10 35.5 | 16 25.2 | 0 3 42.44 | + 0.59 | 87 7 31.3 | - 5.0 |
| 13 | F. | 10 30.8 | 16 20.5 | 0 2 53.84 | + 0.47 | 87 10 12.0 | - 3.6 |
| 17 | F. | 10 12.0 | 16 1.6 | 23 59 51.44 | . . | 87 19 1.3 | . . |
| 18 | S. | 10 7.3 | 15 56.9 | 23 59 8.92 | . . | 87 22 15.3 | . . |

} No ephemeris.

EUPHROSYNÉ, (31).

| | | | | | | | |
|----------|----|---------|---------|-------------|--------|-------------|--------|
| Sept. 28 | S. | 11 6.9 | 16 49.5 | 23 39 57.86 | - 1.00 | 120 8 16.8 | + 9.3 |
| Oct. 3 | P. | 10 42.3 | 16 24.8 | 23 35 7.73 | - 1.14 | 119 52 11.6 | + 16.9 |

LEUCOTHEA, (35).

| | | | | | | | |
|----------|----|---------|---------|-------------|--------|-------------|--------|
| April 18 | P. | 12 31.7 | 18 22.3 | 14 22 21.59 | + 2.01 | 113 57 46.9 | + 20.3 |
| 19 | E. | 12 26.9 | 18 17.5 | 14 21 28.50 | + 2.18 | 113 58 9.5 | + 20.4 |
| 22 | P. | 12 12.4 | 18 3.0 | 14 18 45.88 | + 2.07 | 113 58 18.8 | + 20.3 |
| 25 | S. | 11 57.8 | 17 48.5 | 14 16 1.06 | + 2.10 | 113 57 3.0 | + 18.2 |
| 26 | P. | 11 52.0 | 17 43.7 | 14 15 5.86 | + 1.98 | 113 56 21.5 | + 18.9 |
| May 3 | S. | 11 19.1 | 17 9.7 | 14 8 47.39 | + 2.14 | 113 47 51.8 | + 19.2 |
| 13 | E. | 10 31.9 | 16 22.3 | 14 0 45.35 | + 2.13 | 113 27 44.4 | + 19.3 |

ATALANTE (?), (36).

| | | | | | | | |
|----------|----|---------|---------|------------|--------|------------|--------|
| April 22 | P. | 11 18.7 | 16 59.3 | 13 25 2.54 | - 1.26 | 113 36 0.8 | - 40.3 |
|----------|----|---------|---------|------------|--------|------------|--------|

FIDES, (37).

| Date. | Observer. | Washington Mean Time. | Berlin Mean Time corrected for Aberration. | Apparent Right Ascension of Center. | Corr'n to Ephem. | Apparent N. P. Distance of Center. | Corr'n to Ephem. |
|------------------|-----------|--------------------------|--|---|---------------------|--|---------------------|
| 1876. July 22 | S. | h. m. 12 50.9 | h. m. 18 37.8 | h. m. s. 20 56 14.18 | s. - 1.94 | ° ' " 111 45 18.3 | " + 4.2 |
| Aug. 9 | E. | 11 23.2 | 17 10.3 | 20 39 14.32 | - 1.76 | 112 41 36.7 | + 3.6 |

NOTES.

HARMONIA, (40).

| | | | | | | | |
|---------|----|---------|---------|------------|--------|------------|-------|
| Jan. 14 | E. | 13 43.0 | 19 33.3 | 9 19 24.50 | + 1.13 | 70 12 35.9 | + 1.4 |
| 20 | S. | 13 14.1 | 19 4.6 | 9 13 59.45 | + 1.24 | 69 33 27.2 | + 1.3 |
| 21 | P. | 13 9.1 | 18 59.6 | 9 13 0.96 | + 1.18 | 69 26 50.1 | + 1.0 |
| 25 | P. | 12 49.5 | 18 40.1 | 9 8 57.91 | + 1.25 | 69 0 25.8 | + 0.4 |
| Feb. 2 | P. | 12 9.4 | 18 0.0 | 9 0 24.81 | + 1.22 | 68 9 48.8 | + 2.3 |
| 12 | F. | 11 19.6 | 17 10.0 | 8 49 54.33 | + 1.41 | 67 15 34.3 | + 1.7 |
| 16 | F. | 11 0.0 | 16 50.3 | 8 46 2.85 | + 1.04 | 66 57 50.0 | + 2.2 |
| 17 | S. | 10 55.2 | 16 45.4 | 8 45 8.22 | + 1.32 | 66 53 47.6 | + 2.2 |
| 18 | P. | 10 50.3 | 16 40.5 | 8 44 14.48 | + 1.19 | 66 49 54.6 | + 1.8 |

ISIS, (42).

| | | | | | | | |
|---------|----|---------|-------|------------|-----|------------|-----|
| Dec. 21 | S. | 10 17.4 | . . . | 4 21 29.27 | . . | 70 33 44.2 | . . |
| 31 | E. | 9 32.2 | . . . | 4 15 44.63 | . . | 70 1 42.7 | . . |

} No ephemeris.

ARIADNE, (43).

| | | | | | | | |
|---------|----|---------|---------|------------|--------|------------|-------|
| Jan. 14 | E. | 12 40.3 | 18 29.1 | 8 16 30.97 | - 0.57 | 73 32 47.9 | - 0.9 |
| 20 | S. | 12 10.0 | 17 59.0 | 8 9 41.55 | - 0.43 | 73 18 29.6 | - 0.7 |
| 25 | P. | 11 44.6 | 17 33.6 | 8 3 56.23 | - 0.70 | 73 6 1.0 | - 3.8 |
| 31 | F. | 11 14.3 | 17 3.2 | 7 57 13.96 | - 0.48 | 72 51 14.9 | - 0.5 |
| Feb. 2 | P. | 11 4.3 | 16 53.1 | 7 55 5.45 | - 0.52 | 72 46 25.9 | - 1.6 |
| 4 | F. | 10 54.3 | 16 43.1 | 7 53 0.85 | - 0.50 | 72 41 45.8 | + 0.6 |
| 5 | S. | 10 49.4 | 16 38.2 | 7 52 0.18 | - 0.46 | 72 39 25.2 | - 3.1 |
| 10 | P. | 10 25.1 | 16 13.7 | 7 47 15.29 | - 0.55 | 72 28 30.2 | - 2.0 |

EUGENIA, (45).

| | | | | | | | |
|----------|----|---------|---------|------------|--------|------------|--------|
| Sept. 27 | F. | 11 56.7 | 17 42.9 | 0 25 59.53 | - 6.68 | 93 46 25.8 | + 35.7 |
| 28 | S. | 11 52.0 | 17 38.2 | 0 25 12.54 | - 6.60 | 93 53 5.8 | + 33.0 |
| Oct. 3 | P. | 11 28.4 | 17 14.6 | 0 21 18.96 | - 6.64 | 94 25 29.6 | + 34.9 |
| 11 | F. | 10 51.1 | 16 37.0 | 0 15 23.62 | - 6.56 | 95 11 50.8 | + 36.8 |
| 12 | P. | 10 46.4 | 16 32.2 | 0 14 41.69 | - 6.65 | 95 17 1.2 | + 34.6 |
| 13 | F. | 10 41.8 | 16 27.6 | 0 14 0.62 | - 6.59 | 95 22 6.7 | + 36.0 |
| 17 | F. | 10 23.5 | 16 19.2 | 0 11 24.49 | . . | 95 40 54.3 | . . |
| 18 | S. | 10 19.0 | 16 4.7 | 0 10 47.81 | . . | 95 45 4.3 | . . |

} No ephemeris.

HESTIA, (46).

| | | | | | | | |
|---------|----|---------|---------|-------------|--------|------------|-------|
| Mar. 21 | P. | 12 36.0 | 18 21.7 | 12 36 19.02 | + 0.51 | 93 32 57.1 | + 3.8 |
| 23 | F. | 12 26.4 | 18 12.1 | | . . | 93 20 44.5 | + 4.6 |
| 31 | F. | 11 48.3 | 17 34.1 | | . . | 92 31 6.0 | + 5.7 |
| April 4 | F. | 11 29.1 | 17 14.9 | 12 24 25.75 | + 0.72 | 92 6 31.0 | + 3.3 |
| 9 | S. | 11 5.5 | 16 51.2 | 12 20 21.43 | + 0.74 | 91 36 55.2 | + 5.6 |
| 10 | P. | 11 0.7 | 16 46.4 | 12 19 34.25 | + 0.77 | 91 31 6.4 | + 0.9 |
| 15 | E. | 10 37.3 | 16 22.8 | 12 15 49.06 | + 0.72 | 91 3 41.9 | + 0.3 |

| AGLAIA, (47). | | | | | | | | NOTES. |
|------------------|-----------|-----------------------|--|-------------------------------------|------------------|--------------------------------------|------------------|---|
| Date. | Observer. | Washington Mean Time. | Berlin Mean Time corrected for Aberration. | Apparent Right Ascension of Center. | Corr'n to Ephem. | Geocentric N. P. Distance of Center. | Corr'n to Ephem. | |
| 1876. | | h. m. | h. m. | h. m. s. | s. | ° ' " | " | |
| July 21 | F. | 11 14.7 | 17 3.8 | 19 15 42.61 | + 1.62 | 120 16 4.0 | - 6.7 | |
| 26 | S. | 10 50.7 | 16 39.7 | 19 11 26.89 | + 1.47 | 120 14 30.7 | - 9.1 | |
| PALES, (49). | | | | | | | | |
| Mar. 3 | F. | 12 41.2 | 18 21.7 | . . . | . . | 90 54 58.6 | + 12.3 | |
| 6 | E. | 12 27.1 | 18 7.6 | 11 28 13.17 | - 1.54 | 90 42 7.2 | + 12.9 | |
| 13 | P. | 11 54.3 | 17 34.8 | 11 22 59.44 | - 1.47 | 90 10 54.5 | + 14.7 | |
| 22 | E. | 11 12.5 | 16 52.7 | 11 16 29.52 | - 1.24 | 89 30 6.6 | + 14.5 | |
| VIRGINIA, (50). | | | | | | | | |
| Feb. 4 | F. | 11 51.3 | 17 37.4 | 8 50 7.53 | + 1.62 | 75 9 29.1 | + 2.2 | |
| 12 | F. | 11 12.7 | 16 58.5 | 8 42 51.17 | + 1.47 | 74 33 25.2 | + 5.2 | |
| 17 | S. | 10 48.8 | 16 34.3 | 8 38 (44.46) | + (2.17) | 74 12 19.5 | + 7.0 | |
| NEMAUSA, (51). | | | | | | | | |
| Jan. 25 | P. | 13 24.9 | 19 15.9 | 9 44 32.81 | + 1.42 | 87 36 55.3 | - 11.7 | |
| 31 | F. | 12 56.7 | 18 47.9 | 9 39 55.15 | + 1.69 | 86 57 26.0 | - 14.0 | |
| Feb. 2 | P. | 12 47.2 | 18 38.5 | 9 38 15.10 | + 1.55 | 86 42 22.3 | - 17.4 | |
| 18 | P. | 11 30.2 | 17 21.6 | 9 24 12.31 | + 1.70 | 84 17 54.6 | - 25.0 | |
| 19 | E. | 11 25.5 | 17 16.9 | 9 23 21.40 | + 1.78 | 84 7 59.3 | - 23.0 | |
| ALEXANDRA, (54). | | | | | | | | |
| Aug. 26 | F. | 12 58.8 | 18 49.3 | 23 22 3.15 | + 1.49 | 82 22 32.1 | + 17.7 | Probably 1 rev.=15".3 wrong. |
| Sept. 2 | F. | 12 24.7 | 18 15.3 | 23 15 27.76 | + 1.21 | 94 17 27.4 | + 3.3 | |
| PANDORA, (55). | | | | | | | | |
| Aug. 21 | E. | 11 30.0 | 17 19.5 | 21 33 16.33 | - 1.07 | 114 5 (53.9) | (+ 55.2) | |
| 28 | E. | 10 56.2 | 16 45.5 | 21 27 2.40 | - 1.38 | 114 9 15.7 | + 4.4 | |
| MELETE, (56). | | | | | | | | |
| Jan. 14 | E. | 11 35.7 | 17 18.9 | 7 11 44.91 | + 2.93 | 79 7 28.9 | - 4.8 | One of these probably 1 rev. = 15".3 wrong. |
| 25 | P. | 10 43.0 | 16 25.9 | 7 2 9.15 | + 2.89 | 78 37 42.5 | + 10.7 | |
| MNEMOSYNE, (57). | | | | | | | | |
| Oct. 11 | F. | 11 51.5 | . . . | 1 15 57.47 | . . | 81 59 57.7 | . . | } No ephemeris. |
| 12 | P. | 11 46.9 | . . . | 1 15 17.01 | . . | 82 9 35.4 | . . | |
| 13 | F. | 11 42.3 | . . . | 1 14 36.63 | . . | 82 19 16.1 | . . | |
| 18 | S. | 11 19.3 | . . . | 1 11 16.71 | . . | 83 10 10.8 | . . | |
| 27 | P. | 10 38.4 | . . . | 1 5 41.17 | . . | 84 31 18.8 | . . | |

CONCORDIA, (58).

| Date. | Observer. | Washington Mean Time. | | Berlin Mean Time corrected for Aberration. | | Apparent Right Ascension of Center. | | | Corr'n to Ephem. | Geocentric N. P. Distance of Center. | | | Corr'n to Ephem. |
|---------|-----------|-----------------------|------|--|------|-------------------------------------|----|-------|------------------|--------------------------------------|----|------|------------------|
| 1876. | | h. | m. | m. | s. | h. | m. | s. | s. | ° | ' | " | " |
| Dec. 15 | E. | 13 | 0.0 | 18 | 47.3 | 6 | 40 | 55.14 | - 0.75 | 74 | 5 | 25.5 | - 2.5 |
| 19 | E. | 12 | 40.6 | 18 | 28.1 | 6 | 37 | 18.30 | - 0.87 | 74 | 2 | 2.1 | - 3.1 |
| 31 | E. | 11 | 42.0 | 17 | 29.6 | 6 | 25 | 49.45 | - 0.68 | 73 | 45 | 53.2 | - 1.5 |

ELPIS, (59).

| | | | | | | | | | | | | | |
|---------|----|----|------|----|------|----|----|-------|--------|----|----|------|-------|
| Mar. 4 | S. | 13 | 17.1 | 19 | 1.9 | 12 | 10 | 30.90 | + 0.45 | 89 | 37 | 3.9 | + 2.1 |
| 5 | P. | 13 | 12.5 | 18 | 57.3 | 12 | 9 | 49.63 | + 0.47 | 89 | 29 | 49.8 | + 0.7 |
| 6 | E. | 13 | 7.8 | 18 | 52.7 | 12 | 9 | 7.88 | + 0.68 | 89 | 22 | 33.3 | + 0.8 |
| 9 | P. | 12 | 54.0 | 18 | 39.0 | 12 | 6 | 58.35 | + 0.52 | 89 | 0 | 22.8 | + 1.1 |
| 21 | P. | 11 | 57.6 | 17 | 42.6 | 11 | 57 | 50.24 | + 0.24 | 87 | 29 | 30.2 | + 1.0 |
| 31 | F. | 11 | 11.0 | 16 | 55.8 | 11 | 50 | 22.07 | + 0.52 | 86 | 17 | 12.2 | + 2.2 |
| April 1 | S. | 11 | 6.3 | 16 | 51.1 | 11 | 49 | 39.71 | + 0.50 | 86 | 10 | 22.8 | + 0.1 |
| 4 | F. | 10 | 52.4 | 16 | 37.1 | 11 | 47 | 36.86 | + 0.65 | 85 | 50 | 41.8 | + 2.8 |

DANAE, (61).

| | | | | | | | | | | | | | |
|---------|----|----|------|----|------|---|----|-------|--------|----|----|------|-------|
| Oct. 17 | F. | 12 | 35.0 | 18 | 22.0 | 2 | 23 | 26.97 | - 1.89 | 48 | 48 | 48.0 | - 3.8 |
| 18 | S. | 12 | 30.2 | 18 | 17.3 | 2 | 22 | 22.74 | - 1.74 | 48 | 46 | 53.5 | - 0.2 |
| 27 | P. | 11 | 44.8 | 17 | 32.0 | 2 | 12 | 18.19 | - 1.85 | 48 | 43 | 4.4 | - 0.4 |
| Nov. 1 | E. | 11 | 19.4 | 17 | 6.5 | 2 | 6 | 38.86 | - 1.57 | 48 | 51 | 30.6 | - 0.7 |
| 5 | E. | 10 | 59.3 | 16 | 46.4 | 2 | 2 | 14.59 | - 1.73 | 49 | 3 | 22.0 | + 2.3 |
| 7 | S. | 10 | 49.3 | 16 | 36.4 | 2 | 0 | 7.02 | - 1.61 | 49 | 10 | 46.3 | - 1.2 |
| 22 | F. | 9 | 37.1 | 15 | 23.6 | 1 | 46 | 48.03 | . . | 50 | 32 | 37.1 | . . |

No ephemeris.

AUSONIA, (63).

| | | | | | | | | | | | | | |
|---------|----|----|------|----|------|----|----|-------|--------|----|----|------|--------|
| Mar. 9 | P. | 13 | 10.1 | 19 | 0.3 | 12 | 23 | 13.07 | +19.88 | 94 | 36 | 1.9 | + 35.7 |
| 21 | P. | 12 | 11.6 | 18 | 2.2 | 12 | 11 | 48.38 | +19.79 | 96 | 3 | 32.4 | + 44.6 |
| 31 | F. | 11 | 22.2 | 17 | 12.9 | 12 | 1 | 44.49 | +19.03 | 95 | 27 | 3.6 | + 52.3 |
| April 1 | S. | 11 | 17.3 | 17 | 8.0 | 12 | 0 | 45.68 | +18.74 | 95 | 23 | 10.0 | + 49.1 |
| 4 | F. | 11 | 2.7 | 16 | 53.4 | 11 | 57 | 54.23 | +18.71 | 95 | 11 | 45.4 | + 55.0 |
| 5 | S. | 10 | 57.8 | 16 | 48.4 | 11 | 56 | 58.46 | +18.46 | 95 | 7 | 54.9 | + 52.9 |
| 6 | P. | 10 | 53.0 | 16 | 43.6 | 11 | 56 | 3.71 | +18.32 | 95 | 4 | 7.6 | + 52.5 |
| 8 | F. | 10 | 43.3 | 16 | 33.9 | 11 | 54 | 17.38 | +18.21 | 94 | 56 | 36.9 | + 49.5 |
| 10 | P. | 10 | 33.8 | 16 | 24.4 | 11 | 52 | 35.07 | +17.71 | 94 | 49 | 23.5 | + 53.2 |

ANGELINA, (64).

| | | | | | | | | | | | | | |
|---------|----|----|------|----|------|----|----|-------|--------|----|----|------|-------|
| Aug. 26 | F. | 12 | 51.0 | 18 | 36.7 | 23 | 14 | 16.24 | + 0.32 | 93 | 45 | 13.0 | - 5.5 |
| 28 | E. | 12 | 41.6 | 18 | 27.3 | 23 | 12 | 42.11 | + 0.36 | 93 | 54 | 16.8 | - 2.5 |

CYBELE, (65).

| | | | | | | | | | | | | | | |
|----------|----|----|------|----|------|---------|-------|----|------|------|----|------|---|-----|
| Sept. 27 | F. | 12 | 5.0 | 17 | 46.1 | | . . | 88 | 51 | 44.0 | — | 2.7 | | |
| Oct. 3 | P. | 11 | 37.3 | 17 | 18.3 | 0 30 | 10.96 | + | 1.44 | 89 | 21 | 27.8 | — | 6.0 |
| 12 | P. | 10 | 56.1 | 16 | 36.8 | 0 24 | 23.47 | + | 1.41 | 90 | 3 | 30.7 | — | 6.7 |
| 13 | F. | 10 | 51.6 | 16 | 32.3 | 0 23 | 46.84 | + | 1.51 | 90 | 7 | 54.8 | — | 4.9 |
| 17 | F. | 10 | 33.5 | 16 | 14.0 | 0 21 | 25.45 | + | 1.59 | 90 | 24 | 33.7 | — | 8.8 |
| 18 | S. | 10 | 29.1 | 16 | 9.5 | 0 20 | 51.45 | + | 1.42 | 90 | 28 | 34.7 | — | 5.9 |

MAIA, (66).

| Date. | Observer. | Washington Mean Time. | Berlin Mean Time corrected for Aberration. | Apparent Right Ascension of Center. | Corr'n to Ephem. | Geocentric N. P. Distance of Center. | Corr'n to Ephem. |
|-----------------|-----------|--------------------------|--|---|---------------------|--|---------------------|
| | | h. m. | h. m. | h. m. s. | s. | ° ' " | " |
| 1876. Nov. 1 | E. | 10 17.6 | . . . | 1 4 37.62 | . . | . . . | . . |
| 7 | S. | 9 50.4 | . . . | 1 0 57.05 | . . | 81 22 41.7 | . . |

NOTES.

} No ephemeris.

ASIA, (67).

| | | | | | | | |
|----------|----|---------|---------|-------------|--------|-------------|--------|
| April 18 | P. | 13 4.7 | 18 55.4 | 14 55 23.82 | — 4.08 | 103 44 59.8 | — 13.3 |
| 22 | P. | 12 45.7 | 18 36.6 | 14 52 12.58 | — 4.32 | . . . | . . |
| 25 | S. | 12 31.4 | 18 22.4 | 14 49 40.18 | — 3.97 | 102 54 21.0 | — 12.4 |
| 26 | P. | 12 26.6 | 18 17.6 | 14 48 47.57 | — 4.23 | 102 46 51.9 | — 13.3 |
| May 3 | S. | 11 52.8 | 17 44.0 | 14 42 29.04 | — 4.21 | 101 54 0.9 | — 13.0 |
| 4 | P. | 11 48.0 | 17 39.2 | 14 41 34.20 | — 4.17 | 101 46 28.1 | — 13.6 |
| 13 | E. | 11 4.5 | 16 55.7 | 14 33 30.68 | — 3.97 | 100 40 52.7 | — 11.6 |

HESPERIA, (69).

| | | | | | | | |
|---------|----|---------|---------|------------|--------|------------|-------|
| Jan. 14 | E. | 11 22.4 | 17 11.6 | 6 58 26.02 | — 0.09 | 80 55 8.3 | + 1.0 |
| 21 | P. | 10 49.5 | 16 38.6 | 6 53 2.51 | + 0.04 | 80 30 20.1 | + 0.8 |
| 25 | P. | 10 31.2 | 16 20.2 | 6 50 19.08 | . . | 80 13 57.2 | . . |

No ephemeris.

NIOBE, (71).

| | | | | | | | |
|---------|----|---------|---------|------------|--------|------------|--------|
| Nov. 24 | S. | 11 51.5 | 17 34.3 | 4 9 22.68 | + 0.80 | 37 25 9.6 | + 27.6 |
| 27 | S. | 11 35.6 | 17 18.5 | 4 5 18.95 | + 1.03 | 37 36 0.3 | + 27.4 |
| Dec. 3 | E. | 11 4.1 | 16 47.0 | 3 57 21.21 | + 0.86 | 38 5 25.3 | + 28.1 |
| 5 | S. | 10 53.6 | 16 36.5 | 3 54 47.71 | + 0.73 | 38 17 24.3 | + 28.8 |
| 7 | E. | 10 43.3 | 16 26.2 | 3 52 18.79 | + 1.10 | 38 30 22.3 | + 27.2 |
| 12 | F. | 10 17.8 | 16 0.6 | 3 46 27.66 | + 1.13 | 39 7 1.6 | + 30.3 |
| 15 | E. | 10 2.9 | 15 45.7 | 3 43 15.20 | + 1.04 | 39 31 26.0 | + 28.6 |

FERONIA, (72).

| | | | | | | | |
|--------|----|---------|---------|------------|---------|------------|---------|
| Nov. 5 | E. | 13 18.9 | 19 9.2 | 4 22 10.50 | + 58.68 | . . . | . . |
| 22 | F. | 11 54.6 | 17 45.1 | 4 4 43.56 | + 60.21 | 74 29 55.0 | — 96.1 |
| 24 | S. | 11 44.7 | 17 35.2 | 4 2 33.74 | + 60.16 | 74 39 58.7 | — 104.7 |
| Dec. 3 | E. | 10 59.9 | 16 50.1 | 3 53 12.06 | + 58.66 | 75 22 7.2 | — 109.1 |

GALATEA, (74).

| | | | | | | | |
|----------|----|---------|---------|------------|--------|------------|--------|
| Sept. 27 | F. | 12 32.9 | 18 25.3 | 1 2 19.44 | — 2.04 | 82 28 52.2 | + 12.6 |
| 28 | S. | 12 28.4 | 18 20.8 | 1 1 39.78 | — 2.19 | 82 35 49.9 | + 11.2 |
| 29 | P. | 12 23.8 | 18 16.2 | 1 0 59.65 | — 2.19 | 82 42 56.0 | + 12.9 |
| Oct. 3 | P. | 12 5.2 | 17 57.7 | 0 58 14.64 | — 2.01 | 83 11 56.4 | + 13.9 |
| 12 | P. | 11 23.5 | 17 15.9 | 0 51 56.10 | — 2.07 | 84 18 30.1 | + 12.2 |
| 13 | F. | 11 19.0 | 17 11.4 | 0 51 15.49 | — 1.82 | 84 25 54.3 | + 12.4 |
| 17 | F. | 11 0.6 | 16 52.9 | 0 48 38.11 | — 1.85 | 84 54 29.1 | + 17.8 |
| 18 | S. | 10 56.1 | 16 48.4 | 0 48 0.67 | — 1.85 | 85 1 19.5 | + 14.5 |
| 27 | P. | 10 15.9 | 16 7.9 | 0 43 11.65 | — 1.89 | 85 57 19.0 | + 11.6 |

DIANA, (78).

| Date. | Observer. | Washington Mean Time. | Berlin Mean Time corrected for Aberration. | Apparent Right Ascension of Center. | Corr'n to Ephem. | Geocentric N. P. Distance of Center. | Corr'n to Ephem. |
|----------|-----------|--------------------------|--|---|---------------------|--|---------------------|
| 1876. | | h. m. | h. m. | h. m. s. | s. | ° ' " | " |
| April 10 | P. | 12 56.5 | 18 45.2 | 14 15 40.20 | - 1.76 | 116 20 41.0 | - 8.6 |
| 19 | E. | 12 12.0 | 18 0.8 | 14 6 38.16 | - 1.47 | 116 3 46.5 | - 3.9 |
| 22 | P. | 11 57.1 | 17 45.9 | 14 3 32.60 | - 1.76 | 115 54 43.9 | - 8.1 |
| 26 | P. | 11 37.4 | 17 26.1 | 13 59 28.17 | - 1.58 | 115 40 34.6 | - 6.1 |
| May 3 | S. | 11 3.1 | 16 51.7 | 13 52 40.77 | - 1.33 | 115 10 47.1 | - 9.4 |
| 4 | P. | 10 58.3 | 16 46.8 | 13 51 45.52 | - 1.57 | 115 6 9.8 | - 8.2 |
| 13 | E. | 10 15.4 | 16 3.5 | 13 44 20.88 | - 1.23 | 114 21 50.4 | - 8.4 |

NOTES.

BEATRIX, (83).

| | | | | | | | |
|--------|----|---------|---------|------------|--------|------------|-------|
| Feb. 2 | P. | 13 8.4 | 18 59.2 | 9 59 36.44 | + 0.23 | 69 9 56.3 | + 3.8 |
| 4 | F. | 12 58.7 | 18 49.6 | 9 57 41.81 | + 0.45 | 69 0 10.8 | + 1.8 |
| 17 | S. | 11 54.3 | 17 45.3 | 9 44 21.04 | + 0.32 | 68 5 40.5 | + 4.6 |
| 18 | P. | 11 49.3 | 17 40.3 | 9 43 18.65 | + 0.19 | 68 2 20.5 | + 3.1 |
| 19 | E. | 11 44.4 | 17 35.4 | 9 42 17.04 | + 0.25 | 67 59 11.1 | + 2.7 |
| Mar. 3 | F. | 10 41.0 | 16 31.6 | 9 30 6.79 | + 0.61 | 67 34 32.7 | + 4.3 |
| 4 | S. | 10 36.4 | 16 27.0 | 9 29 18.83 | + 0.35 | 67 33 56.8 | + 2.4 |
| 5 | P. | 10 31.7 | 16 22.3 | 9 28 32.64 | + 0.30 | 67 33 32.7 | + 1.4 |

CLIO, (84).

| | | | | | | | |
|----------|----|---------|---------|-------------|--------|------------|--------|
| Sept. 29 | P. | 10 42.8 | 16 37.5 | 23 19 48.08 | +39.10 | 81 58 42.5 | -353.6 |
| Oct. 2 | S. | 10 28.8 | 16 23.4 | 23 17 27.62 | +38.56 | 81 58 9.2 | -350.9 |
| 3 | P. | 10 24.0 | 16 18.6 | 23 16 44.09 | +38.15 | 81 58 3.5 | -350.8 |

IO, (85).

| | | | | | | | |
|---------|----|---------|---------|------------|--------|------------|--------|
| Jan. 25 | P. | 13 14.2 | 18 57.3 | 9 33 47.83 | +23.89 | 91 31 42.8 | + 77.4 |
| Feb. 2 | P. | 12 36.3 | 18 20.1 | 9 27 24.19 | +23.72 | 91 1 50.6 | + 76.3 |
| 16 | F. | 11 29.6 | 17 13.1 | 9 15 44.30 | +23.61 | 89 47 57.9 | + 73.9 |
| 19 | E. | 11 15.5 | 16 58.9 | 9 13 19.88 | +23.52 | 89 29 31.8 | + 78.0 |

THISBE, (88).

| | | | | | | | |
|---------|----|---------|---------|------------|-----|------------|-----|
| Nov. 24 | S. | 10 11.7 | 15 58.3 | 2 29 25.28 | . . | 69 0 35.5 | . . |
| 27 | S. | 9 58.0 | 15 44.5 | 2 27 26.99 | . . | 69 17 15.9 | . . |

} No ephemeris.

JULIA, (89).

| | | | | | | | |
|---------|----|---------|---------|------------|--------|------------|--------|
| Jan. 14 | E. | 10 36.5 | 16 24.4 | 6 12 18.66 | - 6.07 | 53 21 22.0 | + 64.4 |
|---------|----|---------|---------|------------|--------|------------|--------|

ANTIOPE, (90).

| | | | | | | | |
|----------|----|---------|---------|---------------|-----------|-------------|--------|
| April 25 | S. | 13 14.9 | 19 0.7 | 15 33 20.44 | . . | 107 50 39.8 | . . |
| May 4 | P. | 12 32.9 | 18 19.0 | 15 26 39.31 | + 3.58 | 107 31 37.0 | + 15.1 |
| 13 | E. | 11 50.2 | 17 36.5 | 15 19 19.71 | + 3.66 | 107 10 21.7 | + 15.3 |
| 27 | S. | 10 44.0 | 16 30.3 | 15 8 9.49 | + 3.44 | 106 37 44.9 | + 13.8 |
| 31 | S. | 10 25.5 | 16 11.7 | 15 5 19.30(?) | + 3.97(?) | 106 29 40.4 | + 13.8 |

No ephemeris.

ÆGINA, (91).

| Date. | Observer. | Washington Mean Time. | Berlin Mean Time corrected for Aberration. | Apparent Right Ascension of Center. | Corr'n to Ephem. | Geocentric N. P. Distance of Center. | Corr'n to Ephem. |
|------------------|-----------|--------------------------|--|---|---------------------|--|---------------------|
| | | h. m. | h. m. | h. m. s. | s. | ° ' " | " |
| 1876. Jan. 14 | E. | 13 31.9 | 19 21.9 | 9 8 12.48 | -13.56 | 70 8 55.4 | - 62.8 |
| 20 | S. | 13 3.1 | 18 53.2 | 9 2 51.95 | -13.76 | 69 46 20.0 | - 64.9 |
| 21 | P. | 12 58.1 | 18 48.2 | 9 1 54.96 | -14.06 | . . . | . . . |
| 25 | P. | 12 38.5 | 18 28.6 | 8 58 1.42 | -14.28 | 69 27 39.6 | - 61.3 |
| Feb. 2 | P. | 11 59.0 | 17 49.1 | 8 50 1.08 | -14.27 | 68 59 54.8 | - 60.6 |
| 4 | F. | 11 49.2 | 17 39.3 | 8 48 2.38 | -14.12 | 68 53 50.7 | - 50.8 |
| 12 | F. | 11 10.3 | 17 1.1 | 8 40 32.21 | -13.80 | 68 32 40.9 | - 57.5 |
| 16 | F. | 10 51.2 | 16 40.9 | 8 37 9.93 | -13.82 | 68 24 53.2 | - 50.0 |

NOTES.

UNDINA, (92).

| | | | | | | | |
|---------|----|---------|---------|------------|--------|------------|-------|
| Feb. 17 | S. | 11 27.2 | 17 7.9 | 9 17 14.12 | + 0.13 | 65 46 13.6 | + 2.1 |
| 18 | P. | 11 22.5 | 17 3.1 | 9 16 28.97 | 0.00 | 65 41 55.4 | - 0.3 |
| 19 | E. | 11 17.8 | 16 58.4 | 9 15 44.67 | + 0.26 | 65 37 51.0 | + 4.4 |

AURORA, ? (94).

| | | | | | | | |
|----------|----|---------|---------|-------------|--------|-------------|--------|
| April 19 | E. | 11 32.7 | 17 14.4 | 13 27 13.84 | +17.26 | 103 49 44.1 | +117.2 |
|----------|----|---------|---------|-------------|--------|-------------|--------|

ÆGLE, (96).

| | | | | | | | |
|----------|----|---------|---------|-------------|--------|------------|-------|
| Sept. 28 | S. | 11 11.8 | 16 53.2 | 23 44 56.08 | - 0.38 | 75 15 19.7 | - 2.0 |
| 29 | P. | 11 7.1 | 16 48.5 | 23 44 6.95 | - 0.53 | 75 18 32.0 | + 5.9 |
| Oct. 3 | P. | 10 48.1 | 16 29.4 | 23 40 55.32 | - 0.39 | 75 31 38.1 | + 4.7 |
| 12 | P. | 10 6.1 | 15 47.2 | 23 34 18.63 | . . | 76 4 43.8 | . . |
| 13 | F. | 10 1.6 | 15 42.7 | 23 33 38.53 | . . | 76 8 42.9 | . . |

{ No ephemeris.

HELENA, ? (101).

| | | | | | | | |
|---------|----|---------|---------|-------------|--------|-------------|--------|
| July 21 | F. | 12 29.5 | 18 20.9 | 20 30 45.87 | +31.96 | 121 52 40.8 | -164.3 |
| Aug. 9 | E. | 10 54.7 | 16 45.9 | 20 10 38.47 | +32.05 | 121 12 54.8 | + 10.1 |

MIRIAM, (102).

| | | | | | | | |
|--------|----|---------|---------|-------------|--------|-------------|--------|
| May 29 | E. | 12 18.7 | 18 6.9 | 16 50 59.39 | - 0.16 | 107 9 14.0 | -179.1 |
| June 1 | P. | 12 4.0 | 17 52.3 | 16 48 8.57 | - 0.41 | 106 58 52.3 | -176.5 |

HERA, (103).

| | | | | | | | |
|--------|----|---------|---------|-------------|--------|-------------|-------|
| May 27 | S. | 12 15.2 | 18 3.6 | 16 39 34.51 | - 0.30 | 103 59 57.6 | - 1.2 |
| 29 | E. | 12 5.5 | 17 53.9 | 16 37 46.70 | - 0.18 | 103 57 23.2 | - 3.8 |
| June 1 | P. | 11 51.1 | 17 39.5 | 16 35 3.79 | - 0.40 | 103 54 8.9 | - 0.5 |

| DIONE, (106). | | | | | | | | NOTES. |
|---------------------|-----------|--------------------------|--|---|---------------------|--|---------------------|--------|
| Date. | Observer. | Washington Mean Time. | Berlin Mean Time corrected for Aberration. | Apparent Right Ascension of Center. | Corr'n to Ephem. | Geocentric N. P. Distance of Center. | Corr'n to Ephem. | |
| | | h. m. | h. m. | h. m. s. | s. | ° ' " | " | |
| 1876. | | | | | | | | |
| Feb. 2 | P. | 13 36.5 | 19 18.2 | 10 27 37.52 | - 5.16 | 73 26 10.6 | - 15.2 | |
| 16 | F. | 12 30.8 | 18 12.7 | 10 17 8.40 | - 5.11 | 72 20 6.6 | - 16.0 | |
| 17 | S. | 12 26.3 | 18 8.2 | 10 16 21.11 | - 4.95 | 72 15 45.6 | - 9.0 | |
| 18 | P. | 12 21.5 | 18 3.4 | 10 15 33.56 | - 4.96 | 72 11 14.5 | - 15.7 | |
| Mar. 3 | F. | 11 15.7 | 16 57.2 | 10 4 45.06 | - 4.81 | 71 18 2.7 | - 5.7 | |
| 6 | E. | 11 1.7 | 16 43.0 | 10 2 37.41 | - 4.58 | . . . | . . | |
| FELICITAS, ? (109). | | | | | | | | |
| April 25 | S. | 12 7.0 | 17 48.5 | 14 25 13.46 | -12.37 | 111 15 53.0 | + 31.1 | |
| LYDIA, (110). | | | | | | | | |
| Aug. 26 | F. | 12 53.9 | 18 43.0 | 23 17 11.79 | - 0.52 | 105 6 36.4 | + 7.5 | |
| 28 | E. | 12 44.5 | 18 33.6 | 23 15 35.22 | - 0.58 | 105 16 41.1 | + 7.0 | |
| AMALTHEA, (113). | | | | | | | | |
| Oct. 11 | F. | 10 59.5 | 16 47.9 | 0 23 45.34 | -47.69 | 95 29 58.2 | +315.6 | |
| 12 | P. | 10 54.6 | 16 43.0 | 0 22 55.64 | -47.60 | 95 34 54.9 | +311.1 | |
| 13 | F. | 10 49.9 | 16 38.3 | 0 22 6.80 | -47.37 | 95 39 44.5 | +309.5 | |
| 18 | S. | 10 26.5 | 16 14.7 | 0 18 15.80 | -46.32 | 96 1 11.8 | +298.8 | |
| SIRONA, (116). | | | | | | | | |
| Oct. 11 | F. | 12 42.2 | 18 27.6 | 2 6 45.84 | + 7.66 | 80 31 49.2 | - 28.1 | |
| 12 | P. | 12 37.4 | 18 22.9 | 2 5 57.01 | + 7.47 | 80 35 28.4 | - 35.1 | |
| 13 | F. | 12 32.6 | 18 18.1 | 2 5 7.96 | + 7.69 | 80 39 14.9 | - 36.9 | |
| 17 | F. | 12 13.6 | 17 59.2 | 2 1 45.58 | + 7.65 | 80 54 47.8 | - 32.0 | |
| 18 | S. | 12 8.8 | 17 54.4 | 2 0 53.95 | + 7.65 | 80 58 37.2 | - 36.9 | |
| 27 | P. | 11 25.5 | 17 11.2 | 1 53 2.33 | + 7.40 | 81 33 25.0 | - 38.0 | |
| Nov. 1 | E. | 11 1.7 | 16 47.3 | 1 48 45.59 | + 7.92 | . . . | . . | |
| 5 | E. | 10 42.6 | 16 28.2 | 1 45 27.55 | + 7.55 | 82 5 13.9 | - 35.8 | |
| 7 | S. | 10 33.2 | 16 18.7 | 1 43 52.37 | + 7.39 | 82 11 32.2 | - 36.8 | |
| LOMIA, ? (117). | | | | | | | | |
| Aug. 26 | F. | 12 39.1 | 18 24.6 | 23 2 23.87 | + 9.40 | 100 22 34.0 | -101.5 | |
| PEITHO, (118). | | | | | | | | |
| April 4 | F. | 12 28.8 | 18 17.4 | 13 24 9.23 | -24.36 | 92 12 46.1 | -198.4 | |
| 10 | P. | 11 59.1 | 17 47.6 | 13 18 10.56 | -24.50 | 91 53 35.2 | -201.6 | |
| 15 | E. | 11 34.6 | 17 23.0 | 13 13 15.51 | -24.23 | 91 39 33.8 | -199.8 | |
| 19 | E. | 11 15.1 | 17 3.4 | 13 9 27.77 | -23.76 | 91 30 4.4 | -194.5 | |
| 20 | F. | 11 10.2 | 16 58.5 | 13 8 32.14 | -23.98 | . . . | . . | |
| 25 | S. | 10 46.1 | 16 34.2 | 13 4 8.62 | -23.12 | 91 19 8.1 | -192.2 | |

ALTHÆA, (119).

| Date. | Observer. | Washington Mean Time. | Berlin Mean Time corrected for Aberration. | Apparent Right Ascension of Center. | Corr'n to Ephem. | Geocentric N. P. Distance of Center. | Corr'n to Ephem. |
|---------|-----------|--------------------------|--|---|---------------------|--|---------------------|
| 1876. | | h. m. | h. m. | h. m. s. | s. | ° ' " | " |
| April 4 | F. | 11 22.8 | 17 9.6 | 12 18 4.09 | - 76.24 | 94 24 9.6 | - 410.6 |
| 5 | S. | 11 18.0 | 17 4.8 | 12 17 17.21 | - 76.13 | 94 16 52.7 | - 414.1 |
| 9 | S. | 10 59.4 | 16 46.1 | 12 14 15.82 | - 75.54 | 93 48 31.9 | - 407.7 |
| 10 | P. | 10 54.6 | 16 41.3 | 12 13 32.09 | - 75.45 | 93 41 34.0 | - 407.3 |
| 12 | P. | 10 45.3 | 16 31.9 | 12 12 7.74 | - 74.47 | 93 27 57.0 | - 400.3 |

VELLEDA, (126).

| | | | | | | | |
|---------|----|---------|---------|------------|---------|------------|--------|
| Nov. 27 | S. | 11 29.8 | 17 20.2 | 3 59 29.78 | + 22.09 | 66 2 42.3 | - 80.7 |
| Dec. 5 | S. | 10 50.0 | 16 40.2 | 3 51 9.53 | + 21.46 | 66 21 6.5 | - 85.3 |
| 7 | E. | 10 40.2 | 16 30.4 | 3 49 14.03 | + 21.17 | 66 25 54.7 | - 88.2 |

NEMESIS, (128).

| | | | | | | | |
|----------|----|---------|---------|-------------|---------|-------------|--------|
| Sept. 28 | S. | 10 43.7 | 16 33.2 | 23 16 46.89 | + 13.03 | 105 46 40.6 | - 80.1 |
| 29 | P. | 10 39.2 | 16 28.7 | 23 16 5.23 | . . | 105 48 41.0 | . . |

No ephemeris.

ANTIGONE, (129).

| | | | | | | | |
|--------|----|---------|---------|------------|---------|------------|---------|
| Dec. 6 | P. | 12 7.5 | 17 48.7 | 5 12 48.78 | + 73.70 | 81 55 51.2 | - 196.5 |
| 12 | F. | 11 38.7 | 17 19.9 | 5 7 38.91 | + 73.67 | 81 54 55.2 | - 198.4 |
| 13 | S. | 11 34.0 | 17 15.2 | 5 6 47.21 | + 73.40 | 81 54 19.5 | - 204.1 |
| 15 | E. | 11 24.4 | 17 5.6 | 5 5 4.98 | + 73.45 | 81 53 4.2 | - 201.0 |
| 19 | E. | 11 5.3 | 16 46.4 | 5 1 43.40 | + 72.69 | 81 49 13.4 | - 201.8 |

ELECTRA, (130).

| | | | | | | | |
|----------|----|---------|---------|-------------|---------|-------------|--------|
| Sept. 28 | S. | 10 51.8 | 16 40.4 | 23 24 52.47 | - 51.30 | 112 13 0.8 | + 10.4 |
| 29 | P. | 10 47.3 | 16 35.9 | 23 24 20.76 | - 51.06 | 112 22 30.9 | + 9.5 |

CYRENE? (133).

| | | | | | | | |
|--------|----|---------|---------|------------|---------|------------|--------|
| Feb. 2 | P. | 10 35.6 | 16 17.6 | 7 26 16.23 | - 11.16 | 63 45 50.8 | - 40.0 |
|--------|----|---------|---------|------------|---------|------------|--------|

VIBILIA, (144).

| | | | | | | | |
|---------|----|-------|-------|------------|-----|------------|-----|
| Nov. 24 | S. | . . . | . . . | 4 56 45.88 | . . | 68 19 0.9 | . . |
| 27 | S. | . . . | . . . | 4 53 36.99 | . . | . . . | . . |
| Dec. 2 | P. | . . . | . . . | 4 48 15.62 | . . | 68 11 34.7 | . . |
| 3 | E. | . . . | . . . | 4 47 11.26 | . . | 68 10 47.9 | . . |
| 5 | S. | . . . | . . . | 4 45 3.03 | . . | 68 9 15.6 | . . |
| 6 | P. | . . . | . . . | 4 43 59.31 | . . | 68 8 29.7 | . . |
| 7 | E. | . . . | . . . | 4 42 56.09 | . . | 68 7 46.1 | . . |
| 8 | F. | . . . | . . . | 4 41 53.55 | . . | 68 7 7.7 | . . |
| 12 | F. | . . . | . . . | 4 37 49.74 | . . | 68 4 23.2 | . . |
| 13 | S. | . . . | . . . | 4 36 51.12 | . . | 68 3 43.6 | . . |
| 19 | E. | . . . | . . . | 4 31 23.57 | . . | 67 59 46.4 | . . |
| 21 | S. | . . . | . . . | 4 29 45.22 | . . | 67 58 23.9 | . . |
| 31 | E. | . . . | . . . | 4 23 16.39 | . . | 67 50 8.2 | . . |

No ephemeris.

HILDA, (153).

| Date. | Observer. | Washington Mean Time. | Berlin Mean Time corrected for Aberration. | Apparent Right Ascension of Center. | Corr'n to Ephem. | Geocentric N. P. Distance of Center. | Corr'n to Ephem. | NOTES. |
|------------------|-----------|--------------------------|--|---|---------------------|--|---------------------|-------------------------------------|
| | | h. m. | h. m. | h. m. s. | s. | ° ' " | " | |
| 1876. Dec. 31 | E. | . . . | . . . | 5 37 57.15 | . . | 73 0 26.0 | . . | Parallax not applied. No ephemeris. |

UNA, (160).

| | | | | | | | | |
|---------|----|-------|-------|-------------|-----|------------|-----|---------------------------------------|
| Mar. 3 | F. | . . . | . . . | 10 10 24.18 | . . | 75 3 29.4 | . . | } Parallax not applied. No ephemeris. |
| 21 | P. | . . . | . . . | 9 57 49.64 | . . | . . . | . . | |
| 22 | F. | . . . | . . . | 9 57 19.96 | . . | 74 27 45.3 | . . | |
| 23 | F. | . . . | . . . | . . . | . . | 74 27 19.7 | . . | |
| April 4 | F. | . . . | . . . | . . . | . . | 74 30 28.3 | . . | |
| 19 | E. | . . . | . . . | 9 53 20.57 | . . | 74 59 25.0 | . . | |

RHODOPE, (166).

| | | | | | | | | |
|----------|----|-------|-------|--------------|-----|--------------|-----|---------------------------------------|
| Aug. 26 | F. | . . . | . . . | 21 23 0.01 | . . | 110 55 42.5 | . . | } Parallax not applied. No ephemeris. |
| Sept. 29 | P. | . . . | . . . | 21 10 16.75? | . . | 113 56 37.4? | . . | |

CATALOGUE
OF
MISCELLANEOUS STARS
OBSERVED WITH THE
TRANSIT CIRCLE.
1876.

CATALOGUE

OF

MISCELLANEOUS STARS

OBSERVED IN

THE YEAR 1876

WITH

THE TRANSIT CIRCLE.

[NOTE.—Stars designated simply by hour and number (*e.g.*, VIII, 2) are from a list of zero-stars, selected by Professor Hall, to be used in a revision of the positions of the Washington Zones. "Transit Zones" and "Mural Zones" refer to the "Washington Zones, 1846-1849." The magnitudes are the means of the estimates in the individual observations.]

| Number. | Name of Star. | Magnitude. | Mean Right Ascension, 1876.0. | | | Annual Precession, 1876. | Mean year. | No. of obs. | Mean N. P. Distance, 1876.0. | | | Annual Precession, 1876. | Mean year. | No. of obs. |
|---------|-------------------------------------|------------|-------------------------------|---|-------|--------------------------|------------|-------------|------------------------------|---|-------|--------------------------|------------|-------------|
| | | | h. m. s. | | s. | | | | ° ' " | | " | | | |
| 1 | 4 Ceti | | 0 1 23.00 | + | 3.072 | 6.9 | 4 | 4 | 93 14 21.2 | — | 20.05 | 6.9 | 4 | 4 |
| 2 | 5 Ceti | | 1 51.14 | | 3.072 | 6.9 | 4 | 4 | 93 8 16.2 | | 20.05 | 6.9 | 4 | 4 |
| 3 | B. A. C. 54 | 5.0 | 11 9.13 | | 3.152 | 6.9 | 3 | 3 | 39 15 20.5 | | 20.03 | 6.9 | 3 | 3 |
| 4 | B. A. C. 69 | | 14 43.92 | | 3.001 | 6.9 | 2 | 2 | 129 55 37.8 | | 20.02 | 6.9 | 2 | 2 |
| 5 | B. A. C. 78 | | 17 29.91 | | 3.169 | 7.0 | 2 | 2 | 46 25 21.7 | | 20.00 | 7.0 | 2 | 2 |
| 6 | Groombridge 63 | | 0 18 48.00 | + | 3.177 | 7.0 | 2 | 2 | 46 21 45.4 | — | 19.98 | 7.0 | 2 | 2 |
| 7 | Lalande 512 | | 19 2.85 | | 3.075 | 6.8 | 3 | 3 | 88 44 49.8 | | 19.98 | 6.8 | 3 | 3 |
| 8 | Lacaille 81 | | 19 13.95 | | 2.979 | 6.9 | 1 | 1 | 129 56 42.6 | | 19.95 | 6.9 | 1 | 1 |
| 9 | B. A. C. 100 | | 21 34.25 | | 3.193 | 7.0 | 2 | 2 | 46 17 30.1 | | 19.97 | 7.0 | 2 | 2 |
| 10 | B. A. C. 136 ¹ | | 27 38.99 | | 2.957 | 6.9 | 3 | 3 | 125 40 9.8 | | 19.91 | 6.9 | 3 | 3 |
| 11 | B. A. C. 136 ² | | 0 27 39.15 | + | 2.957 | 6.9 | 3 | 3 | 125 40 15.9 | — | 19.91 | 6.9 | 3 | 3 |
| 12 | B. A. C. 154 | 6.0 | 30 29.05 | | 4.306 | 6.8 | 1 | 1 | 8 11 28.7 | | 19.88 | 6.8 | 1 | 1 |
| 13 | B. A. C. 166 | 3.0 | 32 42.02 | | 3.183 | 6.3 | 5 | 5 | 59 49 5.4 | | 19.85 | 6.3 | 5 | 5 |
| 14 | B. A. C. 192 | | 36 44.86 | | 2.899 | 6.9 | 3 | 3 | 129 8 37.9 | | 19.80 | 6.9 | 3 | 3 |
| 15 | B. A. C. 202 | | 38 12.23 | | 2.892 | 6.9 | 3 | 3 | 129 6 20.4 | | 19.78 | 6.9 | 3 | 3 |
| 16 | Weisse (2) 1062 | | 0 42 27.11 | + | 3.282 | 6.9 | 2 | 2 | 49 35 37.9 | — | 19.71 | 6.9 | 2 | 2 |
| 17 | B. A. C. 227 | | 42 59.06 | | 3.284 | 6.9 | 2 | 2 | 49 35 48.7 | | 19.70 | 6.9 | 2 | 2 |
| 18 | Weisse 753 | 9.0 | 44 39.42 | | 3.085 | 6.7 | 3 | 3 | 87 12 13.0 | | 19.67 | 6.7 | 2 | 2 |
| 19 | B. A. C. 237 | 6.0 | 44 55.32 | | 3.085 | 6.7 | 3 | 3 | 87 17 16.4 | | 19.67 | 6.7 | 2 | 2 |
| 20 | B. A. C. 259 | | 49 52.53 | | 3.297 | 6.7 | 4 | 4 | 52 10 25.9 | | 19.58 | 6.7 | 4 | 4 |
| 21 | Schjellerup 337 | 8.0 | 0 51 54.88 | + | 3.091 | 6.7 | 3 | 3 | 86 22 24.9 | — | 19.54 | 6.7 | 3 | 3 |
| 22 | Durch. 3°, 133 | 7.8 | 52 18.38 | | 3.091 | 6.7 | 3 | 3 | 86 27 51.2 | | 19.53 | 6.7 | 3 | 3 |
| 23 | B. A. C. 272 | | 52 37.78 | | 2.896 | 6.9 | 3 | 3 | 120 1 41.1 | | 19.53 | 6.9 | 3 | 3 |
| 24 | B. A. C. 289 | | 56 30.98 | | 2.867 | 6.9 | 3 | 3 | 122 13 11.0 | | 19.45 | 6.9 | 3 | 3 |
| 25 | Weisse 982 | 7.0 | 57 16.24 | | 3.099 | 6.9 | 3 | 3 | 85 25 49.9 | | 19.43 | 6.9 | 3 | 3 |

| Number. | Name of Star. | Magnitude. | Mean Right Ascension, 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. | Mean N. P. Distance, 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. |
|---------|-----------------------------------|------------|-------------------------------------|--------------------------------|------------|-------------|------------------------------------|--------------------------------|------------|-------------|
| | | | h. m. s. | s. | | | ° ' " | " | | |
| 26 | B. A. C. 334 . . . | . . . | 1 2 47.62 | + 3.325 | 6.2 | 6 | 55 2 15.3 | - 19.31 | 6.2 | 6 |
| 27 | Polaris Comes . . . | . . . | 12 47.59 | 20.708 | 6.4 | 1 | 1 21 23.2 | 19.05 | 6.4 | 1 |
| 28 | B. A. C. 495 . . . | 6.5 | 32 34.39 | 3.223 | 6.8 | 3 | 74 0 17.8 | 18.44 | 6.8 | 3 |
| 29 | B. A. C. 501 . . . | 5.5 | 33 14.03 | 3.560 | 6.9 | 3 | 47 19 49.8 | 18.42 | 6.9 | 3 |
| 30 | B. A. C. 544 . . . | 6.2 | 41 20.19 | 3.509 | 6.9 | 3 | 52 39 56.0 | 18.13 | 6.9 | 3 |
| 31 | Weisse 791 ¹ . . . | 8.5 | 1 45 27.39 | + 3.179 | 6.9 | 3 | 79 48 11.6 | - 17.97 | 6.9 | 3 |
| 32 | Weisse 791 ² . . . | 8.5 | 45 27.48 | 3.179 | 6.9 | 3 | 79 48 7.5 | 17.97 | 6.9 | 3 |
| 33 | B. A. C. 569 . . . | . . . | 46 0.95 | 3.402 | 6.4 | 4 | 61 1 35.6 | 17.95 | 6.4 | 4 |
| 34 | B. A. C. 590 . . . | 6.0 | 50 41.35 | 3.776 | 6.9 | 3 | 41 24 10.2 | 17.76 | 6.9 | 3 |
| 35 | B. A. C. 609 . . . | . . . | 52 47.80 | 3.203 | 7.0 | 1 | 78 18 27.1 | 17.67 | 7.0 | 1 |
| 36 | Durch. 2 ³ , 315 . . . | 8.8 | 1 55 25.49 | + 3.098 | 6.9 | 3 | 87 43 18.1 | - 17.56 | 6.9 | 3 |
| 37 | B. A. C. 625 ¹ . . . | . . . | 55 37.84 | 3.097 | 6.1 | 1 | 87 50 6.7 | 17.56 | 6.1 | 1 |
| 38 | B. A. C. 625 ² . . . | . . . | 1 55 38.12 | 3.097 | 6.5 | 2 | 87 50 10.1 | 17.56 | 6.5 | 2 |
| 39 | Lalande 4528 . . . | 7.5 | 2 20 42.22 | 3.294 | 6.9 | 3 | 73 54 48.5 | 16.39 | 6.9 | 3 |
| 40 | Lalande 4803 . . . | 4.0 | 29 17.10 | 3.162 | 6.9 | 7 | 83 42 21.1 | 15.95 | 6.9 | 7 |
| 41 | Lalande 4830 . . . | 6.5 | 2 30 37.97 | + 3.692 | 6.8 | 3 | 52 48 40.7 | - 15.88 | 6.8 | 3 |
| 42 | Lalande 4903 ¹ . . . | . . . | 32 11.41 | 3.283 | 7.0 | 5 | 75 40 35.2 | 15.79 | 7.0 | 5 |
| 43 | Lalande 4903 ² . . . | . . . | 32 11.89 | 3.283 | 7.0 | 2 | 75 40 33.2 | 15.79 | 7.0 | 2 |
| 44 | γ^1 Ceti . . . | 7.0 | 36 52.50 | 3.112 | 6.9 | 2 | 87 17 15.5 | 15.53 | 6.9 | 2 |
| 45 | B. A. C. 878 ¹ . . . | 6.8 | 43 41.00 | 2.390 | 6.9 | 3 | 127 55 12.5 | 15.15 | 6.9 | 3 |
| 46 | B. A. C. 878 ² . . . | 8.0 | 2 43 41.24 | + 2.390 | 6.9 | 3 | 127 55 17.8 | - 15.15 | 6.9 | 3 |
| 47 | ρ^2 Arietis . . . | 5.8 | 48 50.55 | 3.361 | 6.6 | 3 | 72 10 19.6 | 14.86 | 6.6 | 4 |
| 48 | ρ^3 Arietis . . . | . . . | 49 26.35 | 3.357 | 6.9 | 3 | 72 28 22.2 | 14.82 | 6.9 | 3 |
| 49 | Anonymous . . . | . . . | 50 42.17 | 3.421 | 6.9 | 1 | 68 56 56.2 | 14.74 | 6.9 | 1 |
| 50 | B. A. C. 920 . . . | . . . | 51 46.78 | 3.424 | 7.0 | 3 | 68 52 47.7 | 14.68 | 7.0 | 3 |
| 51 | B. A. C. 937 . . . | . . . | 2 53 33.73 | + 2.279 | 6.9 | 3 | 130 48 10.7 | - 14.57 | 6.9 | 3 |
| 52 | B. A. C. 938 . . . | . . . | 53 34.51 | 2.279 | 6.9 | 3 | 130 48 9.7 | 14.57 | 6.9 | 3 |
| 53 | B. A. C. 953 . . . | . . . | 57 14.00 | 3.811 | 6.4 | 1 | 51 38 31.9 | 14.35 | 6.4 | 1 |
| 54 | B. A. C. 984 . . . | . . . | . . . | . . . | . . . | . . . | 125 54 19.5 | 13.94 | 6.1 | 1 |
| 55 | B. A. C. 1003 . . . | . . . | . . . | . . . | . . . | . . . | 126 24 35.9 | 13.66 | 6.1 | 1 |
| 56 | B. A. C. 1015 . . . | . . . | . . . | . . . | . . . | . . . | 126 1 15.6 | - 13.56 | 6.1 | 1 |
| 57 | B. A. C. 1042 . . . | . . . | . . . | . . . | . . . | . . . | 125 27 19.4 | 13.26 | 6.1 | 1 |
| 58 | B. A. C. 1060 . . . | . . . | . . . | . . . | . . . | . . . | 123 8 55.2 | 12.97 | 6.1 | 1 |
| 59 | B. A. C. 1100 . . . | 4.0 | 3 27 5.28 | + 2.889 | 6.9 | 3 | 99 52 45.5 | 12.41 | 6.9 | 3 |
| 60 | B. A. C. 1125 . . . | . . . | 32 38.73 | 2.153 | 6.9 | 4 | 130 41 0.0 | 12.03 | 6.9 | 4 |
| 61 | B. A. C. 1136 ¹ . . . | . . . | 3 35 19.01 | + 2.142 | 6.9 | 2 | 130 45 10.2 | - 11.84 | 6.9 | 1 |
| 62 | B. A. C. 1136 ² . . . | . . . | 35 19.49 | 2.142 | 6.9 | 2 | 130 45 18.7 | 11.84 | 6.9 | 1 |
| 63 | ϵ Pleiadum . . . | . . . | 37 49.82 | 3.558 | 7.0 | 1 | 65 55 26.4 | 11.70 | 7.0 | 1 |
| 64 | ϵ Pleiadum . . . | . . . | 38 27.07 | 3.557 | 7.0 | 1 | 66 1 17.5 | 11.61 | 7.0 | 1 |
| 65 | Lalande 7443 . . . | 8.8 | 54 55.83 | 3.871 | 6.8 | 1 | 55 1 42.6 | 10.41 | 6.8 | 1 |

| Number. | Name of Star. | Magnitude. | Mean Right Ascension, 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. | Mean N. P. Distance, 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. |
|---------|----------------------------------|------------|-------------------------------------|--------------------------------|------------|-------------|------------------------------------|--------------------------------|------------|-------------|
| | | | h. m. s. | s. | | | ° ' " | " | | |
| 66 | Lalande 7788 . . . | 7.6 | 4 3 53.76 | + 2.697 | 6.9 | 2 | 107 48 10.6 | - 9.73 | 6.9 | 2 |
| 67 | Lalande 7791 . . . | 8.4 | 13 59.50 | 2.696 | 6.9 | 2 | 107 50 2.1 | 9.72 | 6.9 | 2 |
| 68 | B. A. C. 1294 . . . | . . | 6 9.38 | 2.231 | 6.9 | 3 | 125 35 46.1 | 9.55 | 6.9 | 3 |
| 69 | B. A. C. 1312 . . . | . . | 9 28.33 | 2.168 | 6.9 | 3 | 127 20 39.9 | 9.30 | 6.9 | 3 |
| 70 | 51 Tauri | . . | 11 3.04 | 3.535 | 7.0 | 1 | 68 43 32.7 | 9.17 | 7.0 | 1 |
| 71 | 53 Tauri | . . | 4 12 7.73 | + 3.526 | 7.0 | 1 | 69 9 35.3 | - 9.10 | 7.0 | 1 |
| 72 | 56 Tauri | . . | 12 16.37 | 3.541 | 7.0 | 1 | 65 31 41.7 | 9.08 | 7.0 | 1 |
| 73 | B. A. C. 1333 . . . | . . | 13 12.29 | 2.264 | 6.8 | 1 | 124 6 5.8 | 9.01 | 6.8 | 1 |
| 74 | B. A. C. 1341 ¹ . . . | 5.2 | 15 2.29 | 3.640 | 6.9 | 3 | 64 39 54.8 | 8.87 | 6.9 | 3 |
| 75 | B. A. C. 1341 ² . . . | 8.5 | 15 2.96 | 3.640 | 6.9 | 3 | 64 39 36.3 | 8.87 | 6.9 | 3 |
| 76 | 62 ¹ Tauri | 8.0 | 4 16 29.33 | + 3.608 | 6.9 | 2 | 65 59 12.3 | - 8.75 | 6.9 | 2 |
| 77 | 62 ² Tauri | 6.0 | 16 31.29 | 3.608 | 6.9 | 2 | 65 59 22.6 | 8.75 | 6.9 | 2 |
| 78 | B. A. C. 1368 . . . | . . | 18 34.93 | 2.201 | 6.1 | 1 | 125 50 5.7 | 8.59 | 6.1 | 2 |
| 79 | B. A. C. 1378 . . . | . . | 21 22.01 | 3.386 | 6.9 | 4 | 75 32 13.2 | 8.36 | 6.9 | 4 |
| 80 | B. A. C. 1389 . . . | . . | 22 26.89 | 2.021 | 6.1 | 2 | 120 48 38.3 | 8.29 | 6.1 | 2 |
| 81 | B. A. C. 1407 . . . | . . | 4 26 9.36 | + 2.184 | 6.1 | 1 | 125 55 25.1 | - 7.98 | 6.1 | 1 |
| 82 | B. A. C. 1440 . . . | . . | 32 15.81 | 2.336 | 6.1 | 2 | 120 40 55.0 | 7.49 | 6.1 | 3 |
| 83 | Anonymous | . . | 34 3.31 | 3.574 | 7.0 | 2 | 68 2 36.3 | 7.34 | 7.0 | 2 |
| 84 | B. A. C. 1461 . . . | 3.8 | 37 40.48 | 2.116 | 6.6 | 3 | 127 23 15.5 | 7.05 | 6.6 | 3 |
| 85 | B. A. C. 1467 . . . | . . | 38 21.89 | 2.319 | 6.5 | 2 | 120 59 52.6 | 6.99 | 6.5 | 2 |
| 86 | B. A. C. 1480 . . . | 6.5 | 4 41 14.38 | + 2.216 | 6.3 | 3 | 124 13 55.7 | - 6.76 | 6.3 | 3 |
| 87 | B. A. C. 1488 . . . | . . | 42 59.45 | 2.336 | 6.9 | 3 | 120 14 40.9 | 6.61 | 6.9 | 3 |
| 88 | B. A. C. 1533 . . . | . . | 50 45.66 | 2.007 | 6.1 | 1 | 129 49 46.4 | 5.96 | 6.1 | 1 |
| 89 | Lalande 9484 . . . | 7.0 | 4 56 52.95 | 3.742 | 6.9 | 4 | 62 28 45.7 | 5.45 | 6.9 | 4 |
| 90 | B. A. C. 1574 . . . | . . | 5 0 0.61 | 2.138 | 6.1 | 1 | 125 52 44.6 | 5.19 | 6.1 | 1 |
| 91 | B. A. C. 1588 . . . | . . | 5 1 45.29 | + 2.953 | 6.1 | 1 | 95 14 53.7 | - 5.04 | 6.1 | 1 |
| 92 | B. A. C. 1599 . . . | . . | 3 49.97 | 2.134 | 6.1 | 1 | 125 52 46.4 | 4.87 | 6.1 | 1 |
| 93 | Durch. 27°, 744 . . . | . . | 9 6.31 | 3.753 | 7.0 | 1 | 62 25 22.8 | 4.42 | 7.0 | 1 |
| 94 | B. A. C. 1630 . . . | . . | 9 22.51 | 2.126 | 6.1 | 1 | 125 58 8.7 | 4.39 | 6.1 | 1 |
| 95 | B. A. C. 1633 . . . | . . | 10 5.71 | 2.120 | 6.1 | 1 | 126 7 16.2 | 4.33 | 6.1 | 1 |
| 96 | B. A. C. 1644 . . . | . . | 5 11 50.89 | + 2.201 | 6.1 | 1 | 123 40 31.9 | - 4.19 | 6.1 | 1 |
| 97 | B. A. C. 1650 . . . | . . | 13 0.80 | 2.155 | 6.4 | 3 | 125 1 5.1 | 4.08 | 6.4 | 3 |
| 98 | B. A. C. 1666 . . . | . . | 15 52.83 | 2.160 | 6.1 | 2 | 124 49 29.6 | 3.84 | 6.1 | 3 |
| 99 | B. A. C. 1694 . . . | . . | 19 22.75 | 2.064 | 6.3 | 2 | 127 27 9.5 | 3.53 | 6.3 | 3 |
| 100 | B. A. C. 1718 . . . | . . | 23 13.94 | 2.231 | 6.1 | 1 | 122 31 14.4 | 3.21 | 6.1 | 1 |
| 101 | B. A. C. 1724 . . . | . . | 5 23 59.01 | + 2.065 | 6.3 | 2 | 127 20 6.6 | - 3.14 | 6.3 | 3 |
| 102 | Weisse 633 | . . | 26 49.51 | 2.920 | 6.9 | 2 | 96 35 7.1 | 2.90 | 6.9 | 2 |
| 103 | Weisse 632 | . . | 26 49.83 | 2.919 | 6.9 | 2 | 96 35 45.3 | 2.90 | 6.9 | 2 |
| 104 | B. A. C. 1753 . . . | . . | 28 41.27 | 2.137 | 6.1 | 1 | 125 13 33.3 | 2.73 | 6.1 | 1 |
| 105 | 2 ¹ Orionis | . . | 29 16.06 | 2.958 | 7.0 | 1 | 94 55 18.8 | 2.68 | 7.0 | 1 |

| Number. | Name of Star. | Magnitude. | Mean Right | Annual | Mean year. | No. of obs. | Mean | Annual | Mean year. | No. of obs. |
|---------|--------------------------------------|------------|-----------------------|----------------------|------------|-------------|----------------------------|----------------------|------------|-------------|
| | | | Ascension, 1876.0. | Precession, 1876. | | | N. P. Distance, 1876.0. | Precession, 1876. | | |
| | | | h. m. s. | s. | | | ° ' " | " | | |
| 106 | B. A. C. 1763 | . . . | 5 29 32.45 | + 2.958 | 7.0 | 1 | 94 56 21.0 | — 2.66 | 7.0 | 1 |
| 107 | B. A. C. 1767 | . . . | 30 14.03 | 3.583 | 6.4 | 2 | 68 56 6.8 | 2.60 | 6.4 | 3 |
| 108 | B. A. C. 1794 ¹ | 2.5 | 34 30.14 | 3.026 | 6.4 | 7 | 92 0 36.1 | 2.23 | 6.4 | 7 |
| 109 | B. A. C. 1794 ² | 4 0 | 34 30.25 | 3.026 | 6.6 | 4 | 92 0 36.7 | 2.23 | 6.6 | 4 |
| 110 | B. A. C. 1825 | . . . | 39 24.41 | 1.976 | 6.1 | 2 | 129 27 48.0 | 1.80 | 6.1 | 3 |
| 111 | B. A. C. 1842 | . . . | 5 41 18.52 | + 1.979 | 6.1 | 2 | 129 21 52.9 | — 1.64 | 6.1 | 3 |
| 112 | B. A. C. 1841 | . . . | 41 23.44 | 2.228 | 6.7 | 3 | 122 21 17.7 | 1.63 | 6.7 | 3 |
| 113 | Weisse 1110 | . . . | 45 0.05 | 3.414 | 7.0 | 2 | 75 37 46.0 | 1.31 | 7.0 | 2 |
| 114 | B. A. C. 1865 | . . . | 45 10.97 | 2.281 | 6.1 | 3 | 120 39 31.3 | 1.30 | 6.1 | 3 |
| 115 | B. A. C. 1891 | . . . | 48 36.98 | 2.177 | 6.5 | 1 | 123 49 48.5 | 1.00 | 6.5 | 2 |
| 116 | B. A. C. 1882 | . . . | 5 48 41.17 | + 3.810 | 6.6 | 3 | 61 4 47.9 | — 0.99 | 6.6 | 3 |
| 117 | B. A. C. 1900 | . . . | 51 15.92 | 4.086 | 6.4 | 4 | 52 47 55.7 | 0.76 | 6.4 | 4 |
| 118 | B. A. C. 1910 | 5.0 | 51 41.00 | 2.257 | 6.8 | 1 | 121 24 2.1 | 0.73 | 6.8 | 1 |
| 119 | B. A. C. 1922 | . . . | 53 8.40 | 2.126 | 6.1 | 3 | 125 17 51.8 | 0.60 | 6.1 | 3 |
| 120 | Durch. 17°, 1115 | . . . | 57 53.44 | 3.505 | 6.1 | 3 | 72 4 4.4 | 0.18 | 6.1 | 3 |
| 121 | B. A. C. 1951 | 6.8 | 5 59 15.13 | + 3.658 | 6.9 | 7 | 66 21 8.8 | — 0.06 | 6.9 | 7 |
| 122 | Σ 853 ¹ | 9.0 | 6 2 14.56 | 3.349 | 6.9 | 5 | 78 19 2.1 | + 0.19 | 6.9 | 5 |
| 123 | Σ 853 ² | 8.8 | 2 14.94 | 3.349 | 6.9 | 5 | 78 19 28.6 | 0.19 | 6.9 | 5 |
| 124 | B. A. C. 1976 | . . . | 2 35.70 | 2.160 | 6.1 | 2 | 124 17 52.5 | 0.23 | 6.1 | 3 |
| 125 | Durch. 18°, 1111 | . . . | 3 25.39 | 3.525 | 6.1 | 3 | 71 16 33 0 | 0.30 | 6.1 | 3 |
| 126 | B. A. C. 1996 | . . . | 6 6 6.14 | + 2.143 | 6.1 | 2 | 124 47 33.1 | + 0.53 | 6.1 | 3 |
| 127 | B. A. C. 2061 | . . . | 17 14.33 | 2.642 | 6.5 | 4 | 107 53 46.3 | 1.50 | 6.5 | 4 |
| 128 | B. A. C. 2077 | . . . | 19 28.45 | 2.070 | 6.5 | 2 | 126 57 1.1 | 1.70 | 6.5 | 2 |
| 129 | B. A. C. 2089 | . . . | 20 43.08 | 1.946 | 6.1 | 1 | 130 12 58.3 | 1.81 | 6.1 | 1 |
| 130 | B. A. C. 2098 | . . . | 21 48.37 | 1.920 | 6.1 | 3 | 130 54 13.1 | 1.91 | 6.1 | 3 |
| 131 | B. A. C. 2109 | . . . | 6 23 34.44 | + 2.225 | 6.7 | 4 | 122 30 12.1 | + 2.06 | 6.7 | 4 |
| 132 | B. A. C. 2117 | . . . | 24 44.26 | 1.917 | 6.1 | 3 | 130 59 44.0 | 2.16 | 6.1 | 3 |
| 133 | B. A. C. 2122 | . . . | 25 5.23 | 1.946 | 7.0 | 2 | 130 17 28.5 | 2.19 | 7.0 | 2 |
| 134 | Brisbane 1256 | . . . | 25 10.84 | 1.945 | 7.0 | 2 | 130 17 53.7 | 2.20 | 7.0 | 1 |
| 135 | Durch. 68°, 446 | . . . | 25 12.50 | 6.505 | 6.1 | 3 | 21 10 15.9 | 2.20 | 6.1 | 3 |
| 136 | B. A. C. 2135 | . . . | 6 26 39.64 | + 1.943 | 7.0 | 2 | 130 21 44.3 | + 2.33 | 7.0 | 2 |
| 137 | B. A. C. 2136 | . . . | 26 48.18 | 2.137 | 6.1 | 3 | 125 10 19.9 | 2.34 | 6.1 | 3 |
| 138 | Durch. 68°, 447 | . . . | 28 8.18 | 6.484 | 6.1 | 3 | 21 14 51.0 | 2.45 | 6.1 | 3 |
| 139 | Lalande 12661 | . . . | 30 31.21 | 3.809 | 6.1 | 3 | 60 54 42.8 | 2.66 | 6.1 | 3 |
| 140 | B. A. C. 2179 | . . . | 32 49.30 | 2.037 | 6.4 | 3 | 128 2 38.0 | 2.86 | 6.4 | 3 |
| 141 | B. A. C. 2190 | . . . | 6 34 26.02 | + 2.042 | 6.1 | 2 | 127 53 10.9 | + 3.00 | 6.1 | 2 |
| 142 | B. A. C. 2195 | . . . | 35 43.46 | 2.039 | 6.4 | 3 | 128 2 41.6 | 3.11 | 6.4 | 3 |
| 143 | B. A. C. 2194 | . . . | 36 18.16 | 3.695 | 6.5 | 7 | 64 44 55.3 | 3.16 | 6.5 | 7 |
| 144 | B. A. C. 2207 ¹ | . . . | 38 3.93 | 2.032 | 7.0 | 2 | 128 16 41.2 | 3.24 | 7.0 | 2 |
| 145 | B. A. C. 2207 ² | . . . | 38 4.58 | 2.032 | 6.7 | 3 | 128 16 41.2 | 3.32 | 6.7 | 3 |

| Number. | Name of Star. | Magnitude. | Mean Right Ascension, 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. | Mean N. P. Distance, 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. |
|---------|----------------------------------|------------|-------------------------------------|--------------------------------|------------|-------------|------------------------------------|--------------------------------|------------|-------------|
| | | | h. m. s. | s. | | | ° ' " | " | | |
| 146 | B. A. C. 2252 . . . | . . | 6 46 22.02 | + 2.182 | 6.9 | 1 | 124 13 21.1 | + 4.03 | 6.9 | 1 |
| 147 | B. A. C. 2258 . . . | . . | 47 19.96 | 2.119 | 6.1 | 3 | 126 4 51.0 | 4.11 | 6.1 | 3 |
| 148 | B. A. C. 2282 . . . | . . | 52 18.63 | 2.154 | 6.9 | 3 | 125 10 44.7 | 4.54 | 6.9 | 3 |
| 149 | B. A. C. 2288 . . . | . . | 52 51.51 | 2.149 | 6.1 | 3 | 125 20 36.5 | 4.59 | 6.1 | 3 |
| 150 | B. A. C. 2295 . . . | . . | 53 52.79 | 2.197 | 6.2 | 2 | 123 56 41.8 | 4.67 | 6.2 | 2 |
| 151 | Weisse (2) 1675 . . | 8.2 | 6 56 14.26 | + 3.564 | 6.9 | 4 | 69 13 26.7 | + 4.91 | 6.9 | 4 |
| 152 | B. A. C. 2305 . . . | 4.0 | 56 45.22 | 3.563 | 6.9 | 4 | 69 14 59.4 | 4.92 | 6.9 | 4 |
| 153 | B. A. C. 2309 . . . | . . | 56 46.77 | 2.390 | 6.2 | 2 | 117 45 32.2 | 4.92 | 6.2 | 2 |
| 154 | B. A. C. 2315 . . . | . . | 6 57 20.46 | 2.153 | 6.1 | 3 | 125 22 15.1 | 4.96 | 6.1 | 3 |
| 155 | B. A. C. 2335 . . . | . . | 7 1 46.93 | 2.058 | 6.1 | 1 | 128 11 38.3 | 5.34 | 6.1 | 3 |
| 156 | 47 Geminorum. . . | . . | 7 3 41.60 | + 3.729 | 6.2 | 3 | 62 56 30.8 | + 5.50 | 6.3 | 4 |
| 157 | B. A. C. 2372 . . . | . . | 7 10.07 | 2.039 | 6.1 | 1 | 128 53 50.7 | 5.80 | 6.1 | 1 |
| 158 | B. A. C. 2385 . . . | . . | 9 1.10 | 2.309 | 6.1 | 1 | 120 52 19.2 | 5.95 | 6.1 | 1 |
| 159 | B. A. C. 2412 . . . | . . | 12 14.66 | 2.075 | 6.1 | 2 | 128 5 57.4 | 6.21 | 6.1 | 2 |
| 160 | B. A. C. 2427 . . . | . . | 14 19.92 | 2.047 | 6.1 | 1 | 128 59 7.0 | 6.39 | 6.1 | 1 |
| 161 | B. A. C. 2446 . . . | . . | 7 17 51.78 | + 2.290 | 6.4 | 4 | 121 48 35.2 | + 6.69 | 6.4 | 4 |
| 162 | B. A. C. 2449 . . . | . . | 18 16.26 | 2.295 | 6.4 | 4 | 121 41 10.3 | 6.72 | 6.4 | 4 |
| 163 | B. A. C. 2452 . . . | . . | 18 48.33 | 2.287 | 6.1 | 2 | 121 57 47.2 | 6.76 | 6.1 | 2 |
| 164 | B. A. C. 2462 . . . | . . | 20 25.53 | 3.261 | 6.4 | 3 | 81 27 47.3 | 6.89 | 6.4 | 3 |
| 165 | Anonymous . . . | . . | 20 36.15 | 3.688 | 6.2 | 4 | 63 53 5.4 | 6.91 | 6.2 | 4 |
| 166 | B. A. C. 2468 . . . | . . | 7 21 24.67 | + 3.275 | 6.9 | 3 | 80 49 31.1 | + 6.97 | 6.9 | 3 |
| 167 | B. A. C. 2471 . . . | . . | 22 5.89 | 2.231 | 6.4 | 3 | 123 53 34.1 | 7.03 | 6.4 | 3 |
| 168 | B. A. C. 2473 . . . | . . | 22 53.61 | 3.344 | 6.9 | 3 | 77 44 20.2 | 7.10 | 6.9 | 3 |
| 169 | B. A. C. 2477 ¹ . . . | . . | 24 5.35 | 2.305 | 6.1 | 1 | 121 35 37.0 | 7.19 | 6.1 | 1 |
| 170 | B. A. C. 2477 ² . . . | . . | 24 5.99 | 2.305 | 6.1 | 1 | 121 35 30.7 | 7.19 | 6.1 | 1 |
| 171 | B. A. C. 2478 . . . | . . | 7 24 17.63 | + 2.316 | 6.2 | 1 | 121 12 5.8 | + 7.21 | 6.2 | 1 |
| 172 | B. A. C. 2486 . . . | . . | 26 31.80 | 3.431 | 6.9 | 3 | 73 54 31.0 | 7.39 | 6.9 | 3 |
| 173 | ^{a1} Geminorum . . . | . . | 26 40.76 | 3.853 | 6.6 | 7 | 57 50 33.9 | 7.41 | 6.6 | 7 |
| 174 | Durch. 26°, 1602 . . | . . | 27 51.41 | 3.683 | 6.2 | 4 | 63 45 31.7 | 7.50 | 6.2 | 4 |
| 175 | Anonymous. . . | 10.5 | 28 0.90 | 3.683 | 6.2 | 4 | 63 45 32.1 | 7.51 | 6.2 | 4 |
| 176 | B. A. C. 2502 . . . | . . | 7 29 21.87 | + 2.172 | 6.1 | 3 | 126 4 12.5 | + 7.63 | 6.1 | 3 |
| 177 | B. A. C. 2519 . . . | . . | 32 18.87 | 3.471 | 6.2 | 3 | 72 2 42.0 | 7.86 | 6.2 | 3 |
| 178 | B. A. C. 2536 . . . | . . | 34 14.26 | 2.175 | 6.1 | 3 | 126 12 53.3 | 8.01 | 6.1 | 3 |
| 179 | B. A. C. 2547 . . . | . . | 35 32.52 | 2.141 | 6.1 | 1 | 127 17 37.9 | 8.12 | 6.1 | 1 |
| 180 | B. A. C. 2551 . . . | . . | 36 57.58 | 3.633 | 6.9 | 3 | 65 18 23.5 | 8.24 | 6.9 | 3 |
| 181 | B. A. C. 2561 . . . | . . | 7 38 39.69 | + 2.199 | 6.1 | 3 | 125 45 24.9 | + 8.37 | 6.1 | 3 |
| 182 | B. A. C. 2572 . . . | . . | 39 37.83 | 2.199 | 6.1 | 3 | 125 46 7.6 | 8.44 | 6.1 | 3 |
| 183 | B. A. C. 2591 . . . | . . | 42 7.65 | 2.148 | 6.1 | 1 | 127 28 4.9 | 8.64 | 6.1 | 1 |
| 184 | B. A. C. 2604 . . . | . . | 43 54.14 | 2.051 | 6.1 | 1 | 130 20 37.7 | 8.78 | 6.1 | 1 |
| 185 | B. A. C. 2614 . . . | . . | 44 59.91 | 2.053 | 6.1 | 1 | 130 23 27.9 | 8.87 | 6.1 | 1 |

| Number. | Name of Star. | Magnitude. | Mean Right Ascension, 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. | Mean N. P. Distance, 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. |
|---------|--------------------------------------|------------|-------------------------------------|--------------------------------|------------|-------------|------------------------------------|--------------------------------|------------|-------------|
| | | | h. m. s. | s. | | | ° ' " | " | | |
| 186 | B. A. C. 2629 | .. | 7 47 37.86 | + 2.256 | 6.1 | 2 | 124 23 43.3 | + 9.07 | 6.1 | 2 |
| 187 | B. A. C. 2634 | .. | 47 57.28 | 2.063 | 6.1 | 1 | 130 15 30.7 | 9.10 | 6.1 | 1 |
| 188 | B. A. C. 2639 | .. | 49 56.91 | 3.415 | 6.8 | 4 | 73 52 48.6 | 9.25 | 6.8 | 4 |
| 189 | B. A. C. 2646 | .. | 50 0.17 | 2.257 | 6.1 | 2 | 124 31 17.0 | 9.26 | 6.1 | 1 |
| 190 | ω ¹ Cancri | .. | 53 25.56 | 3.639 | 6.1 | 3 | 64 16 11.1 | 9.52 | 6.1 | 3 |
| 191 | B. A. C. 2664 | .. | 7 54 26.10 | + 3.427 | 6.8 | 4 | 73 12 16.6 | + 9.60 | 6.8 | 4 |
| 192 | B. A. C. 2671 | .. | 55 5.73 | 2.125 | 6.1 | 1 | 128 57 29.0 | 9.65 | 6.1 | 1 |
| 193 | B. A. C. 2685 | .. | 7 57 5.39 | 2.195 | 6.1 | 2 | 126 56 25.9 | 9.81 | 6.1 | 3 |
| 194 | B. A. C. 2717 | .. | 8 0 16.66 | 2.314 | 6.3 | 4 | 123 14 23.5 | 10.05 | 6.3 | 4 |
| 195 | B. A. C. 2719 ¹ | .. | 0 57.74 | 2.316 | 6.3 | 4 | 123 12 56.6 | 10.10 | 6.3 | 4 |
| 196 | B. A. C. 2719 ² | .. | 8 0 51.41 | + 2.316 | 6.9 | 1 | 123 12 56.9 | + 10.10 | 6.9 | 1 |
| 197 | B. A. C. 2735 | .. | 3 18.35 | 2.273 | 6.1 | 1 | 124 51 2.1 | 10.27 | 6.1 | 2 |
| 198 | B. A. C. 2758 | .. | 6 26.81 | 2.216 | 6.2 | 2 | 126 55 39.9 | 10.51 | 6.2 | 2 |
| 199 | B. A. C. 2774 | .. | 8 48.75 | 2.264 | 6.1 | 1 | | | | |
| 200 | B. A. C. 2778 | .. | 9 47.38 | 3.262 | 6.1 | 5 | 80 26 2.2 | 10.76 | 6.1 | 5 |
| 201 | VIII, 2 | .. | 8 13 4.68 | + 2.270 | 6.2 | 4 | 125 41 1.0 | + 11.00 | 6.2 | 4 |
| 202 | B. A. C. 2789 | .. | 13 9.64 | 3.579 | 6.6 | 4 | 65 35 20.0 | 11.01 | 6.6 | 4 |
| 203 | B. A. C. 2794 | .. | 13 33.40 | 2.289 | 6.1 | 1 | 125 3 59.2 | 11.04 | 6.1 | 1 |
| 204 | Anonymous | .. | 14 46.88 | 2.273 | 6.2 | 3 | 125 42 27.5 | 11.13 | 6.2 | 4 |
| 205 | B. A. C. 2805 | .. | 16 40.07 | 2.266 | 6.1 | 2 | 126 5 28.1 | 11.26 | 6.1 | 2 |
| 206 | B. A. C. 2809 | .. | 8 16 55.03 | + 2.170 | 6.1 | 1 | 129 13 37.6 | + 11.28 | 6.1 | 1 |
| 207 | B. A. C. 2814 | .. | 18 24.05 | 3.008 | 6.9 | 3 | 93 21 1.8 | 11.39 | 6.9 | 3 |
| 208 | B. A. C. 2820 | .. | 18 41.84 | 2.217 | 6.1 | 2 | 127 53 16.7 | 11.41 | 6.1 | 2 |
| 209 | B. A. C. 2817 ¹ | .. | 19 17.01 | 3.640 | 6.1 | 3 | 62 39 44.4 | 11.45 | 6.1 | 3 |
| 210 | B. A. C. 2817 ² | .. | 19 17.24 | 3.640 | 6.1 | 3 | 62 39 40.8 | 11.45 | 6.1 | 3 |
| 211 | B. A. C. 2825 | .. | 8 19 27.78 | + 3.005 | 6.9 | 3 | 93 30 11.7 | + 11.47 | 6.9 | 3 |
| 212 | Lalande 16596 | .. | 21 0.31 | 3.400 | 6.2 | 3 | 73 17 2.2 | 11.58 | 6.2 | 3 |
| 213 | Weisse (2) 477 | .. | 21 48.41 | 3.400 | 6.2 | 3 | 73 15 56.7 | 11.63 | 6.2 | 3 |
| 214 | B. A. C. 2853 | .. | 24 31.40 | 3.434 | 6.9 | 4 | 71 29 17.7 | 11.82 | 6.9 | 5 |
| 215 | VIII, 6 | .. | 25 47.11 | 2.433 | 6.1 | 3 | 120 43 6.0 | 11.91 | 6.1 | 3 |
| 216 | Lacaille 3373 | .. | 8 26 31.29 | + 2.214 | 6.4 | 3 | 128 38 37.6 | + 11.97 | 6.4 | 3 |
| 217 | B. A. C. 2877 | .. | 26 49.98 | 2.215 | 6.3 | 4 | 128 38 47.8 | 11.98 | 6.3 | 4 |
| 218 | B. A. C. 2889 ¹ | .. | 29 15.41 | 3.204 | 6.5 | 3 | 82 56 56.0 | 12.16 | 6.5 | 3 |
| 219 | B. A. C. 2889 ² | .. | 29 15.75 | 3.204 | 6.5 | 3 | 82 56 46.5 | 12.16 | 6.5 | 3 |
| 220 | B. A. C. 2911 | .. | 32 16.46 | 3.142 | 6.1 | 4 | 86 13 30.0 | 12.37 | 6.1 | 4 |
| 221 | B. A. C. 2933 | .. | 8 34 37.32 | + 2.309 | 6.1 | 2 | 126 10 19.0 | + 12.53 | 6.1 | 2 |
| 222 | B. A. C. 2937 | .. | 36 6.55 | 3.490 | 6.3 | 3 | 68 5 14.0 | 12.63 | 6.3 | 3 |
| 223 | B. A. C. 2915 | .. | 36 44.52 | 3.142 | 6.1 | 4 | 86 9 27.9 | 12.67 | 6.1 | 4 |
| 224 | B. A. C. 2953 | .. | 37 38.15 | 3.420 | 6.8 | 5 | 71 23 29.0 | 12.73 | 6.8 | 5 |
| 225 | B. A. C. 2970 | .. | 40 8.11 | 3.300 | 6.8 | 4 | 77 26 12.1 | 12.90 | 6.8 | 4 |

| Number. | Name of Star. | Magnitude. | Mean Right Ascension, 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. | Mean N. P. Distance, 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. |
|---------|----------------------------------|------------|-------------------------------------|--------------------------------|------------|-------------|------------------------------------|--------------------------------|------------|-------------|
| | | | h. m. s. | s. | | | ° ' " | " | | |
| 226 | B. A. C. 2987 . . . | .. | 8 43 7.82 | + 3.020 | 6.5 | 3 | 92 59 3.1 | + 13.10 | 6.5 | 3 |
| 227 | B. A. C. 2999 . . . | .. | 44 54.82 | 3.724 | 6.1 | 5 | 57 3 46.2 | 13.22 | 6.1 | 5 |
| 228 | B. A. C. 3009 . . . | .. | 45 2.06 | 2.233 | 6.1 | 1 | 129 51 31.3 | 13.22 | 6.1 | 1 |
| 229 | B. A. C. 3013 . . . | .. | 45 51.25 | 3.174 | 6.3 | 2 | 84 11 42.7 | 13.28 | 6.3 | 2 |
| 230 | B. A. C. 3026 . . . | .. | 48 13.85 | 3.609 | 6.2 | 3 | 61 36 3.0 | 13.43 | 6.2 | 3 |
| 231 | B. A. C. 3056 . . . | .. | 8 51 55.54 | + 3.705 | 6.1 | 6 | 57 6 4.5 | + 13.67 | 6.1 | 6 |
| 232 | B. A. C. 3068 . . . | .. | 53 47.67 | 3.696 | 6.1 | 4 | 57 15 54.2 | 13.79 | 6.1 | 4 |
| 233 | B. A. C. 3081 . . . | .. | 55 27.65 | 2.241 | 6.2 | 2 | 130 46 19.0 | 13.90 | 6.2 | 2 |
| 234 | B. A. C. 3079 . . . | .. | 55 29.10 | 3.520 | 6.3 | 1 | 65 3 38.8 | 13.90 | 6.3 | 1 |
| 235 | B. A. C. 3094 . . . | .. | 8 57 21.33 | 2.300 | 6.3 | 2 | 128 54 57.2 | 14.02 | 6.3 | 2 |
| 236 | B. A. C. 3117 . . . | .. | 9 2 13.67 | + 3.461 | 6.4 | 5 | 67 27 16.3 | + 14.32 | 6.4 | 5 |
| 237 | B. A. C. 3123 . . . | .. | 3 13.26 | 3.458 | 6.4 | 3 | 67 30 5.1 | 14.38 | 6.4 | 3 |
| 238 | B. A. C. 3133 . . . | .. | 5 44.17 | 3.143 | 6.9 | 3 | 85 37 23.3 | 14.53 | 6.9 | 3 |
| 239 | B. A. C. 3138 . . . | .. | 6 32.19 | 3.439 | 6.2 | 3 | 68 12 27.0 | 14.58 | 6.2 | 3 |
| 240 | B. A. C. 3144 . . . | .. | 7 37.28 | 3.715 | 6.5 | 3 | 54 51 22.7 | 14.64 | 6.5 | 3 |
| 241 | B. A. C. 3146 . . . | .. | 9 7 54.82 | + 3.117 | 6.2 | 3 | 87 9 51.1 | + 14.66 | 6.2 | 3 |
| 242 | B. A. C. 3158 . . . | .. | 10 0.49 | 2.390 | 6.3 | 1 | 127 5 17.5 | 14.78 | 6.3 | 1 |
| 243 | B. A. C. 3162 ¹ . . . | 8.0 | 11 7.15 | 3.758 | 6.1 | 1 | 52 40 28.2 | 14.85 | 6.1 | 1 |
| 244 | B. A. C. 3162 ² . . . | 4.5 | 11 7.44 | 3.758 | 6.5 | 2 | 52 40 26.0 | 14.85 | 6.5 | 2 |
| 245 | B. A. C. 3171 . . . | .. | 12 3.48 | 3.267 | 6.8 | 4 | 71 46 13.6 | 14.91 | 6.8 | 4 |
| 246 | B. A. C. 3204 . . . | .. | 9 17 25.78 | + 3.511 | 6.3 | 3 | 63 17 8.1 | + 15.22 | 6.3 | 3 |
| 247 | B. A. C. 3227 . . . | 7.0 | 21 48.90 | 3.216 | 6.5 | 3 | 80 24 16.1 | 15.46 | 6.5 | 3 |
| 248 | B. A. C. 3238 . . . | .. | 23 13.43 | 3.647 | 6.2 | 3 | 55 48 3.5 | 15.54 | 6.2 | 3 |
| 249 | B. A. C. 3250 . . . | .. | 25 15.63 | 3.248 | 6.3 | 3 | 78 9 8.7 | 15.66 | 6.3 | 3 |
| 250 | B. A. C. 3252 . . . | .. | 25 53.46 | 3.700 | 6.6 | 4 | 52 57 53.5 | 15.69 | 6.6 | 4 |
| 251 | B. A. C. 3261 . . . | .. | 9 26 37.40 | + 3.699 | 6.6 | 3 | 53 3 12.4 | + 15.73 | 6.6 | 4 |
| 252 | B. A. C. 3273 . . . | .. | 29 21.14 | 3.577 | 6.3 | 3 | 58 17 2.1 | 15.88 | 6.3 | 3 |
| 253 | B. A. C. 3285 . . . | .. | 30 43.96 | 3.454 | 6.6 | 4 | 64 46 26.2 | 15.95 | 6.6 | 4 |
| 254 | B. A. C. 3295 . . . | .. | 31 59.15 | 3.145 | 6.3 | 3 | 84 47 31.3 | 16.01 | 6.3 | 3 |
| 255 | B. A. C. 3303 . . . | .. | 33 31.39 | 3.064 | 6.2 | 3 | 90 34 51.4 | 16.10 | 6.2 | 3 |
| 256 | Weisse 774 . . . | .. | 9 36 34.81 | + 3.049 | 6.1 | 1 | 91 40 31.9 | + 16.26 | 6.1 | 1 |
| 257 | Anonymous . . . | .. | 36 42.52 | 3.049 | 6.1 | 1 | 91 42 30.1 | 16.26 | 6.1 | 1 |
| 258 | B. A. C. 3321 . . . | .. | 36 58.60 | 3.275 | 6.3 | 3 | 75 24 44.0 | 16.27 | 6.3 | 3 |
| 259 | B. A. C. 3336 . . . | .. | 39 37.59 | 3.170 | 6.6 | 2 | 82 43 13.7 | 16.41 | 6.6 | 2 |
| 260 | B. A. C. 3337 . . . | .. | . . . | . . . | . . . | . . . | 77 37 11.8 | 16.41 | 7.0 | 1 |
| 261 | Durch. 21°, 2106 . . . | .. | 9 40 22.02 | + 3.372 | 6.1 | 1 | 68 34 38.3 | + 16.45 | 6.1 | 1 |
| 262 | B. A. C. 3345 . . . | .. | 40 53.22 | 3.234 | 6.6 | 3 | 77 59 49.0 | 16.47 | 6.6 | 3 |
| 263 | IX, 8 . . . | .. | 41 33.25 | 2.433 | 6.2 | 1 | . . . | . . . | . . . | . . . |
| 264 | B. A. C. 3366 . . . | .. | 44 50.54 | 3.419 | 6.3 | 3 | 65 1 10.2 | 16.66 | 6.3 | 3 |
| 265 | Lalande 19442 . . . | .. | 49 53.06 | 3.269 | 6.3 | 2 | 74 41 6.4 | 16.91 | 6.3 | 2 |

| Number. | Name of Star. | Magnitude. | Mean Right Ascension, 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. | Mean N. P. Distance, 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. |
|---------|-----------------------------|------------|-------------------------------------|--------------------------------|------------|-------------|------------------------------------|--------------------------------|------------|-------------|
| | | | h. m. s. | s. | | | ° ' " | " | | |
| 266 | Weisse (2) 1047. . . . | 9.0 | 9 50 12.20 | + 3.300 | 6.3 | 1 | 72 21 18.6 | + 16.92 | 6.3 | 1 |
| 267 | B. A. C. 3406 | . . | 51 33.09 | 3.237 | 6.3 | 3 | 76 57 54.7 | 16.99 | 6.3 | 3 |
| 268 | B. A. C. 3407 | . . | 51 33.44 | 3.184 | 6.2 | 3 | 81 5 42.6 | 16.99 | 6.2 | 3 |
| 269 | Durch. 17°, 2160 | . . | 51 49.51 | 3.293 | 6.3 | 1 | 72 43 3.1 | 17.00 | 6.3 | 1 |
| 270 | Weisse (2) 1106. . . . | . . | 53 26.67 | 3.300 | 6.3 | 2 | 71 56 48.9 | 17.07 | 6.3 | 2 |
| 271 | B. A. C. 3417 | . . | 9 53 33.07 | + 2.576 | 6.2 | 2 | 125 17 52.7 | + 17.08 | 6.2 | 2 |
| 272 | B. A. C. 3415 | . . | 53 39 60 | 3.179 | 6.5 | 4 | 81 21 43.2 | 17.08 | 6.5 | 4 |
| 273 | Weisse (2) 1158. . . . | . . | 9 55 32.70 | 3.284 | 6.3 | 1 | 72 58 3.6 | 17.17 | 6.3 | 1 |
| 274 | B. A. C. 3452 | . . | 10 0 12.49 | 2.682 | 6.2 | 1 | 120 17 19.0 | 17.37 | 6.2 | 1 |
| 275 | Durch. 15°, 2166 | 9.7 | 0 16.41 | 3.255 | 6.3 | 4 | 74 39 37.7 | 17.38 | 6.3 | 4 |
| 276 | Anonymous. | 10.5 | 10 0 24.50 | + 3.255 | 6.3 | 3 | 74 38 35.7 | + 17.39 | 6.3 | 3 |
| 277 | B. A. C. 3453 | . . | 0 34.17 | 3.280 | 6.7 | 1 | 72 38 0.8 | 17.39 | 6.7 | 1 |
| 278 | Weisse (2) 15 | 8.0 | 3 20.45 | 3.294 | 6.3 | 3 | 71 11 48.1 | 17.51 | 6.3 | 3 |
| 279 | Weisse (2) 28 | . . | 3 44.23 | 3.303 | 6.5 | 2 | 70 29 8.0 | 17.53 | 6.5 | 2 |
| 280 | Lalande 19809 | . . | 4 15.01 | 3.247 | 6.2 | 1 | 74 54 28.4 | 17.55 | 6.2 | 1 |
| 281 | Durch. 19°, 2312 | . . | 10 5 9.87 | + 3.300 | 6.5 | 2 | 70 26 56.7 | + 17.59 | 6.5 | 2 |
| 282 | Weisse (2) 74 | . . | 5 21.19 | 3.250 | 6.3 | 1 | 74 30 43.9 | 17.60 | 6.3 | 1 |
| 283 | B. A. C. 3494 | . . | 7 56.21 | 2.673 | 6.2 | 3 | 122 25 13.9 | 17.70 | 6.2 | 3 |
| 284 | B. A. C. 3500 | . . | 9 11.61 | 3.430 | 6.3 | 3 | 60 4 21.0 | 17.75 | 6.3 | 3 |
| 285 | B. A. C. 3507 | 6.0 | 9 40.18 | 3.349 | 6.2 | 3 | 65 52 53.6 | 17.77 | 6.2 | 3 |
| 286 | B. A. C. 3508 | . . | 10 9 47.49 | + 3.348 | 6.2 | 3 | 65 57 56.9 | + 17.78 | 6.2 | 3 |
| 287 | Durch. 15°, 2184 | . . | 10 16.83 | 3.237 | 6.2 | 5 | 75 2 46.5 | 17.80 | 6.2 | 6 |
| 288 | Weisse 160 | . . | 11 8.14 | 3.242 | 6.3 | 3 | 74 31 4.7 | 17.83 | 6.3 | 2 |
| 289 | Lalande 19965 | . . | 11 18.48 | 3.676 | 6.3 | 1 | 45 19 20.0 | 17.84 | 6.3 | 1 |
| 290 | Weisse 170 | . . | 11 46.55 | 3.230 | 6.3 | 3 | 75 26 50.3 | 17.86 | 6.3 | 3 |
| 291 | Weisse (2) 234 | . . | 10 12 53.00 | + 3.297 | 6.9 | 1 | 69 30 42.5 | + 17.90 | 6.9 | 1 |
| 292 | B. A. C. 3522 | . . | 12 59.05 | 3.292 | 7.0 | 3 | 69 54 3.2 | 17.91 | 7.0 | 3 |
| 293 | γ^2 Leonis | 4.5 | 13 8.33 | 2.297 | 6.3 | 20 | 69 31 58.4 | 17.91 | 6.3 | 21 |
| 294 | B. A. C. 3532 | . . | 14 37.75 | 3.102 | 6.9 | 2 | 87 5 13.3 | 17.97 | 6.9 | 2 |
| 295 | B. A. C. 3539 | . . | 15 54.44 | 3.496 | 7.0 | 1 | 54 9 26.7 | 18.02 | 7.0 | 1 |
| 296 | B. A. C. 3553 | 7.0 | 10 17 15.75 | + 3.042 | 6.3 | 2 | 93 1 1.2 | + 18.08 | 6.3 | 2 |
| 297 | B. A. C. 3561 | 6.5 | 18 43.08 | 3.167 | 6.8 | 4 | 80 35 7.9 | 18.13 | 6.8 | 3 |
| 298 | Anonymous | 10.0 | 20 20.13 | 3.218 | 6.2 | 6 | 75 31 47.6 | 18.18 | 6.2 | 6 |
| 299 | Weisse 331 | 7.5 | 20 37.61 | 3.191 | 6.3 | 2 | 78 3 11.4 | 18.20 | 6.3 | 2 |
| 300 | B. A. C. 3575 | . . | 21 5.88 | 3.175 | 6.8 | 2 | 79 36 23.3 | 18.22 | 6.8 | 3 |
| 301 | Weisse 361 | . . | 10 21 53.83 | + 3.191 | 6.3 | 2 | 77 52 41.5 | + 18.24 | 6.3 | 2 |
| 302 | B. A. C. 3582 | 7.0 | 22 26.98 | 3.042 | 6.3 | 4 | 93 6 31.3 | 18.26 | 6.3 | 4 |
| 303 | B. A. C. 3592 | 7.5 | 23 20.42 | 3.093 | 6.3 | 4 | 87 52 15.1 | 18.29 | 6.3 | 4 |
| 304 | B. A. C. 3602 | . . | 24 48.72 | 3.423 | 7.0 | 2 | 56 59 5.6 | 18.35 | 7.0 | 3 |
| 305 | B. A. C. 3606 | . . | 25 34.53 | 3.213 | 6.2 | 3 | 75 13 37.6 | 18.38 | 6.2 | 3 |

| Number. | Name of Star. | Magnitude. | Mean Right Ascension, 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. | Mean N. P. Distance, 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. |
|---------|------------------------------------|------------|-------------------------------------|--------------------------------|------------|-------------|------------------------------------|--------------------------------|------------|-------------|
| | | | h. m. s. | s. | | | ° ' " | " | | |
| 306 | Weisse 520 | . . | 10 30 21.98 | + 2.968 | 6.3 | 1 | 101 33 56.4 | + 18.54 | 6.3 | 1 |
| 307 | B. A. C. 3663 | . . | 35 5 71 | 3.063 | 6.4 | 3 | 91 5 25.7 | 18.69 | 6.4 | 3 |
| 308 | B. A. C. 3666 | . . | 36 13.21 | 3.316 | 6.1 | 3 | 63 1 27.0 | 18.73 | 6.1 | 3 |
| 309 | B. A. C. 3671 | . . | 36 40.34 | 3.282 | 6.2 | 3 | 66 9 47.1 | 18.75 | 6.2 | 4 |
| 310 | B. A. C. 3693 | 6.0 | 39 51.18 | 3.194 | 6.3 | 3 | 75 9 5.3 | 18.84 | 6.3 | 3 |
| 311 | Lalande 21008 | 9.0 | 10 49 34.14 | + 3.291 | 6.3 | 1 | 61 35 42.7 | + 19.11 | 6.3 | 1 |
| 312 | B. A. C. 3753 | . . | 53 22.69 | 2.821 | 6.2 | 3 | 123 4 18.9 | 19.21 | 6.2 | 3 |
| 313 | B. A. C. 3788 | . . | 58 37.22 | 3.122 | 6.2 | 3 | 81 59 39.7 | 19.34 | 6.2 | 3 |
| 314 | Lalande 21258 | 9.0 | 10 59 18.67 | 3.412 | 6.2 | 1 | 45 50 12.6 | 19.36 | 6.2 | 1 |
| 315 | B. A. C. 3822 | . . | 11 3 56.01 | 2.872 | 6.2 | 3 | 121 41 40.5 | 19.46 | 6.2 | 3 |
| 316 | Lalande 21369 | 9.5 | 11 4 12.83 | + 3.267 | 6.3 | 1 | 58 50 4.8 | + 19.46 | 6.3 | 1 |
| 317 | Lalande 21368 | 8.5 | 4 16.28 | 3.267 | 6.3 | 1 | 58 52 28.8 | 19.46 | 6.3 | 1 |
| 318 | B. A. C. 3832 | . . | 7 24.73 | 3.075 | 6.8 | 3 | 89 23 43.0 | 19.53 | 6.8 | 3 |
| 319 | B. A. C. 3838 | . . | 7 43.88 | 3.158 | 6.2 | 1 | 73 53 35.7 | 19.53 | 6.2 | 1 |
| 320 | B. A. C. 3842 | . . | 8 36.51 | 3.203 | 6.2 | 4 | 66 13 44.8 | 19.55 | 6.2 | 4 |
| 321 | B. A. C. 3850 | 5.0 | 11 10 54.52 | + 3.086 | 6.8 | 3 | 87 18 30.0 | + 19.60 | 6.8 | 3 |
| 322 | B. A. C. 3851 | . . | 11 33.99 | 3.249 | 6.2 | 3 | 57 46 26.1 | 19.61 | 6.2 | 3 |
| 323 | Weisse (2) 240 | . . | 14 3.77 | 3.241 | 6.3 | 2 | 57 35 12.9 | 19.65 | 6.3 | 2 |
| 324 | Weisse (2) 273 | . . | 16 12.32 | 3.234 | 6.3 | 2 | 57 29 31.4 | 19.69 | 6.3 | 2 |
| 325 | B. A. C. 3877 ¹ | 4.8 | 17 27.59 | 3.121 | 6.7 | 5 | 78 47 17.5 | 19.71 | 6.7 | 5 |
| 326 | B. A. C. 3877 ² | 8.5 | 11 17 27.80 | + 3.121 | 6.5 | 3 | 78 47 16.6 | + 19.71 | 6.5 | 3 |
| 327 | Weisse (2) 316 | . . | 18 17.31 | 3.226 | 6.3 | 2 | 57 29 38.7 | 19.72 | 6.3 | 2 |
| 328 | B. A. C. 3891 | . . | 19 33.08 | 2.895 | 6.3 | 3 | 127 3 56.7 | 19.74 | 6.3 | 3 |
| 329 | Lal. (F.) 1882 | 5.5 | 21 58.96 | 3.495 | 6.3 | 1 | 27 32 49.4 | 19.78 | 6.3 | 1 |
| 330 | B. A. C. 3919 ¹ | 9.3 | 25 20.12 | 3.126 | 6.3 | 3 | 74 56 30.9 | 19.82 | 6.3 | 3 |
| 331 | B. A. C. 3919 ² | 6.2 | 11 25 20.69 | + 3.126 | 6.3 | 3 | 74 56 44.0 | + 19.82 | 6.3 | 3 |
| 332 | Durch. +32°, 2156 | . . | 26 27.99 | 3.196 | 6.2 | 1 | 57 33 58.9 | 19.84 | 6.2 | 1 |
| 333 | B. A. C. 3934 | . . | 28 28.16 | 2.957 | 6.2 | 3 | 122 10 27.8 | 19.87 | 6.2 | 3 |
| 334 | B. A. C. 3945 | . . | 30 26.06 | 2.961 | 6.3 | 3 | 122 52 58.8 | 19.89 | 6.3 | 3 |
| 335 | B. A. C. 3948 | . . | 30 52.42 | 2.965 | 6.2 | 3 | 122 17 56.6 | 19.89 | 6.2 | 3 |
| 336 | Weisse (2) 609 | . . | 11 32 32.31 | + 3.174 | 6.3 | 2 | 57 33 12.3 | + 19.91 | 6.3 | 2 |
| 337 | B. A. C. 3964 | 6.0 | 34 20.09 | 3.133 | 6.3 | 3 | 67 57 31.6 | 19.93 | 6.3 | 3 |
| 338 | Weisse (2) 661 | . . | 35 6.89 | 3.164 | 6.3 | 2 | 57 34 3.8 | 19.93 | 6.3 | 2 |
| 339 | Weisse (2) 703 | . . | 37 1.46 | 3.157 | 6.4 | 1 | 57 32 57.7 | 19.95 | 6.4 | 1 |
| 340 | Weisse (2) 707 | . . | 37 19.34 | 3.156 | 6.4 | 1 | 57 33 14.3 | 19.96 | 6.4 | 1 |
| 341 | Groombridge 1822 | 8.5 | 11 39 2.72 | + 3.210 | 6.2 | 1 | 41 38 4.1 | + 19.97 | 6.2 | 1 |
| 342 | B. A. C. 3982 | . . | 39 29.11 | 3.087 | 7.0 | 3 | 82 46 34.2 | 19.98 | 7.0 | 3 |
| 343 | Lalande 22304 | . . | 42 17.24 | 3.136 | 6.4 | 1 | 58 6 22.8 | 19.99 | 6.4 | 1 |
| 344 | B. A. C. 4002 | 4.0 | 44 14.23 | 3.076 | 6.3 | 3 | 87 32 13.2 | 20.01 | 6.3 | 3 |
| 345 | Durch. 32°, 2199 | . . | 47 26.14 | 3.118 | 6.4 | 1 | 58 5 3.7 | 20.02 | 6.4 | 1 |

| Number. | Name of Star. | Magnitude. | Mean Right Ascension, 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. | Mean N. P. Distance, 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. |
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| | | | h. m. s. | s. | | | ° ' " | " | | |
| 346 | B. A. C. 4027 . . . | 5.5 | 11 48 41.49 | + 3.083 | 6.2 | 4 | 80 52 0.5 | + 20.03 | 6.2 | 4 |
| 347 | Lalande 22472 . . . | . . | 49 37.16 | 3.110 | 6.4 | 1 | 58 6 13.0 | 20.04 | 6.4 | 1 |
| 348 | Lalande 22543 . . . | . . | 52 9.19 | 3.101 | 6.4 | 1 | 57 58 21.6 | 20.04 | 6.4 | 1 |
| 349 | B. A. C. 4049 . . . | 5.8 | 53 35.91 | 3.074 | 6.3 | 3 | 86 38 16.1 | 20.04 | 6.3 | 3 |
| 350 | B. A. C. 4052 . . . | . . | 54 31.13 | 3.076 | 7.0 | 3 | 82 41 39.2 | 20.05 | 7.0 | 3 |
| 351 | B. A. C. 4056 . . . | . . | 11 55 23.23 | + 3.084 | 6.2 | 3 | 67 12 54.3 | + 20.05 | 6.2 | 3 |
| 352 | Lalande 22622 . . . | . . | 55 47.05 | 3.088 | 6.4 | 1 | 58 3 36.9 | 20.05 | 6.4 | 1 |
| 353 | D'Agelet 2808 . . . | 7.0 | 56 11.52 | 3.094 | 6.3 | 1 | 46 12 29.1 | 20.05 | 6.3 | 1 |
| 354 | B. A. C. 4066 ¹ . . . | . . | 57 55.28 | 3.077 | 6.7 | 5 | 67 51 3.7 | 20.05 | 6.7 | 5 |
| 355 | B. A. C. 4066 ² . . . | . . | 57 55.52 | 3.077 | 6.7 | 5 | 67 51 0.6 | 20.05 | 6.7 | 5 |
| 356 | Lalande 22703 . . . | . . | 11 59 2.89 | + 3.076 | 6.4 | 1 | 58 5 58.6 | + 20.05 | 6.4 | 1 |
| 357 | B. A. C. 4079 . . . | . . | 12 0 50.79 | 3.071 | 6.3 | 1 | 79 38 47.1 | 20.05 | 6.3 | 1 |
| 358 | B. A. C. 4092 . . . | . . | 2 30.15 | 3.085 | 6.3 | 3 | 130 32 30.3 | 20.05 | 6.3 | 3 |
| 359 | Lalande 22810 . . . | 8.0 | 3 23.62 | 3.055 | 6.3 | 1 | 49 3 22.6 | 20.05 | 6.3 | 1 |
| 360 | B. A. C. 4113 . . . | . . | 6 58.31 | 3.104 | 6.2 | 3 | 128 14 21.2 | 20.04 | 6.2 | 3 |
| 361 | B. A. C. 4124 . . . | 3.0 | 12 9 25.86 | + 3.089 | 6.5 | 7 | 106 51 12.9 | + 20.04 | 6.4 | 7 |
| 362 | B. A. C. 4174 . . . | . . | 17 4.53 | 3.141 | 6.3 | 2 | 124 43 31.7 | 20.00 | 6.3 | 2 |
| 363 | B. A. C. 4185 . . . | . . | 19 6.98 | 2.898 | 6.4 | 1 | 32 32 4.9 | 19.98 | 6.4 | 1 |
| 364 | B. A. C. 4200 . . . | 7.0 | 21 29.92 | 3.081 | 6.3 | 1 | 93 55 45.2 | 19.97 | 6.3 | 1 |
| 365 | B. A. C. 4210 . . . | . . | 23 19.87 | 3.190 | 6.3 | 2 | 131 3 0.7 | 19.95 | 6.3 | 2 |
| 366 | B. A. C. 4211 . . . | . . | 12 23 27.01 | + 3.111 | 6.8 | 1 | 105 49 28.6 | + 19.95 | 6.8 | 1 |
| 367 | B. A. C. 4225 . . . | 6.5 | 25 16.25 | 3.084 | 6.3 | 1 | 94 22 7.4 | 19.93 | 6.3 | 1 |
| 368 | B. A. C. 4227 . . . | . . | 26 49.15 | 3.207 | 6.3 | 1 | 130 43 47.8 | 19.92 | 6.3 | 1 |
| 369 | <i>f</i> Virginis . . . | 6.5 | 30 24.20 | 3.088 | 6.3 | 1 | 95 8 54.1 | 19.88 | 6.3 | 1 |
| 370 | Weisse 498 . . . | 9.0 | 31 10.18 | 3.081 | 6.4 | 1 | 92 53 14.7 | 19.87 | 6.4 | 1 |
| 371 | Lalande 23951 . . . | 8.1 | 12 44 58.36 | + 3.132 | 6.4 | 3 | 102 48 17.6 | + 19.67 | 6.4 | 3 |
| 372 | B. A. C. 4321 . . . | . . | 46 34.46 | 3.295 | 6.3 | 4 | 129 30 16.3 | 19.64 | 6.3 | 4 |
| 373 | Lalande 23995 . . . | . . | 46 39.62 | 3.159 | 6.3 | 1 | 107 49 15.3 | 19.64 | 6.3 | 1 |
| 374 | 32 ¹ Camelopardalis . . . | . . | 48 6.76 | 0.380 | 6.5 | 4 | 5 54 27.5 | 19.62 | 6.5 | 4 |
| 375 | 32 ¹ Camelopardalis, S. P. . . | . . | 48 5.94 | 0.380 | 6.9 | 5 | 354 5 32.1 | 19.62 | 6.9 | 5 |
| 376 | 12 ¹ Canum Venaticorum . . . | 7.0 | 12 50 12.29 | + 2.837 | 6.3 | 11 | 51 0 55.4 | + 19.58 | 6.3 | 11 |
| 377 | B. A. C. 4355 . . . | . . | 53 45.52 | 3.273 | 6.2 | 4 | 122 50 1.9 | 19.50 | 6.2 | 3 |
| 378 | B. A. C. 4357 ¹ . . . | 8.2 | 54 14.62 | 3.275 | 6.3 | 2 | 122 57 19.5 | 19.49 | 6.3 | 2 |
| 379 | B. A. C. 4357 ² . . . | 6.0 | 54 15.14 | 3.276 | 6.3 | 3 | 122 57 15.6 | 19.49 | 6.3 | 3 |
| 380 | B. A. C. 4367 . . . | 3.0 | 56 0.25 | 3.006 | 6.5 | 7 | 78 22 27.3 | 19.46 | 6.5 | 7 |
| 381 | B. A. C. 4374 . . . | . . | 12 57 49.46 | + 3.357 | 6.3 | 2 | 130 31 49.5 | + 19.42 | 6.3 | 2 |
| 382 | B. A. C. 4389 . . . | . . | 13 0 17.37 | 2.713 | 6.4 | 2 | 44 4 3.8 | 19.36 | 6.4 | 2 |
| 383 | Lacaille 5410 . . . | . . | 2 9.18 | 3.204 | 6.2 | 4 | 122 50 20.9 | 19.32 | 6.2 | 4 |
| 384 | 50 Virginis . . . | . . | 3 15.92 | 3.134 | 6.4 | 1 | 99 40 4.1 | 19.29 | 6.4 | 1 |
| 385 | B. A. C. 4416 . . . | . . | 4 27.51 | 2.489 | 6.3 | 3 | 32 30 26.2 | 19.27 | 6.3 | 3 |

| Number. | Name of Star. | Magnitude. | Mean Right Ascension. 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. | Mean N. P. Distance, 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. |
|---------|----------------------------------|------------|-------------------------------------|--------------------------------|------------|-------------|------------------------------------|--------------------------------|------------|-------------|
| | | | h. m. s. | s. | | | ° ' " | " | | |
| 386 | B. A. C. 4417 . . . | . . | 13 5 8.64 | + 3.356 | 6.2 | 3 | 127 8 41.6 | + 19.25 | 6.2 | 3 |
| 387 | B. A. C. 4482 . . . | . . | 18 56.79 | 3.439 | 6.3 | 2 | 129 6 26.2 | 18.88 | 6.3 | 2 |
| 388 | B. A. C. 4489 . . . | . . | 19 43.60 | 3.466 | 6.3 | 2 | 130 51 9.7 | 18.85 | 6.3 | 2 |
| 389 | B. A. C. 4509 . . . | . . | 24 1.54 | 2.901 | 6.3 | 1 | 70 18 2.7 | 18.72 | 6.3 | 1 |
| 390 | B. A. C. 4518 . . . | . . | 25 48.06 | 3.473 | 6.2 | 3 | 129 20 0.7 | 18.66 | 6.2 | 3 |
| 391 | B. A. C. 4522 . . . | . . | 13 26 34.51 | + 3.476 | 6.2 | 3 | 129 18 32.1 | + 18.64 | 6.2 | 3 |
| 392 | B. A. C. 4545 . . . | . . | 29 57.25 | 2.564 | 6.4 | 1 | 45 10 7.2 | 18.53 | 6.4 | 1 |
| 393 | B. A. C. 4553 . . . | . . | 32 9.15 | 2.848 | 6.4 | 2 | 66 50 15.8 | 18.45 | 6.4 | 2 |
| 394 | B. A. C. 4563 . . . | 7.0 | 34 45.58 | 2.870 | 6.3 | 2 | 69 21 31.2 | 18.36 | 6.3 | 2 |
| 395 | B. A. C. 4595 . . . | . . | 40 56.83 | 2.609 | 6.4 | 2 | 50 52 31.6 | 18.14 | 6.4 | 2 |
| 396 | B. A. C. 4600 . . . | . . | 13 41 38.97 | + 2.605 | 6.4 | 2 | 50 50 13.0 | + 18.11 | 6.4 | 2 |
| 397 | B. A. C. 4601 . . . | . . | 42 4.50 | 3.574 | 6.3 | 4 | 131 4 8.4 | 18.10 | 6.3 | 4 |
| 398 | B. A. C. 4627 . . . | . . | 45 36.06 | 2.650 | 6.4 | 2 | 54 36 45.7 | 17.96 | 6.4 | 2 |
| 399 | B. A. C. 4629 ¹ . . . | . . | 46 4.47 | 3.435 | 6.3 | 3 | 121 19 7.7 | 17.94 | 6.3 | 3 |
| 400 | B. A. C. 4629 ² . . . | . . | 46 4.56 | 3.435 | 6.5 | 4 | 121 18 52.5 | 17.94 | 6.5 | 4 |
| 401 | B. A. C. 4649 . . . | . . | 13 49 17.08 | + 2.217 | 6.4 | 1 | 35 39 37.8 | + 17.82 | 6.4 | 1 |
| 402 | B. A. C. 4681 . . . | . . | 58 28.92 | 3.638 | 6.3 | 2 | 130 35 5.4 | 17.43 | 6.3 | 2 |
| 403 | B. A. C. 4686 . . . | . . | 13 59 23.52 | 3.552 | 6.3 | 3 | 125 45 32.6 | 17.39 | 6.3 | 3 |
| 404 | B. A. C. 4737 . . . | 6.0 | 14 11 32.73 | 2.866 | 6.4 | 2 | 72 9 42.9 | 16.84 | 6.4 | 2 |
| 405 | B. A. C. 4758 . . . | 6.5 | 14 42.34 | 2.464 | 6.3 | 2 | 50 38 8.3 | 16.69 | 6.3 | 2 |
| 406 | B. A. C. 4759 . . . | . . | 14 15 24.20 | + 3.674 | 6.3 | 1 | 128 56 39.1 | + 16.65 | 6.3 | 1 |
| 407 | B. A. C. 4778 . . . | . . | 18 20.51 | 2.484 | 6.4 | 2 | 52 13 53.0 | 16.51 | 6.4 | 2 |
| 408 | B. A. C. 4812 . . . | . . | 27 5.07 | 2.428 | 6.5 | 5 | 51 8 54.8 | 16.06 | 6.5 | 5 |
| 409 | B. A. C. 4813 . . . | . . | 27 41.48 | 3.770 | 6.5 | 1 | 130 58 18.6 | 16.03 | 6.5 | 1 |
| 410 | B. A. C. 4818 . . . | . . | 28 57.44 | 3.743 | 6.2 | 2 | 129 40 8.6 | 15.96 | 6.2 | 2 |
| 411 | Anonymous . . . | 11.0 | 14 30 43.07 | + 3.394 | 6.4 | 2 | 111 30 11.3 | + 15.87 | 6.4 | 2 |
| 412 | B. A. C. 4853 . . . | . . | 35 46.08 | 2.891 | 6.4 | 3 | 77 48 15.2 | 15.60 | 6.4 | 3 |
| 413 | B. A. C. 4870 . . . | . . | 38 55.82 | 2.330 | 6.4 | 3 | 49 0 54.3 | 15.42 | 6.4 | 3 |
| 414 | ^e 1 Bootis . . . | 6.5 | 39 34.18 | 2.624 | 6.5 | 4 | 62 24 6.2 | 15.39 | 6.5 | 4 |
| 415 | ^a 1 Libræ . . . | 7.0 | 43 49.78 | 3.315 | 6.3 | 2 | 105 29 50.3 | 15.15 | 6.3 | 2 |
| 416 | B. A. C. 4903 . . . | . . | 14 44 53.45 | + 2.139 | 6.4 | 2 | 43 21 58.1 | + 15.08 | 6.4 | 2 |
| 417 | 34 (H) Bootis . . . | . . | 45 36.04 | 2.387 | 6.3 | 1 | 52 13 5.9 | 15.04 | 6.3 | 1 |
| 418 | B. A. C. 4917 . . . | . . | 47 41.04 | 2.115 | 6.4 | 3 | 43 0 43.8 | 14.92 | 6.4 | 3 |
| 419 | Lalande 27173 ¹ . . . | . . | 50 12.73 | 3.417 | 6.2 | 1 | 110 51 12.5 | 14.77 | 6.2 | 1 |
| 420 | Lalande 27173 ² . . . | . . | 50 13.68 | 3.417 | 6.2 | 1 | 110 51 17.9 | 14.77 | 6.2 | 1 |
| 421 | Lalande (F.) 2545 . . | 5.8 | 14 52 16.40 | + 1.980 | 6.4 | 1 | 39 51 49.7 | + 14.65 | 6.4 | 1 |
| 422 | B. A. C. 4954 . . . | . . | 57 16.03 | 3.872 | 6.3 | 3 | 130 34 56.4 | 14.35 | 6.3 | 3 |
| 423 | B. A. C. 4961 . . . | 5.0 | 58 8.99 | 2.398 | 6.4 | 3 | 54 18 28.4 | 14.30 | 6.4 | 3 |
| 424 | B. A. C. 4967 . . . | 6.0 | 58 33.20 | 1.398 | 6.4 | 1 | 29 18 28.1 | 14.27 | 6.4 | 1 |
| 425 | XV, 2 . . . | 9.2 | 15 1 34.65 | 3.626 | 6.3 | 3 | 120 12 12.9 | 14.08 | 6.3 | 3 |

| Number. | Name of Star. | Magnitude. | Mean Right Ascension, 1876.0. | | | Annual Precession, 1876. | Mean year. | No. of obs. | Mean N. P. Distance, 1876.0. | | | Annual Precession, 1876. | Mean year. | No. of obs. |
|---------|--------------------------------------|------------|----------------------------------|----|-------|--------------------------------|------------|-------------|------------------------------------|----|------|--------------------------------|------------|-------------|
| | | | h. | m. | s. | | | | ° | ' | " | | | |
| 426 | B. A. C. 4996 | . . . | 15 | 5 | 18.77 | + 3.765 | 6.3 | 4 | 125 | 37 | 21.8 | + 13.85 | 6.3 | 4 |
| 427 | B. A. C. 5017 | 5.0 | | 7 | 55.07 | 3.923 | 6.4 | 2 | 131 | 1 | 45.4 | 13.68 | 6.4 | 2 |
| 428 | B. A. C. 5026 | 6.0 | | 8 | 52.24 | 2.255 | 6.4 | 3 | 51 | 16 | 13.0 | 13.62 | 6.4 | 3 |
| 429 | B. A. C. 5035 | . . . | | 10 | 49.00 | 3.912 | 6.4 | 3 | 130 | 19 | 56.2 | 13.50 | 6.4 | 3 |
| 430 | B. A. C. 5046 | . . . | | 13 | 14.44 | 3.916 | 6.4 | 3 | 130 | 11 | 48.7 | 13.34 | 6.4 | 3 |
| 431 | Lacaille 6328 | . . . | 15 | 13 | 26.99 | + 3.919 | 6.4 | 1 | 130 | 17 | 57.2 | + 13.33 | 6.4 | 1 |
| 432 | B. A. C. 5054 | 3.0 | | 13 | 56.57 | 3.795 | 6.3 | 3 | 125 | 48 | 36.2 | 13.29 | 6.3 | 3 |
| 433 | B. A. C. 5065 | . . . | | 16 | 39.30 | 3.899 | 6.3 | 1 | 129 | 16 | 0.5 | 13.11 | 6.3 | 1 |
| 434 | B. A. C. 5069 | . . . | | 17 | 18.13 | 3.873 | 6.3 | 1 | 125 | 17 | 32.1 | 13.07 | 6.3 | 1 |
| 435 | B. A. C. 5077 | 7.5 | | 17 | 52.21 | 1.734 | 6.4 | 1 | 37 | 12 | 39.6 | 13.03 | 6.4 | 1 |
| 436 | μ^2 Bootis | 7.0 | 15 | 19 | 49.78 | + 2.279 | 6.3 | 2 | 52 | 13 | 0.8 | + 12.90 | 6.3 | 2 |
| 437 | B. A. C. 5092 | 6.8 | | 21 | 6.54 | 1.458 | 6.4 | 1 | 32 | 29 | 57.0 | 12.82 | 6.4 | 1 |
| 438 | Lalande 28165 | 7.5 | | 21 | 27.11 | 3.233 | 6.2 | 1 | 98 | 54 | 11.4 | 12.79 | 6.2 | 1 |
| 439 | Lalande 28167 | 8.3 | | 21 | 29.69 | 3.233 | 6.2 | 1 | 98 | 54 | 47.2 | 12.79 | 6.2 | 1 |
| 440 | B. A. C. 5118 | . . . | | 26 | 53.02 | 3.977 | 6.3 | 1 | 130 | 44 | 55.7 | 12.42 | 6.3 | 1 |
| 441 | XV, 16 | 7.7 | 15 | 29 | 40.27 | + 3.591 | 6.3 | 3 | 116 | 4 | 49.4 | + 12.22 | 6.3 | 3 |
| 442 | B. A. C. 5199 | . . . | | 38 | 49.32 | 3.817 | 6.3 | 1 | 124 | 17 | 33.4 | 11.59 | 6.3 | 1 |
| 443 | Anonymous | . . . | | 40 | 16.05 | 3.285 | 6.4 | 1 | 100 | 57 | 6.8 | 11.48 | 6.4 | 1 |
| 444 | B. A. C. 5216 | . . . | | 40 | 27.99 | 2.761 | 6.7 | 4 | 74 | 11 | 21.1 | 11.47 | 6.7 | 4 |
| 445 | B. A. C. 5230 | . . . | | 43 | 9.01 | 3.131 | 6.9 | 1 | 93 | 2 | 58.2 | 11.27 | 6.9 | 1 |
| 446 | O. Arg. N. 15653 | 6.0 | 15 | 43 | 37.31 | + 1.440 | 6.5 | 2 | 34 | 8 | 40.2 | + 11.24 | 6.5 | 2 |
| 447 | O. Arg. N. 15662 | 9.0 | | 44 | 14.02 | 1.443 | 6.4 | 1 | 34 | 13 | 34.7 | 11.20 | 6.4 | 1 |
| 448 | B. A. C. 5248 | 5.5 | | 44 | 38.41 | 1.442 | 6.4 | 3 | 34 | 14 | 34.2 | 11.17 | 6.4 | 3 |
| 449 | XV, 25 | . . . | | 49 | 36.05 | 3.713 | 6.3 | 3 | 119 | 37 | 54.6 | 10.80 | 6.3 | 3 |
| 450 | B. A. C. 5284 | . . . | | 50 | 43.60 | 2.740 | 6.9 | 2 | 73 | 55 | 58.6 | 10.72 | 6.9 | 2 |
| 451 | Anonymous | 10.5 | 15 | 51 | 17.64 | + 3.716 | 6.3 | 1 | 119 | 37 | 36.6 | + 10.68 | 6.3 | 1 |
| 452 | Anonymous | 9.2 | | 51 | 31.38 | 3.716 | 6.3 | 3 | 119 | 37 | 11.0 | 10.66 | 6.3 | 3 |
| 453 | B. A. C. 5316 | 6.5 | | 55 | 33.35 | 1.697 | 6.4 | 4 | 39 | 45 | 54.0 | 10.36 | 6.4 | 4 |
| 454 | β^2 Scorpii | . . . | | 58 | 14.18 | 3.480 | 6.4 | 4 | 109 | 27 | 38.8 | 10.16 | 6.4 | 4 |
| 455 | B. A. C. 5341 | 6.0 | | 58 | 55.87 | 1.525 | 6.4 | 3 | 36 | 44 | 20.8 | 10.11 | 6.4 | 3 |
| 456 | Weisse 47 | 8.8 | 16 | 4 | 36.39 | + 3.324 | 6.4 | 3 | 102 | 8 | 10.3 | + 9.68 | 6.4 | 3 |
| 457 | B. A. C. 5399 | . . . | | 6 | 21.41 | 2.553 | 6.6 | 1 | 66 | 10 | 59.9 | 9.54 | 6.6 | 1 |
| 458 | B. A. C. 5395 | 6.7 | | 6 | 23.23 | 3.526 | 6.6 | 2 | 111 | 4 | 54.1 | 9.54 | 6.6 | 2 |
| 459 | B. A. C. 5432 ¹ | 8.0 | | 10 | 1.96 | 2.267 | 6.4 | 3 | 55 | 49 | 36.0 | 9.26 | 6.4 | 3 |
| 460 | B. A. C. 5432 ² | 6.2 | | 10 | 2.08 | 2.267 | 6.4 | 3 | 55 | 49 | 35.8 | 9.26 | 6.4 | 3 |
| 461 | Weisse 180 | 9.2 | 16 | 11 | 17.11 | + 3.339 | 6.5 | 4 | 102 | 37 | 35.4 | + 9.16 | 6.5 | 4 |
| 462 | B. A. C. 5437 | . . . | | 11 | 45.68 | 3.164 | 6.8 | 3 | 94 | 23 | 20.0 | 9.12 | 6.8 | 3 |
| 463 | σ Scorpii | . . . | | 13 | 39.22 | 3.637 | 6.3 | 3 | 115 | 17 | 36.6 | 8.97 | 6.3 | 3 |
| 464 | B. A. C. 5451 | . . . | | 14 | 53.13 | 3.980 | 6.3 | 1 | 127 | 7 | 43.9 | 8.88 | 6.3 | 1 |
| 465 | B. A. C. 5457 | . . . | | 16 | 15.80 | 3.981 | 6.3 | 1 | 127 | 16 | 29.5 | 8.77 | 6.3 | 1 |
| 466 | B. A. C. 5466 | . . . | | 16 | 27.01 | 2.648 | 6.8 | 2 | 70 | 33 | 16.4 | 8.75 | 6.8 | 2 |

| Number. | Name of Star. | Magnitude. | Mean Right | Annual | Mean year. | No. of obs. | Mean | Annual | Mean year. | No. of obs. |
|---------|-------------------------------------|------------|-----------------------|----------------------|------------|-------------|----------------------------|----------------------|------------|-------------|
| | | | Ascension, 1876.0. | Precession, 1876. | | | N. P. Distance, 1876.0. | Precession, 1876. | | |
| | | | h. m. s. | s. | | | ° ' " | " | | |
| 467 | O. Arg. N. 16196 . . . | . . . | 16 20 31.96 | — 0.642 | 6.5 | 1 | | . . . | . . . | . . . |
| 468 | B. A. C. 5499 . . . | 6.5 | 21 22.01 | + 1.485 | 6.4 | 3 | 37 25 38.6 | + 8.36 | 6.4 | 3 |
| 469 | B. A. C. 5514 . . . | 5.3 | 22 6.33 | — 0.165 | 6.6 | 1 | 20 36 14.3 | 8.31 | 6.6 | 1 |
| 470 | B. A. C. 5523 . . . | 4.8 | 24 34.28 | + 1.966 | 6.5 | 3 | 47 50 41.3 | 8.11 | 6.5 | 3 |
| 471 | B. A. C. 5525 . . . | . . . | 24 53.38 | 2.584 | 6.8 | 3 | 68 14 21.1 | 8.09 | 6.8 | 3 |
| 472 | B. A. C. 5522 . . . | 7.0 | 16 25 7.48 | + 3.816 | 6.3 | 1 | 121 17 8.9 | + 8.07 | 6.3 | 1 |
| 473 | B. A. C. 5559 . . . | . . . | 30 57.61 | 1.460 | 6.4 | 3 | 37 30 18.4 | 7.59 | 6.4 | 3 |
| 474 | B. A. C. 5583 . . . | . . . | 35 9.73 | 4.151 | 6.3 | 2 | 130 52 52.8 | 7.25 | 6.3 | 2 |
| 475 | B. A. C. 5584 . . . | . . . | 35 18.04 | 4.151 | 6.3 | 2 | 130 52 34.0 | 7.24 | 6.3 | 2 |
| 476 | B. A. C. 5599 . . . | . . . | 35 30.17 | 1.205 | 6.5 | 1 | 33 44 28.7 | 7.23 | 6.5 | 1 |
| 477 | XVI, 18 | 9.0 | 16 37 29.85 | + 3.904 | 6.6 | 1 | 123 36 57.6 | + 7.06 | 6.6 | 1 |
| 478 | XVI, 19 | 9.2 | 39 38.84 | 3.526 | 6.6 | 1 | 109 52 20.0 | 6.89 | 6.6 | 1 |
| 479 | XVI, 20 | 9.6 | 40 29.04 | 3.827 | 6.6 | 1 | 120 58 46.8 | 6.82 | 6.6 | 1 |
| 480 | O. Arg. S. 15973 . . . | . . . | 41 17.81 | 3.667 | 6.5 | 2 | 115 17 9.7 | 6.75 | 6.5 | 2 |
| 481 | O. Arg. S. 15981 . . . | 9.0 | 41 43.68 | 3.668 | 6.5 | 2 | 115 20 15.6 | 6.72 | 6.5 | 2 |
| 482 | B. A. C. 5686 . . . | 7.5 | 16 47 43.94 | + 2.717 | 6.4 | 3 | 74 23 9.4 | + 6.22 | 6.4 | 4 |
| 483 | Anonymous . . . | 10.2 | 50 47.87 | 3.645 | 6.6 | 3 | 114 9 28.8 | 5.96 | 6.6 | 2 |
| 484 | O. Arg. S. 16183 ¹ . . . | 9.8 | 52 24.09 | 3.642 | 6.6 | 1 | 114 0 48.4 | 5.83 | 6.6 | 1 |
| 485 | O. Arg. S. 16183 ² . . . | 10.3 | 52 24.48 | 3.642 | 6.6 | 1 | 114 0 42.7 | 5.83 | 6.6 | 1 |
| 486 | B. A. C. 5718 . . . | . . . | 53 51.72 | 3.872 | 6.3 | 1 | 121 57 25.0 | 5.70 | 6.3 | 1 |
| 487 | B. A. C. 5734 . . . | 6.5 | 16 55 6.50 | + 0.602 | 6.4 | 1 | 27 26 23.7 | + 5.60 | 6.4 | 1 |
| 488 | B. A. C. 5731 . . . | . . . | 55 32.77 | 2.297 | 6.8 | 2 | 58 53 25.0 | 5.57 | 6.8 | 2 |
| 489 | B. A. C. 5753 . . . | . . . | 57 57.4 ³ | 2.758 | 6.6 | 1 | 76 13 3.0 | 5.36 | 6.6 | 1 |
| 490 | B. A. C. 5757 . . . | . . . | 16 58 15.71 | 2.757 | 6.6 | 1 | 76 15 10.8 | 5.33 | 6.6 | 1 |
| 491 | B. A. C. 5785 ¹ . . . | 6.2 | 17 2 46.00 | 1.247 | 6.5 | 4 | 35 21 56.0 | 4.95 | 6.5 | 5 |
| 492 | B. A. C. 5785 ² . . . | 6.4 | 17 2 46.06 | + 1.247 | 6.5 | 4 | 35 21 57.2 | 4.95 | 6.5 | 5 |
| 493 | ^{a2} Hercules | 6.0 | 9 0.01 | 2.734 | 6.6 | 1 | 75 23 3.6 | 4.43 | 6.6 | 1 |
| 494 | B. A. C. 5834 . . . | . . . | 10 43.71 | 2.090 | 6.8 | 1 | 53 3 1.4 | 4.28 | 6.8 | 1 |
| 495 | B. A. C. 5841 . . . | 4.5 | 12 47.17 | 2.818 | 6.4 | 3 | 78 59 59.5 | 4.10 | 6.4 | 3 |
| 496 | B. A. C. 5886 ¹ . . . | 6.7 | 19 24.00 | 2.071 | 6.5 | 5 | 52 44 17.9 | 3.53 | 6.5 | 5 |
| 497 | B. A. C. 5886 ² . . . | 5.2 | 17 19 24.30 | + 2.071 | 6.5 | 5 | 52 44 21.2 | + 3.53 | 6.5 | 5 |
| 498 | Lalande 31762 . . . | 6.5 | 19 53.30 | 2.079 | 6.6 | 2 | 52 57 49.9 | 3.49 | 6.6 | 3 |
| 499 | B. A. C. 5895 . . . | 5.8 | 20 9.51 | 2.078 | 6.6 | 1 | 52 56 12.0 | 3.47 | 6.6 | 2 |
| 500 | B. A. C. 5902 . . . | 6.5 | 21 14.05 | 1.034 | 6.3 | 1 | 32 52 32.5 | 3.38 | 6.3 | 1 |
| 501 | XVII, 9 | . . . | 24 5.46 | 3.880 | 6.5 | 1 | 121 27 13.9 | 3.13 | 6.5 | 1 |
| 502 | XVII, 10 | 8.5 | 17 29 51.54 | + 3.863 | 6.5 | 2 | 120 49 50.7 | + 2.63 | 6.5 | 2 |
| 503 | O. Arg. S. 17123 . . . | 9.5 | 36 27.36 | 3.762 | 6.5 | 4 | 117 23 54.6 | 2.05 | 6.5 | 4 |
| 504 | O. Arg. S. 17137 . . . | 8.0 | 36 59.78 | 3.755 | 6.6 | 2 | 117 10 18.0 | 2.01 | 6.6 | 2 |
| 505 | Transit Zones 36, 67 . | 10.0 | 37 20.58 | 3.762 | 6.5 | 4 | 117 24 13.7 | 1.98 | 6.5 | 4 |
| 506 | B. A. C. 5996 . . . | . . . | 37 20.87 | 2.965 | 6.3 | 3 | 85 22 46.1 | 1.98 | 6.3 | 5 |

| Number. | Name of Star. | Magnitude. | Mean Right Ascension, 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. | Mean N. P. Distance, 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. |
|---------|--------------------------------------|------------|-------------------------------------|--------------------------------|------------|-------------|------------------------------------|--------------------------------|------------|-------------|
| | | | h. m. s. | s. | | | ° ' " | " | | |
| 507 | O. Arg. S. 17166 . . . | 8.5 | 17 38 4.50 | + 3.755 | 6.6 | 2 | 117 9 44.7 | + 1.91 | 6.6 | 2 |
| 508 | O. Arg. S. 17177 . . . | 8.8 | 38 44.16 | 3.762 | 6.5 | 4 | 117 23 11.5 | 1.86 | 6.5 | 4 |
| 509 | XVII, 18 | 7.8 | 40 49.80 | + 4.148 | 6.6 | 1 | 128 56 22.1 | 1.68 | 6.6 | 1 |
| 510 | ψ^2 Draconis, S.P. . . . | 6.0 | 44 10.65 | - 1.086 | 6.9 | 5 | 342 13 1.9 | 1.38 | 6.9 | 5 |
| 511 | Anonymous | 9.0 | 45 13.60 | + 3.807 | 6.6 | 2 | 118 50 2.8 | 1.29 | 6.6 | 1 |
| 512 | Anonymous | 10.0 | 17 45 18.42 | + 3.807 | 6.6 | 2 | 118 50 12.0 | + 1.29 | 6.5 | 1 |
| 513 | O. Arg. S. 17313 . . . | 8.5 | 45 48.22 | 3.807 | 6.6 | 2 | 118 49 21.2 | 1.24 | 6.6 | 2 |
| 514 | B. A. C. 6072 | 6.5 | 50 47.03 | 3.805 | 6.5 | 3 | 118 44 35.6 | 0.80 | 6.5 | 3 |
| 515 | B. A. C. 6082 | . . | 52 0.13 | 2.056 | 6.1 | 1 | 52 43 55.2 | 0.70 | 6.1 | 1 |
| 516 | Herschel and South 379 ¹ | 10.0 | 54 51.51 | 3.641 | 6.5 | 4 | 113 1 45.9 | 0.45 | 6.5 | 4 |
| 517 | Herschel and South 379 ² | 8.8 | 17 54 51.95 | + 3.641 | 6.5 | 4 | 113 1 37.1 | + 0.45 | 6.5 | 4 |
| 518 | Lalande 32974 | 7.5 | 17 55 5.72 | 3.777 | 6.6 | 2 | 117 49 25.9 | + 0.43 | 6.6 | 2 |
| 519 | XVIII, 4 | . . | 18 6 1.31 | 3.830 | 6.5 | 3 | 119 33 57.8 | - 0.52 | 6.5 | 3 |
| 520 | B. A. C. 6184 | 6.8 | 7 49.97 | 1.072 | 6.6 | 2 | 33 45 39.1 | 0.68 | 6.6 | 2 |
| 521 | XVIII, 7 | 9.5 | 10 12.29 | 4.089 | 6.5 | 3 | 127 16 4.5 | 0.89 | 6.5 | 3 |
| 522 | Anonymous | 11.5 | 18 14 16.11 | + 3.486 | 6.4 | 1 | 107 14 13.5 | - 1.25 | 6.4 | 1 |
| 523 | Anonymous | 11.5 | 14 41.43 | 3.485 | 6.4 | 1 | 107 12 5.2 | 1.29 | 6.4 | 1 |
| 524 | B. A. C. 6252 | . . | 18 0.82 | + 1.502 | 6.6 | 1 | 40 20 3.2 | 1.57 | 6.6 | 1 |
| 525 | B. A. C. 6288 | . . | 21 1.67 | - 0.895 | 6.6 | 1 | 18 32 37.7 | 1.84 | 6.6 | 1 |
| 526 | B. A. C. 6275 | . . | 21 53.14 | + 3.941 | 6.3 | 1 | 123 7 34.9 | 1.91 | 6.3 | 1 |
| 527 | B. A. C. 6285 | . . | 18 22 56.76 | + 3.940 | 6.3 | 1 | 123 4 8.7 | - 2.00 | 6.3 | 1 |
| 528 | Mayer 729 | . . | 24 2.58 | 3.530 | 6.3 | 1 | 108 59 8.0 | 2.10 | 6.3 | 1 |
| 529 | B. A. C. 6298 ¹ | 6.5 | 24 49.94 | 4.142 | 6.4 | 1 | | . . | . . | . . |
| 530 | B. A. C. 6298 ² | 7.0 | 24 49.97 | 4.142 | 6.4 | 1 | | . . | . . | . . |
| 531 | B. A. C. 6317 | . . | 27 19.04 | 3.934 | 6.3 | 1 | 122 59 8.2 | 2.38 | . . | . . |
| 532 | O. Arg. S. 18436 . . . | 9.8 | 18 29 11.00 | + 3.772 | 6.6 | 2 | 117 49 44.4 | - 2.55 | 6.6 | 3 |
| 533 | Anonymous | 10.0 | 29 30.00 | 3.759 | 6.5 | 1 | 117 23 23.7 | 2.57 | 6.5 | 1 |
| 534 | B. A. C. 6344 | . . | 31 22.71 | 3.936 | 6.3 | 1 | 123 6 2.9 | 2.74 | 6.3 | 1 |
| 535 | Mural Zones 45, 21 . . | . . | 32 47.60 | 3.765 | 6.7 | 1 | 117 39 6.5 | 2.86 | 6.7 | 1 |
| 536 | XVIII, 18 | 10.0 | 36 36.93 | 3.882 | 6.5 | 3 | 121 31 19.3 | 3.19 | 6.5 | 3 |
| 537 | B. A. C. 6378 | . . | 18 39 4.38 | + 4.199 | 6.3 | 1 | 130 32 14.8 | - 3.40 | 6.3 | 1 |
| 538 | Mural Zones 47, 21 . . | . . | 42 32.01 | 3.793 | 6.7 | 1 | 118 44 47.8 | 3.70 | 6 | 1 |
| 539 | B. A. C. 6422 | . . | 45 21.15 | 3.766 | 6.6 | 1 | 117 54 16.8 | 3.95 | 6.6 | 1 |
| 540 | Anonymous | . . | 48 50.64 | + 3.796 | 6.7 | 1 | 118 57 38.2 | 4.24 | 6.7 | 1 |
| 541 | B. A. C. 6469 | . . | 48 51.89 | - 1.464 | 6.6 | 1 | | . . | . . | . . |
| 542 | Mural Zones 47, 23 . . | . . | 18 50 24.07 | + 3.793 | 6.6 | 2 | 118 54 53.7 | - 4.37 | 6.6 | 2 |
| 543 | B. A. C. 6477 | 6.0 | 51 37.57 | 1.040 | 6.4 | 2 | 32 40 13.0 | 4.48 | 6.4 | 2 |
| 544 | B. A. C. 6487 | . . | 53 59.66 | 2.726 | 6.9 | 1 | 75 5 56.4 | 4.68 | 6.9 | 1 |
| 545 | B. A. C. 6491 | . . | 54 18.30 | 2.244 | 6.3 | 3 | 57 28 46.7 | 4.71 | 6.4 | 5 |
| 546 | B. A. C. 6495 | 6.8 | 55 1.91 | 2.019 | 6.5 | 5 | 50 57 10.7 | 4.77 | 6.5 | 4 |

| Number. | Name of Star. | Magnitude. | Mean Right Ascension, 1876.0. | | | Annual Precession, 1876. | Mean year. | No. of obs. | Mean N. P. Distance, 1876.0. | | | Annual Precession, 1876. | Mean year. | No. of obs. |
|---------|------------------------------------|------------|-------------------------------|---|-------|--------------------------|------------|-------------|------------------------------|-------|-----|--------------------------|------------|-------------|
| | | | h. m. s. | | s. | | | | ° ' " | | " | | | |
| 547 | B. A. C. 6514 . . . | 8.2 | 18 56 6.16 | — | 1.427 | 6.6 | 1 | 16 4 36.6 | — | 4.86 | 6.6 | 1 | | |
| 548 | B. A. C. 6516 . . . | . . | 18 57 43.15 | + | 1.641 | 6.6 | 3 | 42 8 25.0 | | 5.00 | 6.6 | 3 | | |
| 549 | B. A. C. 6570 ¹ . . . | 6.5 | 19 8 52.53 | | 1.571 | 6.5 | 3 | 40 22 36.8 | | 5.94 | 6.5 | 3 | | |
| 550 | B. A. C. 6570 ² . . . | 6.5 | 8 53.11 | | 1.570 | 6.5 | 3 | 40 22 29.1 | | 5.94 | 6.5 | 3 | | |
| 551 | B. A. C. 6593 . . . | 6.5 | 11 36.48 | | 1.999 | 6.3 | 1 | 49 51 23.5 | | 6.16 | 6.3 | 1 | | |
| 552 | B. A. C. 6624 . . . | 6.5 | 19 14 49.49 | + | 2.005 | 6.3 | 1 | 49 52 2.0 | — | 6.43 | 6.3 | 1 | | |
| 553 | B. A. C. 6659 . . . | 5.5 | 20 8.92 | | 1.574 | 6.5 | 2 | 39 58 13.3 | | 6.87 | 6.5 | 2 | | |
| 554 | O. Arg. N. 19238 . . . | 5.0 | 21 17.64 | | 1.578 | 6.5 | 2 | 40 0 7.9 | | 6.97 | 6.5 | 2 | | |
| 555 | B. A. C. 6690 ¹ . . . | 3.0 | 25 43.25 | | 2.419 | 6.3 | 3 | 62 17 59.0 | | 7.32 | 6.4 | 5 | | |
| 556 | B. A. C. 6690 ² . . . | 6.0 | 25 45.39 | | 2.419 | 6.5 | 1 | 62 17 39.3 | | 7.33 | 6.5 | 1 | | |
| 557 | B. A. C. 6693 . . . | . . | 19 27 9.58 | + | 2.844 | 6.8 | 1 | 121 52 27.7 | — | 7.45 | 6.8 | 1 | | |
| 558 | Anonymous . . . | . . | 27 52.37 | | 3.695 | 6.6 | 3 | 116 40 2.8 | | 7.50 | 6.6 | 3 | | |
| 559 | Mural Zones 176, 77 . . . | . . | 28 16.50 | | 3.692 | 6.6 | 3 | 116 34 12.9 | | 7.54 | 6.6 | 2 | | |
| 560 | Mural Zones 176, 78 . . . | . . | 28 55.03 | | 3.692 | 6.6 | 3 | 116 35 34.0 | | 7.59 | 6.6 | 2 | | |
| 561 | Mural Zones 52, 24 . . . | . . | 29 16.53 | | 3.723 | 6.7 | 1 | 117 46 22.3 | | 7.62 | 6.7 | 1 | | |
| 562 | Anonymous . . . | . . | 19 29 58.14 | + | 3.689 | 6.6 | 1 | 116 31 16.8 | — | 7.67 | 6.6 | 1 | | |
| 563 | Mural Zones 19, 60 . . . | . . | 30 42.82 | | 3.718 | 6.7 | 1 | 117 38 7.8 | | 7.73 | 6.7 | 1 | | |
| 564 | Anonymous . . . | . . | 30 48.90 | | 3.691 | 6.6 | 1 | 116 38 25.5 | | 7.74 | 6.6 | 1 | | |
| 565 | O. Arg. S. 19809 . . . | . . | 31 16.42 | | 3.718 | 6.7 | 2 | 117 38 57.2 | | 7.78 | 6.7 | 2 | | |
| 566 | B. A. C. 6763 . . . | . . | 38 31.19 | | 1.612 | 6.3 | 1 | 39 45 42.4 | | 8.36 | 6.3 | 1 | | |
| 567 | B. A. C. 6764 . . . | . . | 19 38 33.91 | + | 1.612 | 6.3 | 1 | 39 46 9.3 | — | 8.36 | 6.3 | 1 | | |
| 568 | B. A. C. 6799 . . . | . . | . . . | | 1.756 | . . | . . | 42 23 54.7 | | 8.78 | 6.5 | 2 | | |
| 569 | B. A. C. 6876 . . . | . . | 55 26.82 | | 1.883 | 6.3 | 1 | 44 33 54.6 | | 9.68 | 6.3 | 1 | | |
| 570 | B. A. C. 6881 . . . | . . | 19 55 58.18 | | 1.591 | 6.7 | 1 | 38 16 58.2 | | 9.72 | 6.7 | 1 | | |
| 571 | B. A. C. 6913 . . . | . . | 20 0 57.29 | | 0.675 | 6.7 | 3 | 25 42 54.6 | | 10.10 | 6.7 | 3 | | |
| 572 | B. A. C. 6918 . . . | . . | 20 1 45.21 | + | 1.624 | 6.8 | 1 | 38 30 56.9 | — | 10.16 | 6.8 | 1 | | |
| 573 | B. A. C. 6934 . . . | . . | 4 54.42 | | 3.096 | 6.2 | 3 | 91 11 16.4 | | 10.40 | 6.2 | 3 | | |
| 574 | B. A. C. 6948 . . . | . . | 8 8.24 | + | 3.737 | 6.7 | 3 | 120 22 54.0 | | 10.63 | 6.7 | 3 | | |
| 575 | α ² Cephei, S. P. . . . | . . | 12 3.92 | — | 1.538 | 6.9 | 1 | 347 20 8.2 | | 10.93 | 6.9 | 1 | | |
| 576 | B. A. C. 6985 . . . | . . | 12 6.96 | + | 1.743 | 6.8 | 1 | 40 8 52.8 | | 10.93 | 6.8 | 1 | | |
| 577 | Weisse (2) 538 . . . | 8.5 | 20 15 56.20 | + | 2.685 | 6.7 | 3 | 70 43 49.9 | — | 11.21 | 6.7 | 3 | | |
| 578 | B. A. C. 7022 . . . | . . | 17 46.77 | | 2.151 | 6.2 | 3 | 50 8 21.5 | | 11.34 | 6.2 | 3 | | |
| 579 | B. A. C. 7025 . . . | . . | 18 50.77 | | 3.925 | 6.8 | 1 | 127 48 9.2 | | 11.42 | 6.8 | 1 | | |
| 580 | B. A. C. 7035 . . . | . . | 19 49.12 | | 1.549 | 6.7 | 3 | 35 43 35.3 | | 11.49 | 6.7 | 3 | | |
| 581 | B. A. C. 7055 . . . | . . | 22 19.66 | | 1.560 | 6.7 | 3 | 35 43 16.0 | | 11.67 | 6.7 | 3 | | |
| 582 | O. Arg. S. 20578 . . . | . . | 20 24 55.91 | + | 3.582 | 6.6 | 2 | 115 17 15.1 | — | 11.85 | 6.6 | 1 | | |
| 583 | B. A. C. 7077 . . . | 5.0 | 25 29.22 | | 3.582 | 6.7 | 2 | 115 21 40.4 | | 11.89 | 6.7 | 2 | | |
| 584 | Anonymous . . . | 9.5 | 25 45.34 | | 3.583 | 6.8 | 1 | 115 24 33.7 | | 11.92 | 6.8 | 1 | | |
| 585 | Anonymous . . . | 9.5 | 26 49.32 | | 3.583 | 6.7 | 2 | 115 27 44.9 | | 11.98 | 6.7 | 2 | | |
| 586 | Mural Zones 64, 16 . . . | . . | 28 28.11 | | 3.565 | 6.6 | 1 | 114 47 57.5 | | 12.10 | 6.6 | 1 | | |

| Number. | Name of Star. | Magnitude. | Mean Right Ascension, 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. | Mean N. P. Distance, 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. |
|---------|-------------------------------|------------|-------------------------------------|--------------------------------|------------|-------------|------------------------------------|--------------------------------|------------|-------------|
| | | | h. m. s. | s. | | | ° ' " | " | | |
| 587 | B. A. C. 7149 | .. | 20 33 52.72 | + 2.782 | 6.2 | 5 | 74 31 27.4 | - 12.48 | 6.2 | 5 |
| 588 | B. A. C. 7174 | .. | 37 27.82 | 2.165 | 6.7 | 1 | 48 43 56.2 | 12.72 | 6.7 | 1 |
| 589 | B. A. C. 7175 | .. | 38 44.79 | 3.927 | 6.7 | 1 | 129 38 52.6 | 12.77 | 6.7 | 1 |
| 590 | B. A. C. 7189 | .. | 39 12.21 | 1.495 | 6.7 | 1 | 33 3 37.5 | 12.84 | 6.7 | 1 |
| 591 | γ^1 Delphini | .. | 40 54.26 | 2.786 | 6.6 | 2 | 74 19 19.1 | 12.95 | 6.6 | 2 |
| 592 | B. A. C. 7234 | .. | 20 45 35.70 | + 3.922 | 6.7 | 2 | 130 16 20.3 | - 13.26 | 6.7 | 2 |
| 593 | B. A. C. 7237 | .. | 45 44.65 | 3.524 | 6.6 | 3 | 114 14 48.2 | 13.27 | 6.6 | 3 |
| 594 | B. A. C. 7260 | 6.5 | 49 44.45 | 2.237 | 6.7 | 3 | 49 46 4.8 | 13.53 | 6.7 | 3 |
| 595 | B. A. C. 7286 | .. | 54 29.60 | 3.856 | 6.7 | 2 | 129 0 37.6 | 13.84 | 6.7 | 2 |
| 596 | B. A. C. 7292 | .. | 55 2.09 | 3.858 | 6.7 | 2 | 129 6 51.3 | 13.87 | 6.7 | 2 |
| 597 | B. A. C. 7316 | .. | 20 58 31.69 | + 3.635 | 6.7 | 1 | 120 36 55.8 | - 14.09 | 6.7 | 1 |
| 598 | 61^2 Cygni | .. | 21 1 22.08 | 2.335 | 6.7 | 3 | 51 51 40.3 | 14.27 | 6.7 | 3 |
| 599 | Mural Zones 187, 66 . . . | .. | 6 54.84 | 3.416 | 6.7 | 3 | 110 35 53.9 | 14.27 | 6.7 | 3 |
| 600 | Anonymous | .. | 7 45.33 | 3.415 | 6.8 | 1 | 112 19 58.3 | 14.66 | 6.8 | 1 |
| 601 | O. Arg. S. 21237 | .. | 7 54.52 | 3.447 | 6.7 | 3 | 110 34 58.5 | 14.66 | 6.7 | 3 |
| 602 | Transit Zones 176, 4 . . . | .. | 21 7 56.90 | + 3.447 | 6.8 | 1 | 112 19 36.5 | - 14.66 | 6.8 | 1 |
| 603 | O. Arg. S. 21249 | .. | 8 47.20 | 3.439 | 6.8 | 1 | 111 57 11.2 | 14.71 | 6.8 | 1 |
| 604 | B. A. C. 7387 | 6.5 | 9 37.93 | 1.531 | 6.7 | 3 | 30 24 48.1 | 14.76 | 6.8 | 1 |
| 605 | Anonymous | 11.0 | 10 4.79 | 3.474 | 6.7 | 1 | 113 58 36.2 | 14.79 | 6.7 | 1 |
| 606 | Anonymous | 11.0 | 10 12.88 | 3.474 | 6.7 | 1 | 113 56 44.4 | 14.79 | 6.7 | 1 |
| 607 | B. A. C. 7398 | .. | 12 32.88 | 2.352 | 6.2 | 2 | 51 7 27.3 | 14.93 | 6.2 | 2 |
| 608 | B. A. C. 7399 | .. | 21 12 49.22 | + 2.463 | 6.3 | 1 | 55 37 23.8 | - 14.95 | 6.3 | 1 |
| 609 | Anonymous | 9.5 | 19 7.86 | 3.407 | 6.8 | 5 | 111 9 58.8 | 15.31 | 6.8 | 5 |
| 610 | B. A. C. 7447 | .. | 20 12.89 | 3.414 | 6.7 | 4 | 111 43 53.6 | 15.37 | 6.7 | 4 |
| 611 | B. A. C. 7477 | .. | 24 33.08 | 2.268 | 6.7 | 1 | 46 12 13.5 | 15.61 | 6.7 | 1 |
| 612 | B. A. C. 7483 | .. | 26 12.79 | 1.992 | 6.7 | 1 | 37 35 13.3 | 15.70 | 6.7 | 1 |
| 613 | Anonymous | 10.8 | 21 27 36.12 | + 3.218 | 6.7 | 4 | 100 2 55.8 | - 15.78 | 6.7 | 4 |
| 614 | O. Arg. S. 21542 | 9.0 | 32 11.66 | 3.303 | 6.7 | 4 | 106 0 20.6 | 16.03 | 6.7 | 4 |
| 615 | B. A. C. 7544 | 5.5 | 35 19.23 | 2.344 | 6.8 | 3 | 47 17 19.5 | 16.19 | 6.8 | 3 |
| 616 | B. A. C. 7564 | .. | 37 26.02 | 0.841 | 6.8 | 1 | 19 15 4.6 | 16.30 | 6.8 | 1 |
| 617 | B. A. C. 7588 | .. | 40 6.06 | 0.880 | 6.8 | 2 | 19 15 34.1 | 16.43 | 6.8 | 2 |
| 618 | B. A. C. 7589 | 6.0 | 21 40 50.79 | + 2.106 | 6.6 | 3 | 38 18 11.5 | - 16.47 | 6.6 | 4 |
| 619 | B. A. C. 7593 | .. | 41 21.21 | 2.376 | 6.8 | 1 | 47 30 44.4 | 16.50 | 6.8 | 1 |
| 620 | B. A. C. 7612 | 6.0 | 45 28.85 | 2.121 | 6.8 | 3 | 37 52 54.1 | 16.70 | 6.8 | 4 |
| 621 | B. A. C. 7646 | 6.0 | 51 9.18 | 2.139 | 6.8 | 3 | 37 20 40.8 | 16.97 | 6.8 | 4 |
| 622 | Weisse 1314 | 10.0 | 58 3.07 | 3.210 | 6.7 | 4 | 101 28 59.4 | 17.28 | 6.7 | 4 |
| 623 | Anonymous | 10.6 | 21 59 17.00 | + 3.208 | 6.7 | 3 | 101 24 17.5 | - 17.34 | 6.7 | 4 |
| 624 | Anonymous | .. | 21 59 49.15 | 3.280 | 6.7 | 2 | 107 15 13.0 | 17.36 | 6.7 | 2 |
| 625 | Anonymous | .. | 22 1 22.05 | 3.276 | 6.7 | 1 | 107 9 20.3 | 17.43 | 6.7 | 1 |
| 626 | Mural Zones 207, 63 . . . | .. | 1 40.60 | 3.276 | 6.7 | 1 | 107 8 55.1 | 17.44 | 6.7 | 1 |
| 627 | Anonymous | .. | 1 46.35 | 3.277 | 6.7 | 1 | 107 13 1.4 | 17.45 | 6.7 | 1 |

| Number. | Name of Star. | Magnitude. | Mean Right Ascension, 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. | Mean N. P. Distance, 1876.0. | Annual Precession, 1876. | Mean year. | No. of obs. |
|---------|--------------------------------------|------------|-------------------------------------|--------------------------------|------------|-------------|------------------------------------|--------------------------------|------------|-------------|
| | | | h. m. s. | s. | | | ° ' " | " | | |
| 628 | B. A. C. 7732 | 6.0 | 22 2 34.30 | - 1.756 | 6.8 | 3 | 7 43 39.7 | - 17.48 | 6.8 | 3 |
| 629 | B. A. C. 7735 | 6.0 | 2 40.87 | - 1.754 | 6.8 | 3 | 7 43 36.7 | 17.48 | 6.8 | 3 |
| 630 | B. A. C. 7718 | 6.0 | 2 59.14 | + 2.017 | 6.7 | 1 | 31 45 48.4 | 17.50 | 6.7 | 1 |
| 631 | B. A. C. 7743 | 6.0 | 5 54.46 | 2.489 | 6.5 | 1 | 47 34 43.9 | 17.62 | 6.5 | 1 |
| 632 | B. A. C. 7770 | 5.5 | 9 31.74 | 2.508 | 6.5 | 1 | 47 39 39.1 | 17.77 | 6.5 | 1 |
| 633 | 42 Aquarii | 6.0 | 22 10 9.68 | + 3.220 | 6.7 | 1 | 103 26 56.4 | - 17.80 | 6.7 | 1 |
| 634 | B. A. C. 7779 ¹ | 6.0 | 10 36.25 | 1.100 | 6.8 | 1 | 17 18 1.7 | 17.81 | 6.8 | 1 |
| 635 | B. A. C. 7779 ² | 6.0 | 10 37.62 | 1.102 | 6.8 | 2 | 17 18 30.0 | 17.81 | 6.8 | 2 |
| 636 | Mural Zones 207, 70 | 6.0 | 10 39.34 | 3.256 | 6.7 | 2 | 106 39 22.0 | 17.82 | 6.7 | 3 |
| 637 | Mural Zones 207, 71 | 6.0 | 10 44.15 | 3.255 | 6.7 | 2 | 106 35 52.3 | 17.82 | 6.7 | 3 |
| 638 | Transit Zones 205, 40 | 6.0 | 22 16 40.69 | + 3.234 | 6.6 | 3 | 105 34 16.0 | - 18.05 | 6.6 | 3 |
| 639 | Transit Zones 204, 17 | 6.0 | 19 20.07 | 3.231 | 6.6 | 3 | 105 34 50.5 | 18.15 | 6.6 | 3 |
| 640 | B. A. C. 7857 | 6.0 | 25 45.48 | 0.526 | 6.8 | 3 | 11 50 52.3 | 18.38 | 6.8 | 1 |
| 641 | B. A. C. 7874 | 6.0 | 28 46.08 | 0.595 | 6.8 | 2 | 11 48 45.5 | 18.49 | 6.8 | 1 |
| 642 | Weisse 604 | 6.0 | 30 11.88 | 3.190 | 6.7 | 1 | 103 1 24.2 | 18.55 | 6.7 | 1 |
| 643 | 64 Aquarii | 6.5 | 22 32 44.42 | + 3.166 | 6.8 | 1 | 100 40 20.0 | - 18.62 | 6.8 | 1 |
| 644 | B. A. C. 7923 | 6.5 | 37 11.47 | 2.804 | 6.3 | 3 | 60 25 35.1 | 18.76 | 6.3 | 3 |
| 645 | B. A. C. 7931 | 6.5 | 38 29.56 | 2.698 | 6.8 | 1 | 51 11 3.0 | 18.80 | 6.8 | 1 |
| 646 | B. A. C. 7962 | 6.5 | 44 46.42 | 2.694 | 6.7 | 2 | 48 42 9.9 | 18.98 | 6.7 | 2 |
| 647 | B. A. C. 7987 | 6.5 | 49 4.58 | 3.349 | 6.8 | 1 | 123 12 7.5 | 19.10 | 6.8 | 1 |
| 648 | B. A. C. 8013 | 6.5 | 22 54 4.68 | + 2.437 | 6.7 | 2 | 30 50 59.2 | - 19.23 | 6.7 | 2 |
| 649 | B. A. C. 8026 | 6.5 | 55 20.21 | - 0.291 | 6.8 | 1 | 6 19 3.1 | 19.26 | 6.8 | 1 |
| 650 | B. A. C. 8032 | 6.5 | 22 57 45.94 | + 2.886 | 6.3 | 2 | 62 35 23.4 | 19.32 | 6.3 | 2 |
| 651 | B. A. C. 8054 | 6.5 | 23 1 22.67 | 2.515 | 6.7 | 2 | 31 15 1.4 | 19.40 | 6.7 | 2 |
| 652 | B. A. C. 8058 | 6.5 | 1 59.28 | 2.729 | 6.8 | 1 | 44 16 55.6 | 19.41 | 6.8 | 1 |
| 653 | Weisse 22 ¹ | 9.0 | 23 3 40.14 | + 3.122 | 6.8 | 2 | 98 44 28.1 | - 19.45 | 6.8 | 2 |
| 654 | Weisse 22 ² | 9.7 | 3 40.19 | 3.122 | 6.8 | 2 | 98 44 22.2 | 19.45 | 6.8 | 2 |
| 655 | Weisse 23 | 9.0 | 3 40.28 | 3.123 | 6.8 | 2 | 98 49 38.4 | 19.45 | 6.8 | 2 |
| 656 | B. A. C. 8074 | 6.5 | 3 58.23 | 1.889 | 6.8 | 1 | 15 16 56.3 | 19.46 | 6.8 | 1 |
| 657 | Weisse 103 | 8.5 | 7 36.00 | 3.123 | 6.8 | 4 | 99 35 51.8 | 19.53 | 6.8 | 3 |
| 658 | Weisse 104 | 9.0 | 23 7 36.09 | + 3.124 | 6.8 | 4 | 99 36 16.7 | - 19.53 | 6.8 | 3 |
| 659 | Weisse 109 | 10.0 | 7 44.51 | 3.123 | 6.8 | 4 | 99 36 45.4 | 19.53 | 6.8 | 3 |
| 660 | ψ ¹ Aquarii | 6.5 | 9 23.68 | 3.123 | 6.8 | 2 | 99 45 48.2 | 19.57 | 6.8 | 2 |
| 661 | B. A. C. 8102 | 6.5 | 10 25.25 | 3.115 | 6.8 | 1 | 98 24 11.2 | 19.58 | 6.8 | 1 |
| 662 | B. A. C. 8107 | 6.5 | 11 3.46 | 2.703 | 6.7 | 1 | 37 27 16.5 | 19.60 | 6.7 | 1 |
| 663 | Anonymous | 10.5 | 23 20 7.63 | + 3.111 | 6.7 | 1 | 97 34 51.4 | - 19.75 | 6.7 | 1 |
| 664 | B. A. C. 8184 | 6.5 | 23 7.36 | 3.092 | 6.7 | 4 | 95 12 27.8 | 19.79 | 6.7 | 4 |
| 665 | Anonymous | 8.5 | 41 16.84 | 3.082 | 6.8 | 4 | 95 9 4.3 | 19.99 | 6.8 | 4 |
| 666 | Anonymous | 6.5 | 41 27.46 | 3.083 | 6.8 | 1 | 95 37 7.5 | 19.99 | 6.8 | 1 |
| 667 | Weisse 839 | 6.5 | 42 5.93 | 3.082 | 6.8 | 1 | 95 22 22.0 | 19.99 | 6.8 | 1 |

CATALOGUE OF MISCELLANEOUS STARS.

| Number. | Name of Star | Magnitude. | Mean Right Ascension, 1876.0. | | | Annual Precession, 1876. | Mean year. | No. of obs. | Mean N. P. Distance, 1876.0. | | | Annual Precession, 1876. | Mean year. | No. of obs. |
|---------|----------------------------------|------------|-------------------------------------|----|-------|--------------------------------|------------|-------------|------------------------------------|----|------|--------------------------------|------------|-------------|
| | | | h. | m. | s. | | | | ° | ' | " | | | |
| 668 | Weisse 848 | 9.0 | 23 | 42 | 23.19 | + 3.081 | 6.8 | 3 | 95 | 7 | 29.4 | - 19.99 | 6.8 | 3 |
| 669 | B. A. C. 8277 ¹ . . . | 7.0 | | 42 | 38.66 | 2.863 | 6.8 | 1 | 25 | 48 | 44.8 | 19.99 | 6.8 | 1 |
| 670 | B. A. C. 8277 ² . . . | 8.7 | | 42 | 39.44 | 2.864 | 6.8 | 1 | 25 | 47 | 54.8 | 20.00 | 6.8 | 1 |
| 671 | B. A. C. 8316 | 6.0 | | 49 | 17.89 | 2.992 | 6.8 | 2 | 37 | 57 | 18.5 | 20.03 | 6.8 | 2 |
| 672 | B. A. C. 8326 | . . | | 51 | 50.75 | 3.616 | 6.8 | 2 | 40 | 15 | 4.7 | 20.04 | 6.8 | 2 |

METEOROLOGICAL OBSERVATIONS

MADE AT THE

UNITED STATES NAVAL OBSERVATORY

DURING

THE YEAR 1876.

INTRODUCTION.

The meteorological department, during 1876, was under the charge of Prof. J. R. Eastman, U. S. N., who made a daily examination of all the records and a monthly inspection of all the instruments in use. The observations were made at 0^h, 3^h, 6^h, 9^h, 12^h, 15^h, 18^h, and 21^h, Washington civil time, by the Observatory watchmen, Messrs. T. Hays, D. Horrigan, and N. Cahill, who have acquired such a degree of skill as insures a reasonable accuracy in their work.

METEOROLOGICAL INSTRUMENTS.

Standard Barometer.—The barometer was made by James Green, of New York, and is used only as a standard by which the Newman barometer is occasionally tested. Drawings and a description of this instrument will be found in the volume of Washington Observations for 1862.

Newman Barometer.—This barometer in daily use was made by Newman, and is mounted against the northern wall of the northwest room on the first floor of the Observatory. The barometer is mounted with the usual adjustments at the top and bottom, and is attached by heavy brackets to a substantial mahogany board, which is firmly secured to the wall. The cistern is 103 feet above the mean half-tide of the Potomac River. The cistern and tube are of glass; the internal diameter of the former being 3.0 inches, and of the latter 0.532 inch.

The scale is attached to a brass rod having the usual adjustment to the surface of the mercury in the cistern. It is silvered and divided to 0.05 inch, and, by means of a vernier, may be read to 0.002 inch. The temperature of the mercury in the cistern is determined by a small ivory-scale thermometer, the bulb of which is constantly immersed in the mercury. The observations with this instrument in 1875, as printed in this volume, have received the constant correction of +0.005 inch, determined in 1864, and have also been reduced to 32° Fahrenheit.

Dry-bulb Thermometer.—This is a mercurial thermometer by Green, with a bulb 1.5 inches long and 0.2 inch in diameter. The scale is of glass, 12.0 inches long, 0.8 inch wide, and 0.1 inch thick. It is divided to half-degrees from $-30^{\circ}.0$ to $+125^{\circ}.0$ Fahrenheit. Several independent tests, in the spring of 1868, indicated that the *freezing-point* had changed its position on the scale since 1863.

In 1871, the dry-bulb, the maximum, and the minimum thermometers were compared with the Kew standard thermometer, No. 462, belonging to Professor Eastman. No appreciable errors were detected in the maximum and minimum thermometers. A

correction of $-0^{\circ}.9$ was deduced for the dry-bulb thermometer, and in 1876 this correction was found to be $-1^{\circ}.0$, and each observation published in this volume has been corrected by the latter quantity.

Wet-bulb Thermometer.—This instrument is similar to the preceding in materials, construction, and dimensions. Its scale extends from $-35^{\circ}.0$ to $+115^{\circ}.0$ Fahrenheit. The bulb is covered with soft, fine linen, kept moist by the capillary action of a bundle of fine linen fibers that communicate with water in a bird-glass placed close beside it. The linen on the bulb is changed before its free action is impaired by dust.

Maximum Thermometer.—This is a mercurial thermometer, with a bulb 1.5 inches long and 0.2 inch in diameter. The scale is of glass, 12.0 inches long, 0.8 inch wide, and 0.1 inch thick, and is graduated to half-degrees from $-50^{\circ}.0$ to $+120^{\circ}.0$ Fahrenheit. At a point a short distance above the bulb, the internal diameter of the tube is so reduced that, while with the increase of temperature the mercury passes freely, with the least decrease of temperature the column of mercury is broken at the point of contraction if the instrument is nearly horizontal, and the top of the column marks the highest temperature.

The top of the scale is attached by a metallic clamp to a pivot, around which the thermometer revolves freely in a vertical plane. This pivot is secured to a walnut board fixed to a post, about three feet above the ground; and the thermometer is placed nearly horizontal by resting the scale near the bulb on a wooden pin in the board.

After each observation, the instrument is adjusted by removing the pin and allowing the thermometer to swing freely from the pivot at the top of the scale, which motion is generally sufficient to reunite the column of mercury. In 1873, it was found that the readings from this thermometer required a correction of $+0^{\circ}.5$, which has been applied to the observations of 1876.

Minimum Thermometer.—This is a transparent spirit-thermometer, with a spherical bulb about 0.5 inch in diameter. The scale is of silvered brass, 12 inches long, 1.0 inch wide, and 0.06 inch thick, and is graduated to degrees from $-67^{\circ}.0$ to $+131^{\circ}.0$ Fahrenheit. The registering index is a short, fine steel wire, inclosed in a delicate blue-glass cylinder, with a small knob at the extremity farthest from the bulb of the thermometer.

This cylinder is drawn toward the bulb by the decrease of temperature; but when the temperature increases, the spirit flows through and around the cylinder, which remains at rest at the lowest point reached by the liquid. The end of the knob on the cylinder indicates the lowest point reached by the column of liquid. After each observation, the index is moved to the top of the column by means of a small magnet.

Solar Thermometer.—This thermometer (No. 13583) was made by L. Casella, of London, and consists of a blackened spherical bulb and its tube, inclosed within a bulb and cylinder of glass of the same form as the thermometer, but of about three times the diameter. The air has been exhausted from the inclosing bulb and cylinder, and the thermometer is confined in the center of the cylinder by having its upper end sealed to the end of the cylinder, while the lower end is fixed in a cork collar just above the junction of the bulb and cylinder. The scale is engraved on the thermometer-tube to degrees, and has a range from $-10^{\circ}.0$ to $+215^{\circ}.0$ Fahrenheit.

At about 20° from the top of the column of mercury, a small portion of air

(covering about $0^{\circ}.5$ on the scale) is introduced into the column, so that whenever the temperature diminishes, the column of mercury above the air remains in position, indicating the highest temperature subsequent to the last observation. After each observation, the instrument is adjusted by holding it in a vertical position, tapping it gently, if necessary, until the upper portion forces the air down to the main column.

This thermometer rests in a horizontal position, in metallic crutches, 3 inches high, which are attached to an inch board 16 inches long and 5 inches wide. The board is painted green, and placed on the grass about three yards west of the Meteorological Observatory.

METEOROLOGICAL OBSERVATORY.

In 1862, a small building for the special protection of thermometers was erected about four yards southwest of the southwest corner of the south wing of the Observatory. It is constructed of wood, and painted white throughout.

Its form is octagonal, each side being 2.4 feet wide and 6.3 feet high to the eaves. The roof is of tin, unpainted on the under side. The ceiling is of thick boards, tightly fitted together, and between it and the roof there is an open space freely communicating with the open air.

On the north side is the door, which, as well as the sides, is of double louver-work, with a space of three inches between the two divisions. The sides terminate one foot from the ground, and, as the building is situated on a grass-plot, under ordinary circumstances the instrument should indicate the true temperature. This building was moved on April 9, 1874, to a point 18.8 yards west of the south wing of the main building and 17.3 yards south of the Transit Circle room.

The dry-, wet-bulb, maximum, and minimum thermometers are in the Meteorological Observatory, and are all supported by means of arms and brackets to an upright metallic shaft, which is firmly secured to the ground in the center of the building.

The bulb of the minimum thermometer is 5.8 feet, those of the dry- and the wet-bulb thermometers are 4.2 feet, and that of the maximum thermometer is 3.2 feet above the ground.

A standard thermometer (Troughton and Simms, No. 1) is suspended between the dry- and the wet-bulb thermometers, and is frequently used as a check on the other instruments.

From frequent comparisons, it has been ascertained that the errors of the minimum and wet-bulb thermometers are not appreciable, and therefore the published observations with these instruments are the unmodified copies of the original records.

The maximum and minimum thermometers were read at the end (midnight) of each day.

DIRECTION AND FORCE OF THE WIND.

An ordinary wind-vane revolves freely on a spindle at the top of the time-ball staff, and the direction of the wind is estimated from the known azimuths of the lines

of the main building of the Observatory. The velocity of the wind is recorded in numerals, of which 0 indicates a calm, 1 a very slight breeze, and so on up to 10, which would indicate a violent hurricane.

These recorded numbers are only estimates, and at best are but approximative.

CLOUDS.

In the description of the prevailing forms of clouds, the nomenclature of Howard is used: C., K., S., N., being the symbols for the forms designated *cirrus*, *cumulus*, *stratus*, *nimbus*; and the letters C. S., C. K., &c., indicate the combination *cirro-stratus*, *cirro-cumulus*, &c. The portion of the sky obscured is determined by estimation after a careful scrutiny of the clouds or sky. A clear sky is denoted by 0, and a total obscuration by 10.

RAIN-GAUGE.

This instrument is placed within the inclosure for the protection of the solar thermometer. It consists of a cylinder 0.8 inch long and 4.1 inches in diameter, soldered to an inverted cone, which is loaded with lead on the outside and near the apex.

The cone rests in an aperture in the horizontal top of an oblong box, and this, aided by the weight of the lead, prevents any disturbance, even during high winds. The top of the gauge is 2.0 feet above the ground, and is free from all shelter, even in driving rain-storms.

At the apex of the cone is a small aperture, through which the water passes to a receiving-bottle in the box.

The rain is measured in a glass cylinder, with an internal diameter of 0.60 inch, so graduated that the depth of rain can be determined to within 0.002 inch.

The gauge is examined every day, and, as the apex of the cone closes the mouth of the bottle except through the small aperture, there is little or no loss by evaporation.

Each inch of snow is assumed to be equal to 0.111 inch of rain; but, whenever practicable, the snow has been melted, and measured in the graduated cylinder.

O B S E R V A T I O N S.

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|---------------|------------------|------------------|------------------|------------------|--------|------------------|------------------|------------------|
| 1876. | in. | in. | in. | in. | in. | in. | in. | in. |
| January | | | | | | | | |
| 1 | 30.169 | 30.130 | 30.114 | 30.161 | 30.106 | 30.052 | 30.044 | 29.994 |
| 2 | 29.958 | 29.944 | 29.940 | 29.950 | 29.863 | 29.855 | 29.905 | 29.943 |
| 3 | 29.951 | 29.989 | 30.037 | 30.123 | 30.086 | 30.080 | 30.143 | 30.200 |
| 4 | 30.211 | 30.230 | 30.262 | 30.334 | 30.320 | 30.352 | 30.416 | 30.461 |
| 5 | 30.463 | 30.485 | 30.463 | 30.458 | 30.339 | 30.195 | 30.118 | 30.038 |
| 6 | 29.947 | 29.907 | 29.896 | 29.980 | 30.034 | 30.102 | 30.212 | 30.254 |
| 7 | 30.263 | 30.301 | 30.312 | 30.346 | 30.257 | 30.225 | 30.225 | 30.223 |
| 8 | 30.192 | 30.160 | 30.149 | 30.155 | 30.038 | 29.941 | 29.880 | 29.998 |
| 9 | 29.721 | 29.735 | 29.737 | 29.777 | 29.695 | 29.663 | 29.661 | 29.567 |
| 10 | 29.504 | 29.509 | 29.571 | 29.743 | 29.754 | 29.824 | 29.976 | 30.077 |
| 11 | 30.140 | 30.203 | 30.219 | 30.270 | 30.198 | 30.144 | 30.113 | 30.106 |
| 12 | 30.040 | 30.025 | 29.952 | 29.938 | 29.857 | 29.907 | 29.997 | 30.072 |
| 13 | 30.126 | 30.191 | 30.258 | 30.324 | 30.282 | 30.290 | 30.310 | 30.355 |
| 14 | 30.366 | 30.384 | 30.369 | 30.385 | 30.391 | 30.221 | 30.205 | 30.233 |
| 15 | 30.261 | 30.301 | 30.313 | 30.312 | 30.240 | 30.198 | 30.172 | 30.145 |
| 16 | 30.057 | 30.044 | 30.087 | 30.177 | 30.182 | 30.180 | 30.205 | 30.172 |
| 17 | 30.065 | 30.017 | 30.003 | 30.003 | 29.970 | 29.951 | 29.974 | 29.995 |
| 18 | 29.964 | 29.952 | 29.931 | 29.922 | 29.792 | 29.715 | 29.710 | 29.687 |
| 19 | 29.661 | 29.635 | 29.931 | 29.634 | 29.533 | 29.506 | 29.471 | 29.613 |
| 20 | 29.717 | 29.863 | 29.968 | 30.129 | 30.165 | 30.164 | 30.211 | 30.265 |
| 21 | 30.268 | 30.293 | 30.320 | 30.408 | 30.356 | 30.334 | 30.361 | 30.402 |
| 22 | 30.400 | 30.400 | 30.386 | 30.401 | 30.348 | 30.281 | 30.245 | 30.224 |
| 23 | 30.177 | 30.101 | 30.039 | 30.044 | 29.978 | 29.928 | 29.938 | 29.915 |
| 24 | 29.872 | 29.909 | 30.033 | 30.151 | 30.156 | 30.160 | 30.233 | 30.275 |
| 25 | 30.265 | 30.264 | 30.245 | 30.234 | 30.082 | 29.968 | 29.903 | 29.858 |
| 26 | 29.850 | 29.924 | 30.032 | 30.147 | 30.171 | 30.144 | 30.195 | 30.189 |
| 27 | 30.140 | 30.073 | 29.980 | 29.894 | 29.845 | 29.807 | 29.896 | 29.952 |
| 28 | 29.949 | 29.946 | 29.946 | 29.979 | 29.885 | 29.797 | 29.817 | 29.828 |
| 29 | 29.805 | 29.766 | 29.716 | 29.708 | 29.719 | 29.740 | 29.938 | 30.169 |
| 30 | 30.229 | 30.335 | 30.429 | 30.521 | 30.516 | 30.450 | 30.462 | 30.458 |
| 31 | 30.405 | 30.368 | 30.342 | 30.328 | 30.275 | 30.191 | 30.184 | 30.176 |
| Hourly means. | 30.069 | 30.077 | 30.086 | 30.127 | 30.078 | 30.044 | 30.068 | 30.092 |

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|---------------|------------------|------------------|------------------|------------------|--------|------------------|------------------|------------------|
| 1876. | in. | in. | in. | in. | in. | in. | in. | in. |
| February | | | | | | | | |
| 1 | 30.161 | 30.110 | 30.080 | 30.022 | 29.868 | 29.757 | 29.585 | 29.390 |
| 2 | 29.175 | 29.275 | 29.540 | 29.823 | 29.930 | 30.038 | 30.201 | 30.295 |
| 3 | 30.386 | 30.411 | 30.431 | 30.468 | 30.375 | 30.283 | 30.211 | 30.160 |
| 4 | 30.015 | 29.968 | 30.003 | 30.115 | 30.132 | 30.200 | 30.299 | 30.428 |
| 5 | 30.506 | 30.624 | 30.725 | 30.825 | 30.847 | 30.792 | 30.825 | 30.833 |
| 6 | 30.796 | 30.707 | 30.672 | 30.654 | 30.531 | 30.439 | 30.343 | 30.283 |
| 7 | 30.197 | 30.160 | 30.207 | 30.276 | 30.295 | 30.258 | 30.295 | 30.310 |
| 8 | 30.316 | 30.329 | 30.361 | 30.410 | 30.376 | 30.395 | 30.315 | 30.304 |
| 9 | 30.283 | 30.239 | 30.213 | 30.193 | 30.089 | 29.943 | 29.863 | 29.730 |
| 10 | 29.654 | 29.743 | 29.803 | 29.947 | 29.980 | 30.002 | 30.051 | 30.056 |
| 11 | 30.111 | 30.065 | 29.989 | 29.954 | 29.836 | 29.668 | 29.783 | 29.796 |
| 12 | 29.829 | 29.896 | 29.961 | 30.083 | 30.081 | 30.067 | 30.068 | 30.076 |
| 13 | 30.069 | 30.053 | 30.040 | 30.022 | 29.969 | 29.899 | 29.885 | 29.841 |
| 14 | 29.802 | 29.743 | 29.692 | 29.687 | 29.650 | 29.622 | 29.581 | 29.516 |
| 15 | 29.436 | 29.297 | 29.233 | 29.234 | 29.265 | 29.391 | 29.490 | 29.626 |
| 16 | 29.696 | 29.766 | 29.791 | 29.846 | 29.872 | 29.846 | 29.873 | 29.893 |
| 17 | 29.944 | 29.926 | 29.944 | 29.989 | 29.981 | 29.958 | 30.027 | 30.076 |
| 18 | 30.081 | 30.083 | 30.096 | 30.124 | 30.117 | 30.095 | 30.134 | 30.170 |
| 19 | 30.170 | 30.145 | 30.147 | 30.161 | 30.063 | 29.981 | 29.972 | 29.994 |
| 20 | 30.036 | 30.056 | 30.124 | 30.185 | 30.204 | 30.191 | 30.208 | 30.262 |
| 21 | 30.283 | 30.279 | 30.295 | 30.288 | 30.190 | 30.131 | 30.031 | 29.958 |
| 22 | 29.833 | 29.802 | 29.873 | 29.980 | 29.997 | 29.904 | 29.864 | 29.802 |
| 23 | 29.765 | 29.721 | 29.857 | 29.990 | 30.054 | 30.037 | 30.089 | 30.162 |
| 24 | 30.161 | 30.157 | 30.179 | 30.179 | 30.112 | 30.057 | 30.071 | 30.113 |
| 25 | 30.138 | 30.127 | 30.140 | 30.150 | 30.094 | 30.019 | 30.029 | 30.060 |
| 26 | 30.056 | 30.048 | 30.054 | 30.057 | 30.022 | 29.960 | 29.958 | 30.001 |
| 27 | 30.023 | 30.013 | 30.059 | 30.121 | 30.082 | 30.031 | 30.005 | 29.964 |
| 28 | 29.911 | 29.852 | 29.782 | 29.774 | 29.723 | 29.677 | 29.727 | 29.789 |
| 29 | 29.834 | 29.673 | 29.958 | 30.074 | 30.107 | 30.159 | 30.200 | 30.249 |
| Hourly means. | 30.223 | 30.016 | 30.043 | 30.091 | 30.064 | 30.028 | 30.034 | 30.039 |

BAROMETRIC PRESSURE.

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|---------------|------------------|------------------|------------------|------------------|--------|------------------|------------------|------------------|
| 1876. | in. | in. | in. | in. | in. | in. | in. | in. |
| March | | | | | | | | |
| 1 | 30.240 | 30.240 | 30.210 | 30.223 | 30.155 | 30.051 | 29.946 | 29.889 |
| 2 | 29.799 | 29.826 | 29.884 | 29.985 | 30.044 | 30.063 | 30.122 | 30.170 |
| 3 | 30.210 | 30.242 | 30.268 | 30.308 | 30.293 | 30.230 | 30.236 | 30.299 |
| 4 | 30.331 | 30.350 | 30.393 | 30.446 | 30.424 | 30.368 | 30.344 | 30.362 |
| 5 | 30.361 | 30.357 | 30.395 | 30.421 | 30.388 | 30.324 | 30.312 | 30.342 |
| 6 | 30.332 | 30.313 | 30.322 | 30.346 | 30.296 | 30.216 | 30.187 | 30.181 |
| 7 | 30.146 | 30.007 | 30.059 | 30.025 | 29.967 | 29.846 | 29.776 | 29.722 |
| 8 | 29.693 | 29.653 | 29.631 | 29.759 | 29.827 | 29.826 | 29.904 | 29.936 |
| 9 | 29.949 | 29.942 | 29.971 | 30.002 | 29.965 | 29.926 | 29.929 | 29.975 |
| 10 | 29.991 | 30.003 | 30.025 | 30.052 | 30.017 | 29.981 | 30.022 | 30.011 |
| 11 | 30.056 | 30.098 | 30.129 | 30.141 | 30.126 | 30.091 | 30.116 | 30.157 |
| 12 | 30.134 | 30.116 | 30.120 | 30.123 | 30.044 | 29.964 | 29.902 | 29.842 |
| 13 | 29.756 | 29.704 | 29.815 | 29.956 | 30.014 | 30.019 | 30.122 | 30.161 |
| 14 | 30.213 | 30.231 | 30.301 | 30.352 | 30.323 | 30.377 | 30.275 | 30.275 |
| 15 | 30.296 | 30.276 | 30.311 | 30.359 | 30.351 | 30.295 | 30.260 | 30.254 |
| 16 | 30.205 | 30.105 | 30.045 | 29.969 | 29.780 | 29.484 | 29.417 | 29.439 |
| 17 | 29.406 | 29.342 | 29.398 | 29.374 | 29.376 | 29.436 | 29.520 | 29.580 |
| 18 | 29.600 | 29.632 | 29.665 | 29.750 | 29.800 | 29.848 | 29.954 | 30.061 |
| 19 | 30.131 | 30.193 | 30.293 | 30.383 | 30.385 | 30.334 | 30.332 | 30.370 |
| 20 | 30.339 | 30.296 | 30.274 | 30.199 | 30.022 | 29.786 | 29.514 | 29.340 |
| 21 | 29.309 | 29.321 | 29.338 | 29.417 | 29.495 | 29.567 | 29.697 | 29.840 |
| 22 | 29.896 | 29.934 | 30.004 | 30.080 | 30.106 | 30.094 | 30.115 | 30.165 |
| 23 | 30.163 | 30.163 | 30.195 | 30.214 | 30.167 | 30.094 | 30.094 | 30.123 |
| 24 | 30.139 | 30.139 | 30.169 | 30.136 | 30.171 | 30.097 | 30.026 | 30.020 |
| 25 | 29.885 | 29.751 | 29.676 | 29.551 | 29.502 | 29.430 | 29.434 | 29.478 |
| 26 | 29.534 | 29.554 | 29.580 | 29.625 | 29.648 | 29.663 | 29.754 | 29.808 |
| 27 | 29.838 | 29.858 | 29.884 | 29.919 | 29.927 | 29.890 | 29.900 | 29.932 |
| 28 | 29.945 | 29.907 | 29.849 | 29.748 | 29.612 | 29.319 | 29.098 | 29.183 |
| 29 | 29.218 | 29.227 | 29.292 | 29.393 | 29.476 | 29.485 | 29.573 | 29.612 |
| 30 | 29.606 | 29.572 | 29.577 | 29.595 | 29.617 | 29.632 | 29.702 | 29.796 |
| 31 | 29.819 | 29.863 | 29.921 | 29.967 | 29.972 | 29.955 | 29.998 | 30.085 |
| Hourly means. | 29.953 | 29.945 | 29.968 | 29.994 | 29.977 | 29.926 | 29.922 | 29.949 |

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|---------------|------------------|------------------|------------------|------------------|--------|------------------|------------------|------------------|
| 1876. | in. | in. | in. | in. | in. | in. | in. | in. |
| April | | | | | | | | |
| 1 | 30.106 | 30.155 | 30.169 | 30.187 | 30.168 | 30.156 | 30.218 | 30.267 |
| 2 | 30.340 | 30.372 | 30.399 | 30.418 | 30.401 | 30.278 | 30.278 | 30.237 |
| 3 | 30.201 | 30.135 | 30.078 | 30.053 | 29.948 | 29.845 | 29.791 | 29.685 |
| 4 | 29.630 | 29.612 | 29.631 | 29.652 | 29.673 | 29.708 | 29.760 | 29.852 |
| 5 | 29.844 | 29.866 | 29.914 | 29.960 | 29.894 | 29.783 | 29.780 | 29.852 |
| 6 | 29.926 | 30.040 | 30.079 | 30.105 | 30.062 | 30.003 | 30.008 | 30.047 |
| 7 | 30.048 | 29.988 | 29.986 | 29.936 | 29.804 | 29.699 | 29.702 | 29.864 |
| 8 | 29.933 | 29.994 | 30.024 | 30.064 | 29.998 | 29.956 | 29.935 | 29.956 |
| 9 | 29.984 | 30.004 | 30.016 | 30.074 | 30.038 | 29.981 | 29.964 | 30.030 |
| 10 | 30.059 | 30.059 | 30.094 | 30.138 | 30.078 | 30.009 | 30.021 | 30.058 |
| 11 | 30.073 | 30.063 | 30.075 | 30.088 | 30.028 | 29.980 | 29.959 | 29.972 |
| 12 | 29.969 | 29.941 | 29.929 | 29.963 | 29.921 | 29.854 | 29.794 | 29.794 |
| 13 | 29.782 | 29.760 | 29.776 | 29.769 | 29.689 | 29.662 | 29.551 | 29.572 |
| 14 | 29.600 | 29.574 | 29.577 | 29.601 | 29.552 | 29.496 | 29.480 | 29.548 |
| 15 | 29.626 | 29.662 | 29.733 | 29.770 | 29.748 | 29.727 | 29.668 | 29.706 |
| 16 | 29.673 | 29.544 | 29.566 | 29.598 | 29.593 | 29.557 | 29.596 | 29.674 |
| 17 | 29.674 | 29.724 | 29.748 | 29.793 | 29.777 | 29.781 | 29.857 | 29.927 |
| 18 | 29.943 | 29.959 | 29.999 | 30.019 | 29.995 | 29.986 | 30.029 | 30.087 |
| 19 | 30.115 | 30.151 | 30.186 | 30.208 | 30.153 | 30.107 | 30.145 | 30.226 |
| 20 | 30.254 | 30.288 | 30.304 | 30.310 | 30.219 | 30.113 | 30.012 | 29.968 |
| 21 | 29.892 | 29.922 | 29.968 | 30.034 | 29.996 | 29.910 | 29.974 | 30.062 |
| 22 | 30.099 | 30.122 | 30.144 | 30.151 | 30.099 | 30.008 | 29.970 | 29.957 |
| 23 | 29.935 | 29.895 | 29.893 | 29.899 | 29.863 | 29.834 | 29.868 | 29.906 |
| 24 | 29.906 | 29.876 | 29.898 | 29.929 | 29.938 | 29.916 | 29.933 | 29.963 |
| 25 | 29.960 | 29.948 | 29.972 | 30.017 | 30.030 | 30.054 | 30.088 | 30.128 |
| 26 | 30.138 | 30.109 | 30.142 | 30.166 | 30.118 | 30.044 | 30.042 | 30.065 |
| 27 | 30.063 | 30.048 | 30.068 | 30.051 | 30.002 | 29.938 | 29.908 | 29.911 |
| 28 | 29.853 | 29.796 | 29.750 | 29.699 | 29.625 | 29.611 | 29.645 | 29.708 |
| 29 | 29.753 | 29.844 | 29.912 | 29.940 | 29.910 | 29.866 | 29.786 | 29.745 |
| 30 | 29.677 | 29.684 | 29.690 | 29.634 | 29.598 | 29.554 | 29.715 | 29.922 |
| Hourly means. | 29.935 | 29.938 | 29.958 | 29.974 | 29.931 | 29.880 | 29.886 | 29.923 |

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|---------------|------------------|------------------|------------------|------------------|--------|------------------|------------------|------------------|
| 1876. | in. | in. | in. | in. | in. | in. | in. | in. |
| May | | | | | | | | |
| 1 | 29.942 | 29.958 | 29.993 | 30.005 | 29.960 | 29.902 | 29.880 | 29.905 |
| 2 | 29.910 | 29.902 | 29.921 | 29.913 | 29.869 | 29.816 | 29.799 | 29.839 |
| 3 | 29.813 | 29.769 | 29.785 | 29.827 | 29.830 | 29.832 | 29.885 | 29.940 |
| 4 | 29.969 | 29.986 | 30.029 | 30.073 | 30.002 | 29.945 | 29.929 | 29.994 |
| 5 | 30.012 | 30.022 | 30.068 | 30.068 | 30.042 | 29.994 | 29.953 | 29.983 |
| 6 | 29.973 | 29.964 | 29.986 | 30.018 | 30.012 | 29.976 | 29.960 | 29.964 |
| 7 | 29.945 | 29.916 | 29.926 | 29.903 | 29.863 | 29.796 | 29.776 | 29.786 |
| 8 | 29.765 | 29.759 | 29.778 | 29.751 | 29.749 | 29.712 | 29.712 | 29.723 |
| 9 | 29.704 | 29.679 | 29.660 | 29.679 | 29.676 | 29.668 | 29.693 | 29.733 |
| 10 | 29.738 | 29.744 | 29.746 | 29.737 | 29.670 | 29.711 | 29.815 | 29.894 |
| 11 | 29.955 | 30.039 | 30.090 | 30.111 | 30.122 | 30.081 | 30.069 | 30.120 |
| 12 | 30.102 | 30.042 | 29.975 | 29.903 | 29.811 | 29.846 | 29.874 | 29.905 |
| 13 | 29.951 | 29.986 | 30.002 | 30.024 | 30.011 | 30.016 | 30.051 | 30.120 |
| 14 | 30.162 | 30.198 | 30.238 | 30.262 | 30.201 | 30.114 | 30.090 | 30.108 |
| 15 | 30.117 | 30.081 | 30.098 | 30.099 | 30.042 | 29.960 | 29.911 | 29.956 |
| 16 | 30.098 | 30.119 | 30.195 | 30.230 | 30.251 | 30.249 | 30.267 | 30.272 |
| 17 | 30.295 | 30.283 | 30.295 | 30.304 | 30.279 | 30.237 | 30.205 | 30.207 |
| 18 | 30.162 | 30.125 | 30.086 | 30.071 | 30.037 | 29.969 | 29.944 | 29.968 |
| 19 | 29.962 | 29.951 | 29.925 | 30.036 | 30.018 | 29.974 | 29.947 | 29.961 |
| 20 | 29.962 | 29.976 | 30.006 | 30.033 | 30.018 | 29.973 | 29.950 | 30.058 |
| 21 | 29.949 | 29.920 | 29.938 | 29.926 | 29.883 | 29.808 | 29.760 | 29.793 |
| 22 | 29.783 | 29.746 | 29.736 | 29.735 | 29.698 | 29.608 | 29.636 | 29.725 |
| 23 | 29.789 | 29.870 | 29.981 | 30.063 | 30.092 | 30.092 | 30.099 | 30.149 |
| 24 | 30.174 | 30.191 | 30.221 | 30.234 | 30.205 | 30.143 | 30.104 | 30.108 |
| 25 | 30.092 | 30.066 | 30.068 | 30.054 | 30.018 | 29.967 | 29.951 | 29.958 |
| 26 | 29.953 | 29.952 | 29.993 | 30.025 | 30.013 | 29.062 | 29.961 | 29.978 |
| 27 | 29.985 | 29.969 | 29.978 | 29.990 | 29.984 | 29.924 | 29.900 | 29.978 |
| 28 | 29.934 | 29.916 | 29.926 | 29.922 | 29.903 | 29.884 | 29.897 | 29.891 |
| 29 | 29.865 | 29.842 | 29.846 | 29.833 | 29.800 | 29.747 | 29.725 | 29.740 |
| 30 | 29.746 | 29.788 | 29.844 | 29.890 | 29.913 | 29.931 | 29.979 | 30.042 |
| 31 | 30.083 | 30.123 | 30.145 | 30.181 | 30.167 | 30.118 | 30.084 | 30.096 |
| Hourly means. | 29.964 | 29.964 | 29.966 | 29.998 | 29.972 | 29.934 | 29.930 | 29.964 |

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|---------------|------------------|------------------|------------------|------------------|--------|------------------|------------------|------------------|
| 1876. | in. | in. | in. | in. | in. | in. | in. | in. |
| June | | | | | | | | |
| 1 | 30.110 | 30.076 | 30.062 | 30.054 | 29.995 | 29.911 | 29.870 | 29.872 |
| 2 | 29.830 | 29.808 | 29.799 | 29.798 | 29.764 | 29.714 | 29.695 | 29.760 |
| 3 | 29.719 | 29.728 | 29.738 | 29.732 | 29.705 | 29.656 | 29.674 | 29.725 |
| 4 | 29.737 | 29.724 | 29.758 | 29.771 | 29.726 | 29.713 | 29.717 | 29.737 |
| 5 | 29.744 | 29.744 | 29.801 | 29.836 | 29.841 | 29.817 | 29.828 | 29.864 |
| 6 | 29.892 | 29.890 | 29.923 | 29.959 | 29.945 | 29.927 | 29.920 | 29.960 |
| 7 | 29.992 | 29.998 | 30.048 | 30.065 | 30.058 | 30.021 | 30.015 | 30.028 |
| 8 | 30.057 | 30.055 | 30.094 | 30.108 | 30.094 | 30.064 | 30.048 | 30.062 |
| 9 | 30.069 | 30.081 | 30.097 | 30.083 | 30.055 | 29.994 | 29.985 | 30.014 |
| 10 | 30.022 | 30.022 | 30.070 | 30.080 | 30.064 | 30.025 | 30.053 | 30.048 |
| 11 | 30.053 | 30.034 | 30.069 | 30.074 | 30.055 | 30.010 | 30.000 | 30.025 |
| 12 | 30.028 | 30.028 | 30.057 | 30.071 | 30.044 | 30.006 | 30.007 | 30.024 |
| 13 | 30.011 | 30.018 | 30.040 | 30.048 | 30.036 | 30.015 | 30.005 | 30.037 |
| 14 | 30.034 | 30.019 | 30.037 | 30.063 | 30.038 | 29.992 | 29.970 | 30.002 |
| 15 | 30.129 | 30.025 | 30.054 | 30.070 | 30.068 | 30.044 | 30.020 | 30.072 |
| 16 | 30.072 | 30.050 | 30.066 | 30.083 | 30.062 | 30.020 | 29.986 | 29.994 |
| 17 | 29.980 | 29.964 | 29.959 | 29.951 | 29.898 | 29.862 | 29.852 | 29.857 |
| 18 | 29.819 | 29.778 | 29.778 | 29.804 | 29.804 | 29.753 | 29.775 | 29.824 |
| 19 | 29.833 | 29.840 | 29.868 | 29.912 | 29.898 | 29.871 | 29.878 | 29.904 |
| 20 | 29.899 | 29.898 | 29.920 | 29.927 | 29.899 | 29.859 | 29.848 | 29.869 |
| 21 | 29.886 | 29.882 | 29.912 | 29.938 | 29.942 | 29.926 | 29.949 | 29.981 |
| 22 | 29.998 | 29.996 | 30.012 | 30.008 | 29.980 | 29.924 | 29.906 | 29.910 |
| 23 | 29.908 | 29.893 | 29.946 | 29.928 | 29.904 | 29.858 | 29.812 | 29.816 |
| 24 | 29.776 | 29.746 | 29.758 | 29.778 | 29.770 | 29.738 | 29.714 | 29.728 |
| 25 | 29.647 | 29.741 | 29.749 | 29.758 | 29.730 | 29.674 | 29.665 | 29.661 |
| 26 | 29.671 | 29.681 | 29.698 | 29.729 | 29.734 | 29.709 | 29.705 | 29.732 |
| 27 | 29.746 | 29.704 | 29.806 | 29.803 | 29.798 | 29.771 | 29.793 | 29.839 |
| 28 | 29.860 | 29.888 | 29.917 | 29.941 | 29.975 | 29.863 | 29.875 | 29.924 |
| 29 | 29.912 | 29.901 | 29.935 | 29.934 | 29.920 | 29.878 | 29.871 | 29.904 |
| 30 | 29.912 | 29.914 | 29.933 | 29.968 | 29.967 | 29.934 | 29.938 | 29.960 |
| Hourly means. | 29.908 | 29.906 | 29.930 | 29.942 | 29.926 | 29.885 | 29.879 | 29.904 |

BAROMETRIC PRESSURE.

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|---------------|------------------|------------------|------------------|------------------|--------|------------------|------------------|------------------|
| 1876. | in. | in. | in. | in. | in. | in. | in. | in. |
| July | | | | | | | | |
| 1 | 29.962 | 29.948 | 29.965 | 29.972 | 29.952 | 29.897 | 29.879 | 29.902 |
| 2 | 29.880 | 29.887 | 29.910 | 29.924 | 29.905 | 29.854 | 29.842 | 29.847 |
| 3 | 29.863 | 29.864 | 29.876 | 29.917 | 29.924 | 29.897 | 29.897 | 29.924 |
| 4 | 29.948 | 29.960 | 29.971 | 29.976 | 29.947 | 29.886 | 29.856 | 29.932 |
| 5 | 29.963 | 29.930 | 29.940 | 29.957 | 29.917 | 29.848 | 29.814 | 29.827 |
| 6 | 29.881 | 29.926 | 29.958 | 30.005 | 30.006 | 29.953 | 29.924 | 29.949 |
| 7 | 29.966 | 29.968 | 29.992 | 30.017 | 30.013 | 29.977 | 29.954 | 29.969 |
| 8 | 29.963 | 29.953 | 29.945 | 29.958 | 29.921 | 29.887 | 29.866 | 29.860 |
| 9 | 29.867 | 29.902 | 29.912 | 29.916 | 29.871 | 29.832 | 29.831 | 29.856 |
| 10 | 29.874 | 29.859 | 29.873 | 29.893 | 29.893 | 29.870 | 29.871 | 29.922 |
| 11 | 29.909 | 29.912 | 29.924 | 29.948 | 29.951 | 29.890 | 29.900 | 29.972 |
| 12 | 29.964 | 29.976 | 29.996 | 29.996 | 29.998 | 29.943 | 29.952 | 29.945 |
| 13 | 29.957 | 29.913 | 29.939 | 29.955 | 29.925 | 29.875 | 29.886 | 29.898 |
| 14 | 29.903 | 29.847 | 29.862 | 29.862 | 29.846 | 29.789 | 29.793 | 29.815 |
| 15 | 29.798 | 29.774 | 29.799 | 29.830 | 29.845 | 29.821 | 29.828 | 29.869 |
| 16 | 29.904 | 29.939 | 29.990 | 30.045 | 30.061 | 30.048 | 30.042 | 30.084 |
| 17 | 30.105 | 30.107 | 30.110 | 30.167 | 30.142 | 30.096 | 30.067 | 30.075 |
| 18 | 30.081 | 30.066 | 30.072 | 30.057 | 30.018 | 29.974 | 29.925 | 29.955 |
| 19 | 29.972 | 29.934 | 29.950 | 29.959 | 29.917 | 29.924 | 29.899 | 29.927 |
| 20 | 29.884 | 29.870 | 29.893 | 29.875 | 29.836 | 29.773 | 29.713 | 29.778 |
| 21 | 29.830 | 29.825 | 29.870 | 29.914 | 29.937 | 29.898 | 29.921 | 29.983 |
| 22 | 29.982 | 29.990 | 30.012 | 30.025 | 29.992 | 29.947 | 29.901 | 29.867 |
| 23 | 29.848 | 29.820 | 29.807 | 29.786 | 29.758 | 29.764 | 29.770 | 29.814 |
| 24 | 29.850 | 29.856 | 29.892 | 29.916 | 29.904 | 29.911 | 29.898 | 29.918 |
| 25 | 29.930 | 29.926 | 29.958 | 30.000 | 29.980 | 29.952 | 29.947 | 29.993 |
| 26 | 29.986 | 29.996 | 30.010 | 30.084 | 30.093 | 30.072 | 30.074 | 30.120 |
| 27 | 30.124 | 30.140 | 30.152 | 30.146 | 30.106 | 30.046 | 30.010 | 30.015 |
| 28 | 30.008 | 29.995 | 29.987 | 29.948 | 29.881 | 29.832 | 29.859 | 29.843 |
| 29 | 29.864 | 29.858 | 29.880 | 29.898 | 29.885 | 29.820 | 29.835 | 29.842 |
| 30 | 29.824 | 29.777 | 29.793 | 29.786 | 29.739 | 29.703 | 29.727 | 29.773 |
| 31 | 29.741 | 29.726 | 29.738 | 29.759 | 29.773 | 29.778 | 29.808 | 29.855 |
| Hourly means. | 29.924 | 29.918 | 29.935 | 29.951 | 29.934 | 29.895 | 29.888 | 29.914 |

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|---------------|------------------|------------------|------------------|------------------|--------|------------------|------------------|------------------|
| 1876. | in. | in. | in. | in. | in. | in. | in. | in. |
| August | | | | | | | | |
| 1 | 29.850 | 29.846 | 29.898 | 29.938 | 29.952 | 29.950 | 29.964 | 29.998 |
| 2 | 29.987 | 29.984 | 29.978 | 30.001 | 30.008 | 29.995 | 30.016 | 30.061 |
| 3 | 30.080 | 30.072 | 30.088 | 30.117 | 30.106 | 30.079 | 30.073 | 30.091 |
| 4 | 30.075 | 30.072 | 30.071 | 30.086 | 30.082 | 30.028 | 30.021 | 30.048 |
| 5 | 30.047 | 30.070 | 30.076 | 30.088 | 30.075 | 30.036 | 30.847 | 30.085 |
| 6 | 30.101 | 30.079 | 30.116 | 30.132 | 30.115 | 30.058 | 30.053 | 30.083 |
| 7 | 30.080 | 30.070 | 30.086 | 30.088 | 30.054 | 29.995 | 29.972 | 30.044 |
| 8 | 30.027 | 29.981 | 30.002 | 30.028 | 30.000 | 29.972 | 29.945 | 29.958 |
| 9 | 29.994 | 29.982 | 29.990 | 30.030 | 30.027 | 29.996 | 29.978 | 30.025 |
| 10 | 30.034 | 30.040 | 30.066 | 30.104 | 30.081 | 30.060 | 30.054 | 30.093 |
| 11 | 30.090 | 30.089 | 30.108 | 30.114 | 30.107 | 30.080 | 30.045 | 30.082 |
| 12 | 30.071 | 30.052 | 30.078 | 30.095 | 30.096 | 30.054 | 30.051 | 30.062 |
| 13 | 30.064 | 30.035 | 30.064 | 30.083 | 30.064 | 30.024 | 30.013 | 30.024 |
| 14 | 30.012 | 29.980 | 29.995 | 29.996 | 29.951 | 29.900 | 29.882 | 29.885 |
| 15 | 29.858 | 29.828 | 29.845 | 29.854 | 29.827 | 29.793 | 29.771 | 29.812 |
| 16 | 29.824 | 29.825 | 29.875 | 29.918 | 29.931 | 29.892 | 29.883 | 29.906 |
| 17 | 29.923 | 29.908 | 29.909 | 29.921 | 29.899 | 29.856 | 29.856 | 29.875 |
| 18 | 29.861 | 29.840 | 29.853 | 29.880 | 29.868 | 29.818 | 29.788 | 29.802 |
| 19 | 29.774 | 29.727 | 29.709 | 29.723 | 29.698 | 29.694 | 29.680 | 29.736 |
| 20 | 29.731 | 29.731 | 29.758 | 29.829 | 29.842 | 29.845 | 29.855 | 29.918 |
| 21 | 30.030 | 30.088 | 30.122 | 30.152 | 30.117 | 30.049 | 30.011 | 30.016 |
| 22 | 30.041 | 30.019 | 30.024 | 30.040 | 30.003 | 29.959 | 29.943 | 29.952 |
| 23 | 29.940 | 29.950 | 29.941 | 29.981 | 29.966 | 29.971 | 29.967 | 29.992 |
| 24 | 29.988 | 30.000 | 30.038 | 30.048 | 30.038 | 30.023 | 29.991 | 30.008 |
| 25 | 30.000 | 29.970 | 29.960 | 29.959 | 29.930 | 29.889 | 29.851 | 29.875 |
| 26 | 29.870 | 29.843 | 29.898 | 29.948 | 29.925 | 29.886 | 29.870 | 29.919 |
| 27 | 29.914 | 29.975 | 29.998 | 30.031 | 30.017 | 29.973 | 29.988 | 30.000 |
| 28 | 30.027 | 30.032 | 30.062 | 30.088 | 30.051 | 29.986 | 29.994 | 30.012 |
| 29 | 30.005 | 29.990 | 29.997 | 30.015 | 29.986 | 29.942 | 29.945 | 29.953 |
| 30 | 29.944 | 29.932 | 29.936 | 29.916 | 29.878 | 29.852 | 29.839 | 29.876 |
| 31 | 29.878 | 29.873 | 29.883 | 29.892 | 29.870 | 29.830 | 29.825 | 29.842 |
| Hourly means. | 29.973 | 29.964 | 29.982 | 30.003 | 29.986 | 29.951 | 29.941 | 29.969 |

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|--------------------|------------------|------------------|------------------|------------------|--------|------------------|------------------|------------------|
| 1876. September | in. | in. | in. | in. | in. | in. | in. | in. |
| 1 | 29.832 | 29.796 | 29.825 | 29.822 | 29.776 | 29.714 | 29.681 | 29.670 |
| 2 | 29.629 | 29.607 | 29.688 | 29.814 | 29.840 | 29.846 | 29.883 | 29.942 |
| 3 | 29.997 | 30.006 | 30.044 | 30.065 | 30.015 | 29.991 | 29.988 | 29.981 |
| 4 | 29.992 | 29.988 | 30.006 | 29.996 | 29.948 | 29.890 | 29.854 | 29.885 |
| 5 | 29.910 | 29.930 | 29.988 | 30.025 | 30.024 | 29.998 | 30.007 | 30.044 |
| 6 | 30.060 | 30.077 | 30.095 | 30.110 | 30.066 | 30.006 | 29.986 | 29.981 |
| 7 | 29.944 | 29.886 | 29.886 | 29.898 | 29.891 | 29.858 | 29.876 | 29.906 |
| 8 | 29.884 | 29.841 | 29.835 | 29.824 | 29.787 | 29.769 | 29.782 | 29.807 |
| 9 | 29.828 | 29.848 | 29.883 | 29.906 | 29.912 | 29.880 | 29.907 | 29.943 |
| 10 | 29.948 | 29.968 | 29.988 | 30.018 | 29.999 | 29.933 | 29.907 | 29.900 |
| 11 | 29.871 | 29.851 | 29.801 | 29.778 | 29.763 | 29.849 | 29.749 | 29.796 |
| 12 | 29.794 | 29.788 | 29.825 | 29.866 | 29.900 | 29.908 | 29.933 | 29.986 |
| 13 | 30.019 | 30.039 | 30.059 | 30.103 | 30.091 | 30.065 | 30.069 | 30.067 |
| 14 | 30.059 | 30.029 | 30.035 | 30.036 | 29.686 | 29.888 | 29.868 | 29.881 |
| 15 | 29.874 | 29.855 | 29.859 | 29.871 | 29.894 | 29.890 | 29.915 | 29.978 |
| 16 | 30.029 | 30.064 | 30.068 | 30.121 | 30.123 | 30.066 | 30.039 | 29.999 |
| 17 | 29.901 | 29.842 | 29.834 | 29.799 | 29.601 | 29.250 | 29.228 | 29.580 |
| 18 | 29.670 | 29.701 | 29.760 | 29.717 | 29.718 | 29.688 | 29.737 | 29.774 |
| 19 | 29.765 | 29.756 | 29.753 | 29.769 | 29.768 | 29.746 | 29.778 | 29.805 |
| 20 | 29.806 | 29.808 | 29.847 | 29.870 | 29.854 | 29.828 | 29.849 | 29.894 |
| 21 | 29.924 | 29.976 | 30.006 | 30.037 | 30.050 | 30.030 | 30.052 | 30.074 |
| 22 | 30.064 | 30.054 | 30.076 | 30.087 | 30.040 | 29.990 | 29.962 | 29.897 |
| 23 | 29.879 | 29.849 | 29.829 | 29.828 | 29.780 | 29.758 | 29.759 | 29.766 |
| 24 | 29.736 | 29.712 | 29.732 | 29.773 | 29.786 | 29.788 | 29.819 | 29.849 |
| 25 | 29.849 | 29.875 | 29.893 | 29.924 | 29.908 | 29.884 | 29.868 | 29.861 |
| 26 | 29.831 | 29.799 | 29.731 | 29.705 | 29.691 | 29.688 | 29.746 | 29.790 |
| 27 | 29.795 | 29.801 | 29.821 | 29.870 | 29.883 | 29.882 | 29.935 | 30.012 |
| 28 | 30.053 | 30.070 | 30.088 | 30.142 | 30.104 | 30.034 | 30.010 | 30.008 |
| 29 | 29.972 | 29.913 | 29.887 | 29.908 | 29.844 | 29.771 | 29.757 | 29.775 |
| 30 | 29.793 | 29.787 | 29.784 | 29.889 | 29.892 | 29.883 | 29.899 | 29.914 |
| Hourly means. | 29.890 | 29.884 | 29.898 | 29.919 | 29.898 | 29.859 | 29.861 | 29.892 |

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|------------------|------------------|------------------|------------------|------------------|--------|------------------|------------------|------------------|
| 1876. October | in. | in. | in. | in. | in. | in. | in. | in. |
| 1 | 29.920 | 29.894 | 29.919 | 29.979 | 29.936 | 29.896 | 29.914 | 29.951 |
| 2 | 29.938 | 29.931 | 29.935 | 29.972 | 29.916 | 29.886 | 29.897 | 29.901 |
| 3 | 29.891 | 29.884 | 29.900 | 29.912 | 29.843 | 29.774 | 29.770 | 29.786 |
| 4 | 29.756 | 29.747 | 29.813 | 29.872 | 29.886 | 29.867 | 29.909 | 29.928 |
| 5 | 29.913 | 29.892 | 29.902 | 29.935 | 29.902 | 29.865 | 29.846 | 29.831 |
| 6 | 29.788 | 29.738 | 29.718 | 29.679 | 29.611 | 29.502 | 29.541 | 29.593 |
| 7 | 29.633 | 29.669 | 29.769 | 29.858 | 29.874 | 29.904 | 29.961 | 30.013 |
| 8 | 30.046 | 30.050 | 30.070 | 30.078 | 30.010 | 29.970 | 29.989 | 30.076 |
| 9 | 30.106 | 30.134 | 30.199 | 30.235 | 30.161 | 30.085 | 30.065 | 30.029 |
| 10 | 29.958 | 29.876 | 29.844 | 29.809 | 29.718 | 29.645 | 29.636 | 29.695 |
| 11 | 29.788 | 29.831 | 29.958 | 30.060 | 30.088 | 30.104 | 30.200 | 30.255 |
| 12 | 30.279 | 30.318 | 30.332 | 30.362 | 30.295 | 30.221 | 30.194 | 30.174 |
| 13 | 30.153 | 30.116 | 30.124 | 30.136 | 30.065 | 30.005 | 29.981 | 29.988 |
| 14 | 29.954 | 29.876 | 29.858 | 29.832 | 29.759 | 29.686 | 29.685 | 29.743 |
| 15 | 29.815 | 29.878 | 29.930 | 30.015 | 30.019 | 30.033 | 30.102 | 30.163 |
| 16 | 30.186 | 30.183 | 30.183 | 30.189 | 30.132 | 30.028 | 29.992 | 29.962 |
| 17 | 29.915 | 29.884 | 29.864 | 29.875 | 29.846 | 29.820 | 29.886 | 29.957 |
| 18 | 30.039 | 30.077 | 30.128 | 30.170 | 30.124 | 30.074 | 30.075 | 30.084 |
| 19 | 30.089 | 30.095 | 30.100 | 30.139 | 30.094 | 30.039 | 30.025 | 30.026 |
| 20 | 30.010 | 29.988 | 29.968 | 29.950 | 29.905 | 29.859 | 29.806 | 29.797 |
| 21 | 29.741 | 29.739 | 29.734 | 29.790 | 29.773 | 29.757 | 29.775 | 29.818 |
| 22 | 29.827 | 29.821 | 29.839 | 29.854 | 29.826 | 29.760 | 29.778 | 29.792 |
| 23 | 29.756 | 29.709 | 29.673 | 29.640 | 29.558 | 29.506 | 29.531 | 29.575 |
| 24 | 29.601 | 29.633 | 29.648 | 29.675 | 29.664 | 29.603 | 29.610 | 29.612 |
| 25 | 29.641 | 29.671 | 29.739 | 29.775 | 29.761 | 29.795 | 29.866 | 29.897 |
| 26 | 29.899 | 29.866 | 29.917 | 29.944 | 29.970 | 29.994 | 30.075 | 30.127 |
| 27 | 30.142 | 30.177 | 30.238 | 30.300 | 30.268 | 30.243 | 30.250 | 30.266 |
| 28 | 30.268 | 30.196 | 30.191 | 30.138 | 30.044 | 29.932 | 29.925 | 29.973 |
| 29 | 29.979 | 29.972 | 30.016 | 30.055 | 30.049 | 30.031 | 30.052 | 30.094 |
| 30 | 30.112 | 30.118 | 30.152 | 30.187 | 30.179 | 30.162 | 30.191 | 30.203 |
| 31 | 30.187 | 30.162 | 30.173 | 30.180 | 30.119 | 30.086 | 30.081 | 30.070 |
| Hourly means. | 29.946 | 29.940 | 29.962 | 29.987 | 29.948 | 29.907 | 29.923 | 29.948 |

BAROMETRIC PRESSURE.

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|---------------|------------------|------------------|------------------|------------------|--------|------------------|------------------|------------------|
| 1876. | in. | in. | in. | in. | in. | in. | in. | in. |
| November 1 | 30.071 | 30.046 | 30.060 | 30.064 | 30.002 | 29.936 | 29.926 | 29.903 |
| 2 | 29.870 | 29.828 | 29.810 | 29.797 | 29.692 | 29.628 | 29.610 | 29.600 |
| 3 | 29.587 | 29.603 | 29.653 | 29.740 | 29.753 | 29.776 | 29.871 | 29.941 |
| 4 | 30.015 | 30.053 | 30.127 | 30.182 | 30.163 | 30.153 | 30.205 | 30.227 |
| 5 | 30.233 | 30.244 | 30.271 | 30.315 | 30.273 | 30.239 | 30.255 | 30.278 |
| 6 | 30.282 | 30.245 | 30.245 | 30.233 | 30.111 | 30.027 | 29.972 | 29.895 |
| 7 | 29.857 | 29.820 | 29.809 | 29.845 | 29.807 | 29.747 | 29.751 | 29.757 |
| 8 | 29.762 | 29.760 | 29.754 | 29.781 | 29.728 | 29.700 | 29.746 | 29.754 |
| 9 | 29.757 | 29.787 | 29.815 | 29.881 | 29.856 | 29.864 | 29.916 | 29.926 |
| 10 | 29.929 | 29.905 | 29.928 | 29.908 | 29.898 | 29.858 | 29.868 | 29.908 |
| 11 | 29.910 | 29.904 | 29.914 | 29.960 | 29.910 | 29.887 | 29.911 | 29.946 |
| 12 | 29.957 | 29.986 | 30.024 | 30.101 | 30.056 | 30.004 | 30.004 | 29.996 |
| 13 | 29.959 | 29.989 | 29.990 | 29.995 | 29.946 | 29.908 | 29.926 | 29.918 |
| 14 | 29.924 | 29.910 | 29.934 | 29.959 | 29.899 | 29.887 | 29.901 | 29.904 |
| 15 | 29.874 | 29.831 | 29.807 | 29.843 | 29.858 | 29.926 | 30.020 | 30.094 |
| 16 | 30.118 | 30.132 | 30.151 | 30.232 | 30.200 | 30.162 | 30.175 | 30.193 |
| 17 | 30.165 | 30.151 | 30.159 | 30.207 | 30.157 | 30.125 | 30.148 | 30.138 |
| 18 | 30.112 | 30.101 | 30.101 | 30.121 | 30.072 | 30.037 | 30.030 | 30.009 |
| 19 | 29.967 | 29.907 | 29.849 | 29.832 | 29.739 | 29.715 | 29.709 | 29.703 |
| 20 | 29.637 | 29.527 | 29.491 | 29.414 | 29.402 | 29.415 | 29.522 | 29.598 |
| 21 | 29.666 | 29.705 | 29.758 | 29.825 | 29.807 | 29.865 | 29.825 | 29.839 |
| 22 | 29.830 | 29.819 | 29.857 | 29.873 | 29.853 | 29.849 | 29.882 | 29.921 |
| 23 | 29.967 | 29.989 | 29.990 | 30.015 | 29.952 | 29.910 | 29.907 | 29.899 |
| 24 | 29.923 | 29.944 | 29.991 | 30.059 | 30.023 | 29.960 | 30.002 | 29.972 |
| 25 | 29.951 | 29.924 | 29.908 | 29.872 | 29.778 | 29.720 | 29.704 | 29.671 |
| 26 | 29.628 | 29.602 | 29.583 | 29.563 | 29.527 | 29.518 | 29.592 | 29.651 |
| 27 | 29.667 | 29.678 | 29.664 | 29.634 | 29.521 | 29.497 | 29.573 | 29.639 |
| 28 | 29.722 | 29.794 | 29.830 | 29.888 | 29.854 | 29.832 | 29.872 | 29.898 |
| 29 | 29.929 | 29.956 | 29.994 | 30.016 | 29.988 | 29.935 | 29.930 | 29.884 |
| 30 | 29.844 | 29.765 | 29.766 | 29.723 | 29.649 | 29.588 | 29.614 | 29.642 |
| Hourly means. | 29.905 | 29.898 | 29.911 | 29.929 | 29.892 | 29.853 | 29.879 | 29.890 |

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|---------------|------------------|------------------|------------------|------------------|--------|------------------|------------------|------------------|
| 1876. | in. | in. | in. | in. | in. | in. | in. | in. |
| December 1 | 29.667 | 29.661 | 29.686 | 29.735 | 29.707 | 29.693 | 29.743 | 29.755 |
| 2 | 29.733 | 29.714 | 29.722 | 29.758 | 29.735 | 29.736 | 29.807 | 29.859 |
| 3 | 29.904 | 29.963 | 29.995 | 30.061 | 30.084 | 30.094 | 30.138 | 30.155 |
| 4 | 30.168 | 30.173 | 30.195 | 30.227 | 30.176 | 30.154 | 30.175 | 30.164 |
| 5 | 30.143 | 30.133 | 30.152 | 30.167 | 30.140 | 30.106 | 30.131 | 30.149 |
| 6 | 30.134 | 30.125 | 30.114 | 30.115 | 30.027 | 29.922 | 29.884 | 29.832 |
| 7 | 29.803 | 29.752 | 29.732 | 29.754 | 29.658 | 29.594 | 29.597 | 29.631 |
| 8 | 29.640 | 29.689 | 29.692 | 29.709 | 29.614 | 29.539 | 29.483 | 29.396 |
| 9 | 29.267 | 29.348 | 29.595 | 29.795 | 29.868 | 29.970 | 30.062 | 30.155 |
| 10 | 30.255 | 30.305 | 30.309 | 30.375 | 30.320 | 30.241 | 30.229 | 30.157 |
| 11 | 30.084 | 30.006 | 29.992 | 29.996 | 29.962 | 29.912 | 29.869 | 29.836 |
| 12 | 29.763 | 29.706 | 29.686 | 29.734 | 29.755 | 29.782 | 29.902 | 29.962 |
| 13 | 29.966 | 29.953 | 29.928 | 29.896 | 29.804 | 29.770 | 29.791 | 29.806 |
| 14 | 29.824 | 29.820 | 29.819 | 29.842 | 29.795 | 29.659 | 29.764 | 29.774 |
| 15 | 29.794 | 29.850 | 29.953 | 30.107 | 30.089 | 30.014 | 29.962 | 29.911 |
| 16 | 29.791 | 29.721 | 29.691 | 29.806 | 29.977 | 30.071 | 30.239 | 30.243 |
| 17 | 30.432 | 30.523 | 30.549 | 30.619 | 30.567 | 30.513 | 30.459 | 30.413 |
| 18 | 30.317 | 30.122 | 30.057 | 29.957 | 29.814 | 29.836 | 30.000 | 30.111 |
| 19 | 30.129 | 30.144 | 30.119 | 30.126 | 30.076 | 30.070 | 30.152 | 30.240 |
| 20 | 30.306 | 30.335 | 30.356 | 30.428 | 30.399 | 30.329 | 30.298 | 30.240 |
| 21 | 30.206 | 30.197 | 30.018 | 30.009 | 29.939 | 29.877 | 29.887 | 29.891 |
| 22 | 29.877 | 29.827 | 29.769 | 29.744 | 29.624 | 29.516 | 29.492 | 29.504 |
| 23 | 29.605 | 29.713 | 29.872 | 30.002 | 30.066 | 30.004 | 30.163 | 30.193 |
| 24 | 30.223 | 30.259 | 30.281 | 29.348 | 30.313 | 30.303 | 30.355 | 30.313 |
| 25 | 30.282 | 30.265 | 30.237 | 30.242 | 30.177 | 30.122 | 30.089 | 30.063 |
| 26 | 30.018 | 29.976 | 29.962 | 29.992 | 29.941 | 29.912 | 29.911 | 29.957 |
| 27 | 29.938 | 29.955 | 29.960 | 30.029 | 30.007 | 30.015 | 30.074 | 30.096 |
| 28 | 30.101 | 30.123 | 30.111 | 30.165 | 30.070 | 30.051 | 30.045 | 29.996 |
| 29 | 29.961 | 29.855 | 29.716 | 29.541 | 29.395 | 29.077 | 29.097 | 29.113 |
| 30 | 29.180 | 29.313 | 29.422 | 29.595 | 29.651 | 29.750 | 29.863 | 29.919 |
| 31 | 29.979 | 30.044 | 30.034 | 30.151 | 30.158 | 30.141 | 30.194 | 30.222 |
| Hourly means. | 29.951 | 29.951 | 29.961 | 30.001 | 29.962 | 29.928 | 29.964 | 29.971 |

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . | Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. January | | | | | | | | | 1876. February | | | | | | | | |
| 1 | 52.6 | 51.9 | 53.1 | 53.1 | 55.7 | 61.1 | 57.3 | 54.1 | 1 | 26.6 | 25.1 | 25.1 | 32.4 | 38.7 | 39.4 | 38.6 | 38.6 |
| 2 | 53.1 | 53.1 | 51.6 | 55.6 | 70.1 | 67.6 | 57.6 | 55.6 | 2 | 37.6 | 33.1 | 24.6 | 23.9 | 27.1 | 26.6 | 22.6 | 18.1 |
| 3 | 53.1 | 52.1 | 48.9 | 46.7 | 49.9 | 50.6 | 45.1 | 37.6 | 3 | 15.7 | 14.6 | 14.6 | 17.1 | 24.7 | 25.6 | 26.6 | 25.6 |
| 4 | 32.6 | 35.6 | 36.1 | 36.9 | 48.6 | 48.4 | 38.6 | 33.1 | 4 | 25.1 | 25.4 | 24.1 | 26.6 | 30.6 | 30.3 | 26.6 | 18.9 |
| 5 | 30.1 | 27.6 | 24.9 | 28.6 | 38.4 | 47.6 | 42.6 | 45.1 | 5 | 19.1 | 15.1 | 7.1 | 12.6 | 26.6 | 26.7 | 19.7 | 13.6 |
| 6 | 45.6 | 43.6 | 42.1 | 46.1 | 45.1 | 44.6 | 38.9 | 36.3 | 6 | 11.1 | 16.1 | 20.1 | 23.1 | 28.1 | 30.6 | 31.1 | 31.6 |
| 7 | 33.6 | 29.7 | 26.1 | 27.6 | 44.8 | 47.3 | 40.6 | 33.1 | 7 | 32.1 | 32.3 | 31.1 | 31.1 | 45.7 | 50.6 | 44.6 | 37.1 |
| 8 | 31.1 | 27.6 | 26.5 | 30.6 | 40.1 | 53.1 | 45.6 | 48.1 | 8 | 32.1 | 31.6 | 29.6 | 30.4 | 48.6 | 51.7 | 43.9 | 40.6 |
| 9 | 49.1 | 47.1 | 49.3 | 48.6 | 53.6 | 55.1 | 52.1 | 54.1 | 9 | 38.6 | 37.6 | 35.1 | 37.7 | 47.6 | 50.6 | 47.4 | 46.6 |
| 10 | 54.1 | 55.1 | 53.6 | 41.7 | 39.7 | 38.7 | 28.3 | 24.1 | 10 | 50.1 | 50.6 | 47.6 | 48.9 | 62.5 | 65.3 | 53.9 | 48.1 |
| 11 | 20.7 | 19.5 | 17.1 | 19.3 | 26.6 | 29.1 | 24.6 | 20.6 | 11 | 43.6 | 42.1 | 41.9 | 44.6 | 49.6 | 62.6 | 58.3 | 54.6 |
| 12 | 18.6 | 17.6 | 19.1 | 24.9 | 34.1 | 32.7 | 27.1 | 23.6 | 12 | 52.1 | 50.1 | 48.6 | 46.1 | 54.7 | 58.1 | 53.1 | 42.6 |
| 13 | 21.1 | 18.6 | 17.1 | 21.6 | 26.1 | 26.6 | 24.1 | 21.6 | 13 | 36.6 | 35.9 | 34.6 | 39.6 | 53.1 | 52.1 | 51.3 | 51.6 |
| 14 | 18.6 | 15.6 | 15.6 | 21.1 | 37.6 | 32.6 | 26.6 | 23.1 | 14 | 51.1 | 50.6 | 50.3 | 54.6 | 61.1 | 62.1 | 57.1 | 55.6 |
| 15 | 20.7 | 18.1 | 15.6 | 21.1 | 37.9 | 42.6 | 36.6 | 37.1 | 15 | 51.1 | 50.6 | 40.7 | 35.6 | 42.1 | 46.1 | 43.1 | 35.1 |
| 16 | 38.6 | 39.1 | 37.6 | 41.1 | 48.3 | 47.6 | 41.7 | 38.4 | 16 | 30.3 | 29.6 | 28.1 | 30.1 | 34.6 | 35.6 | 30.3 | 27.3 |
| 17 | 37.6 | 38.1 | 39.6 | 40.1 | 44.1 | 48.6 | 47.7 | 47.1 | 17 | 26.7 | 24.6 | 24.9 | 29.6 | 36.1 | 38.3 | 32.1 | 29.3 |
| 18 | 44.1 | 43.9 | 47.6 | 49.1 | 58.6 | 60.1 | 50.6 | 58.1 | 18 | 28.3 | 25.8 | 27.1 | 33.1 | 40.8 | 44.4 | 39.1 | 31.9 |
| 19 | 58.1 | 58.6 | 58.6 | 56.1 | 58.5 | 53.1 | 52.4 | 43.6 | 19 | 27.9 | 26.6 | 24.7 | 29.8 | 50.6 | 53.1 | 47.1 | 39.6 |
| 20 | 41.6 | 36.6 | 33.6 | 34.1 | 40.1 | 44.6 | 38.6 | 35.4 | 20 | 35.5 | 38.1 | 35.1 | 39.6 | 48.6 | 53.1 | 46.6 | 37.1 |
| 21 | 35.1 | 34.1 | 33.6 | 37.1 | 53.1 | 53.1 | 46.1 | 36.6 | 21 | 32.1 | 31.1 | 29.6 | 33.3 | 41.3 | 41.6 | 41.6 | 40.6 |
| 22 | 35.6 | 36.1 | 31.9 | 31.3 | 34.6 | 34.6 | 35.6 | 35.1 | 22 | 40.1 | 39.6 | 36.6 | 33.1 | 41.3 | 47.1 | 41.1 | 36.6 |
| 23 | 35.6 | 34.6 | 33.6 | 35.6 | 41.1 | 45.1 | 47.6 | 48.5 | 23 | 39.1 | 36.1 | 30.6 | 24.1 | 24.6 | 23.9 | 18.1 | 16.1 |
| 24 | 47.6 | 44.1 | 42.3 | 40.6 | 44.6 | 45.1 | 37.6 | 33.6 | 24 | 15.1 | 11.1 | 15.1 | 22.1 | 30.6 | 34.9 | 31.1 | 30.1 |
| 25 | 31.6 | 30.1 | 29.1 | 30.4 | 37.1 | 37.1 | 33.1 | 29.6 | 25 | 25.1 | 21.1 | 19.3 | 25.1 | 35.1 | 42.3 | 36.6 | 31.6 |
| 26 | 29.6 | 27.6 | 32.1 | 32.4 | 39.9 | 40.1 | 33.1 | 30.6 | 26 | 29.6 | 29.1 | 27.6 | 32.7 | 49.1 | 57.1 | 47.1 | 41.1 |
| 27 | 30.3 | 34.1 | 34.6 | 37.1 | 46.1 | 53.1 | 51.7 | 48.1 | 27 | 37.1 | 36.1 | 35.1 | 33.6 | 35.3 | 39.1 | 38.2 | 36.7 |
| 28 | 47.1 | 43.3 | 40.9 | 43.6 | 65.6 | 69.9 | 60.5 | 57.1 | 28 | 36.1 | 35.1 | 34.4 | 31.7 | 39.6 | 39.1 | 39.1 | 37.9 |
| 29 | 55.7 | 56.1 | 57.4 | 58.6 | 59.9 | 52.1 | 45.1 | 34.1 | 29 | 36.1 | 36.1 | 34.1 | 31.6 | 34.1 | 39.6 | 34.6 | 33.3 |
| 30 | 31.6 | 29.9 | 23.6 | 24.1 | 30.1 | 33.6 | 27.6 | 24.6 | | | | | | | | | |
| 31 | 22.7 | 20.1 | 18.6 | 22.6 | 32.9 | 36.9 | 31.6 | 28.6 | | | | | | | | | |
| Hourly means | 37.3 | 36.1 | 35.3 | 36.7 | 44.6 | 46.2 | 41.1 | 38.0 | Hourly means. | 33.2 | 32.1 | 30.3 | 32.3 | 40.9 | 43.7 | 39.3 | 35.4 |

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . | Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|----------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|----------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. March | | | | | | | | | 1876. April | | | | | | | | |
| 1 | 30.1 | 30.6 | 38.1 | 31.6 | 34.6 | 36.1 | 34.1 | 32.6 | 1 | 33.7 | 30.6 | 30.7 | 39.1 | 45.1 | 49.6 | 46.2 | 38.6 |
| 2 | 32.1 | 31.9 | 31.6 | 28.6 | 29.7 | 33.1 | 29.9 | 28.9 | 2 | 34.9 | 30.6 | 29.6 | 38.1 | 46.6 | 47.1 | 43.6 | 37.1 |
| 3 | 28.6 | 24.1 | 21.1 | 24.6 | 33.1 | 39.5 | 34.1 | 33.1 | 3 | 38.5 | 38.7 | 39.1 | 39.6 | 41.1 | 41.3 | 42.1 | 41.9 |
| 4 | 30.3 | 27.6 | 23.6 | 32.1 | 41.3 | 43.6 | 39.3 | 35.6 | 4 | 41.7 | 40.5 | 39.7 | 49.1 | 52.5 | 47.1 | 44.1 | 41.1 |
| 5 | 31.8 | 30.6 | 29.1 | 34.1 | 50.1 | 57.4 | 51.6 | 45.6 | 5 | 39.1 | 36.6 | 33.6 | 46.8 | 55.1 | 59.1 | 56.6 | 47.1 |
| 6 | 42.1 | 40.1 | 40.1 | 49.6 | 66.1 | 68.1 | 59.6 | 55.1 | 6 | 49.1 | 41.1 | 39.3 | 47.1 | 53.7 | 57.6 | 55.1 | 44.1 |
| 7 | 52.1 | 52.1 | 51.1 | 57.6 | 64.6 | 69.6 | 62.6 | 60.0 | 7 | 36.9 | 33.1 | 34.3 | 49.9 | 60.4 | 66.1 | 55.1 | 48.1 |
| 8 | 59.6 | 53.1 | 47.1 | 39.8 | 46.1 | 47.1 | 41.1 | 37.1 | 8 | 41.3 | 33.6 | 32.6 | 44.1 | 51.9 | 55.7 | 54.1 | 41.9 |
| 9 | 32.6 | 32.9 | 31.6 | 37.9 | 49.6 | 55.1 | 49.6 | 41.1 | 9 | 37.4 | 36.1 | 32.1 | 43.1 | 50.4 | 55.5 | 51.6 | 42.1 |
| 10 | 37.1 | 34.6 | 32.3 | 41.6 | 54.1 | 58.6 | 52.1 | 50.1 | 10 | 34.1 | 33.1 | 30.6 | 45.1 | 53.6 | 58.6 | 54.1 | 45.6 |
| 11 | 46.1 | 43.1 | 42.1 | 46.6 | 52.3 | 55.1 | 46.3 | 41.6 | 11 | 39.1 | 37.1 | 35.6 | 51.1 | 61.6 | 65.8 | 61.3 | 54.7 |
| 12 | 38.7 | 37.1 | 37.6 | 38.7 | 41.6 | 42.9 | 44.6 | 44.1 | 12 | 52.8 | 51.1 | 50.1 | 55.1 | 66.6 | 75.1 | 69.1 | 64.6 |
| 13 | 43.6 | 43.1 | 43.6 | 41.6 | 46.1 | 45.3 | 35.6 | 32.6 | 13 | 57.6 | 55.6 | 55.1 | 56.6 | 62.6 | 66.9 | 69.6 | 68.1 |
| 14 | 30.6 | 27.6 | 26.9 | 32.9 | 41.1 | 46.9 | 42.1 | 34.1 | 14 | 65.6 | 61.6 | 63.1 | 64.6 | 67.6 | 71.6 | 72.9 | 61.1 |
| 15 | 31.1 | 32.1 | 31.1 | 32.6 | 38.6 | 41.7 | 39.6 | 38.6 | 15 | 55.6 | 49.1 | 44.1 | 56.1 | 60.6 | 64.7 | 61.6 | 51.6 |
| 16 | 37.1 | 37.3 | 35.6 | 35.6 | 37.7 | 44.1 | 47.9 | 43.6 | 16 | 49.1 | 52.1 | 51.3 | 58.8 | 64.6 | 65.4 | 60.1 | 53.6 |
| 17 | 39.1 | 38.7 | 35.7 | 42.3 | 42.1 | 39.8 | 37.6 | 36.6 | 17 | 51.1 | 48.1 | 46.1 | 48.5 | 55.1 | 56.6 | 49.7 | 46.1 |
| 18 | 30.1 | 28.1 | 26.1 | 27.6 | 28.3 | 27.1 | 22.1 | 20.1 | 18 | 41.7 | 40.1 | 39.6 | 46.9 | 50.6 | 52.6 | 46.7 | 43.1 |
| 19 | 17.6 | 15.1 | 13.1 | 18.1 | 28.1 | 34.1 | 30.3 | 25.5 | 19 | 38.1 | 33.1 | 33.6 | 45.3 | 53.6 | 58.5 | 51.6 | 43.6 |
| 20 | 23.6 | 25.9 | 26.6 | 27.1 | 29.1 | 32.1 | 35.1 | 44.1 | 20 | 38.1 | 35.6 | 33.6 | 48.1 | 58.1 | 60.6 | 58.6 | 53.1 |
| 21 | 35.1 | 33.1 | 33.6 | 34.6 | 37.1 | 36.1 | 29.9 | 27.9 | 21 | 53.9 | 50.6 | 58.6 | 57.6 | 65.1 | 69.6 | 65.3 | 56.1 |
| 22 | 26.1 | 25.1 | 26.9 | 30.6 | 35.1 | 38.9 | 34.4 | 31.6 | 22 | 52.4 | 42.1 | 40.1 | 55.1 | 60.8 | 64.6 | 59.9 | 51.6 |
| 23 | 28.1 | 27.1 | 27.6 | 31.6 | 39.6 | 45.1 | 40.7 | 33.9 | 23 | 47.6 | 44.6 | 44.1 | 58.6 | 66.6 | 65.9 | 60.6 | 58.1 |
| 24 | 31.1 | 28.1 | 30.1 | 35.1 | 44.1 | 42.7 | 40.1 | 36.1 | 24 | 49.6 | 49.1 | 47.6 | 48.1 | 48.7 | 47.1 | 46.1 | 44.1 |
| 25 | 37.7 | 42.6 | 43.6 | 50.1 | 48.6 | 47.6 | 44.9 | 42.1 | 25 | 44.3 | 40.1 | 39.6 | 43.1 | 47.3 | 46.5 | 45.6 | 40.6 |
| 26 | 40.8 | 36.6 | 35.3 | 41.6 | 45.5 | 47.3 | 41.6 | 40.1 | 26 | 36.6 | 34.7 | 34.6 | 48.5 | 57.1 | 61.7 | 56.8 | 47.6 |
| 27 | 40.6 | 34.7 | 34.4 | 44.6 | 49.6 | 56.8 | 52.1 | 41.6 | 27 | 43.1 | 39.7 | 38.7 | 53.6 | 60.8 | 65.7 | 60.1 | 57.1 |
| 28 | 39.6 | 36.1 | 35.9 | 38.5 | 42.5 | 44.8 | 56.6 | 40.1 | 28 | 55.1 | 54.1 | 52.6 | 67.6 | 72.3 | 62.6 | 60.3 | 58.6 |
| 29 | 39.3 | 38.3 | 39.1 | 38.5 | 40.8 | 42.9 | 37.6 | 33.1 | 29 | 55.1 | 49.1 | 47.1 | 55.7 | 62.6 | 68.6 | 62.1 | 54.1 |
| 30 | 33.6 | 31.3 | 33.1 | 37.6 | 39.9 | 41.6 | 39.1 | 35.6 | 30 | 53.6 | 53.1 | 53.1 | 57.0 | 61.7 | 65.1 | 46.9 | 36.7 |
| 31 | 37.3 | 33.1 | 31.1 | 41.1 | 45.8 | 51.1 | 45.1 | 36.9 | | | | | | | | | |
| Hourly means | 35.6 | 33.9 | 33.1 | 36.9 | 42.7 | 45.6 | 41.8 | 38.0 | Hourly means. | 45.6 | 42.7 | 41.7 | 50.6 | 57.1 | 59.8 | 55.6 | 49.1 |

DRY THERMOMETER.

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . | Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|---------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|---------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | | | | | | | | | 1876. | | | | | | | | |
| May | | | | | | | | | June | | | | | | | | |
| 1 | 35.1 | 33.1 | 32.6 | 45.6 | 53.6 | 60.1 | 58.1 | 48.9 | 1 | 55.6 | 49.6 | 51.1 | 65.1 | 73.3 | 77.8 | 74.6 | 66.6 |
| 2 | 43.3 | 41.1 | 39.1 | 52.6 | 58.6 | 56.1 | 54.1 | 51.6 | 2 | 60.3 | 56.1 | 56.6 | 72.1 | 83.1 | 86.6 | 82.1 | 75.6 |
| 3 | 48.1 | 47.1 | 47.1 | 52.1 | 59.6 | 56.1 | 54.3 | 46.1 | 3 | 69.1 | 67.1 | 68.6 | 79.1 | 88.1 | 90.4 | 74.3 | 71.6 |
| 4 | 43.1 | 41.1 | 40.6 | 54.1 | 62.0 | 65.6 | 61.5 | 52.9 | 4 | 68.6 | 66.1 | 67.6 | 76.6 | 70.9 | 72.3 | 74.1 | 67.1 |
| 5 | 51.8 | 50.1 | 50.1 | 63.1 | 71.1 | 71.1 | 67.3 | 62.1 | 5 | 66.1 | 63.1 | 61.6 | 68.7 | 75.2 | 78.0 | 72.6 | 62.6 |
| 6 | 61.1 | 60.1 | 59.1 | 74.1 | 79.1 | 81.6 | 77.1 | 69.1 | 6 | 58.1 | 55.9 | 55.5 | 68.3 | 71.3 | 75.9 | 72.1 | 62.6 |
| 7 | 65.6 | 61.1 | 64.1 | 76.1 | 83.1 | 81.6 | 77.6 | 73.1 | 7 | 58.1 | 55.1 | 56.1 | 71.8 | 79.7 | 81.7 | 76.1 | 69.1 |
| 8 | 79.1 | 68.1 | 68.4 | 75.6 | 77.1 | 78.1 | 74.1 | 70.1 | 8 | 65.6 | 62.6 | 62.6 | 77.9 | 84.7 | 86.6 | 80.6 | 71.1 |
| 9 | 69.1 | 65.1 | 59.1 | 59.1 | 61.1 | 60.1 | 58.6 | 58.6 | 9 | 68.6 | 67.6 | 66.6 | 77.2 | 83.8 | 87.5 | 81.1 | 74.6 |
| 10 | 57.1 | 53.6 | 53.1 | 64.6 | 69.1 | 55.6 | 58.6 | 51.6 | 10 | 71.1 | 68.1 | 67.9 | 80.6 | 86.1 | 84.9 | 72.1 | 69.6 |
| 11 | 50.1 | 47.6 | 47.6 | 58.6 | 64.8 | 71.6 | 67.6 | 56.1 | 11 | 66.1 | 65.1 | 66.6 | 79.6 | 83.1 | 86.7 | 81.1 | 74.1 |
| 12 | 52.6 | 50.1 | 53.7 | 65.1 | 81.1 | 64.1 | 61.1 | 58.7 | 12 | 71.1 | 69.6 | 70.6 | 81.5 | 87.1 | 86.6 | 79.1 | 72.9 |
| 13 | 56.3 | 50.6 | 51.6 | 59.6 | 66.6 | 64.1 | 61.1 | 55.7 | 13 | 72.6 | 71.1 | 71.1 | 76.1 | 83.6 | 81.1 | 77.3 | 71.6 |
| 14 | 47.1 | 44.1 | 42.7 | 58.6 | 65.6 | 68.6 | 64.8 | 55.1 | 14 | 59.6 | 68.1 | 68.9 | 76.5 | 83.1 | 85.1 | 79.9 | 73.6 |
| 15 | 53.1 | 51.1 | 51.1 | 65.4 | 73.7 | 80.1 | 75.1 | 70.6 | 15 | 70.1 | 67.1 | 68.8 | 77.1 | 84.1 | 85.6 | 79.1 | 72.6 |
| 16 | 61.6 | 56.6 | 52.1 | 54.6 | 56.6 | 56.3 | 55.6 | 51.1 | 16 | 68.6 | 67.1 | 66.9 | 73.8 | 82.6 | 83.6 | 78.3 | 73.7 |
| 17 | 52.6 | 51.6 | 51.7 | 54.1 | 54.9 | 56.4 | 55.8 | 51.1 | 17 | 73.1 | 72.1 | 72.6 | 75.6 | 80.6 | 77.1 | 72.1 | 72.1 |
| 18 | 53.3 | 53.7 | 54.3 | 59.6 | 65.5 | 72.1 | 71.1 | 66.1 | 18 | 72.1 | 70.6 | 71.1 | 70.9 | 72.6 | 77.1 | 77.1 | 70.6 |
| 19 | 63.6 | 59.6 | 58.3 | 71.7 | 77.6 | 81.1 | 73.9 | 70.1 | 19 | 67.6 | 66.6 | 67.6 | 76.1 | 82.6 | 82.6 | 76.1 | 72.1 |
| 20 | 68.6 | 66.6 | 67.1 | 75.1 | 81.3 | 84.1 | 78.3 | 71.1 | 20 | 69.9 | 66.1 | 66.1 | 75.6 | 80.9 | 82.1 | 78.1 | 68.6 |
| 21 | 69.1 | 64.6 | 66.1 | 77.1 | 84.1 | 81.1 | 71.8 | 70.6 | 21 | 66.1 | 63.1 | 63.1 | 74.1 | 75.6 | 78.5 | 73.6 | 64.8 |
| 22 | 69.1 | 67.6 | 67.1 | 75.1 | 81.7 | 83.6 | 71.5 | 66.3 | 22 | 60.3 | 57.6 | 60.1 | 75.3 | 80.1 | 82.1 | 77.6 | 71.1 |
| 23 | 65.6 | 55.1 | 53.1 | 59.3 | 64.9 | 69.1 | 63.6 | 54.7 | 23 | 66.1 | 64.1 | 63.7 | 75.1 | 80.6 | 85.1 | 79.1 | 73.3 |
| 24 | 50.1 | 49.1 | 47.1 | 61.6 | 67.6 | 73.6 | 69.6 | 59.7 | 24 | 71.3 | 68.6 | 71.1 | 80.6 | 86.1 | 89.6 | 84.9 | 75.1 |
| 25 | 55.1 | 53.6 | 55.1 | 68.1 | 74.6 | 80.6 | 71.6 | 64.9 | 25 | 69.7 | 66.6 | 68.1 | 77.7 | 87.6 | 88.6 | 80.6 | 75.7 |
| 26 | 62.6 | 61.1 | 60.1 | 70.1 | 74.6 | 78.7 | 69.3 | 61.4 | 26 | 73.6 | 72.1 | 70.1 | 83.4 | 89.1 | 92.1 | 88.1 | 77.9 |
| 27 | 59.3 | 57.1 | 58.1 | 68.6 | 76.6 | 78.6 | 76.1 | 66.6 | 27 | 70.1 | 73.6 | 72.1 | 85.7 | 91.9 | 95.4 | 87.7 | 79.6 |
| 28 | 61.1 | 60.1 | 61.6 | 72.6 | 78.1 | 71.6 | 67.6 | 64.6 | 28 | 76.3 | 74.1 | 74.6 | 86.6 | 92.1 | 92.7 | 83.1 | 73.1 |
| 29 | 62.6 | 61.1 | 60.7 | 75.1 | 84.1 | 87.8 | 80.0 | 72.1 | 29 | 71.6 | 70.1 | 70.6 | 81.4 | 87.4 | 89.3 | 80.3 | 77.1 |
| 30 | 68.9 | 64.1 | 66.1 | 73.6 | 73.8 | 70.6 | 67.1 | 61.0 | 30 | 74.1 | 71.6 | 71.1 | 79.3 | 84.4 | 88.1 | 82.6 | 73.6 |
| 31 | 58.9 | 56.1 | 56.1 | 61.8 | 69.3 | 70.8 | 66.6 | 60.1 | | | | | | | | | |
| Hourly means. | 57.6 | 54.9 | 54.7 | 64.6 | 70.7 | 71.4 | 67.1 | 61.1 | Hourly means. | 68.2 | 65.9 | 66.3 | 76.6 | 82.4 | 84.4 | 78.5 | 71.9 |

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . | Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|---------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|--------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | | | | | | | | | 1876. | | | | | | | | |
| July | | | | | | | | | August | | | | | | | | |
| 1 | 72.1 | 68.6 | 69.6 | 82.1 | 89.6 | 88.7 | 82.1 | 79.5 | 1 | 67.1 | 67.1 | 66.7 | 67.8 | 71.6 | 72.6 | 71.9 | 69.7 |
| 2 | 77.6 | 75.1 | 74.1 | 85.6 | 91.1 | 92.6 | 89.1 | 82.9 | 2 | 67.3 | 67.1 | 66.6 | 66.4 | 71.6 | 72.1 | 71.1 | 69.7 |
| 3 | 79.1 | 77.1 | 77.1 | 84.1 | 89.8 | 92.1 | 87.1 | 78.7 | 3 | 68.1 | 67.1 | 67.1 | 68.8 | 73.1 | 75.1 | 74.1 | 72.6 |
| 4 | 75.3 | 72.1 | 72.6 | 86.1 | 91.5 | 95.1 | 88.6 | 75.1 | 4 | 71.7 | 70.6 | 69.6 | 73.1 | 79.1 | 82.1 | 80.6 | 74.1 |
| 5 | 74.1 | 72.3 | 74.1 | 82.6 | 89.1 | 94.1 | 80.9 | 81.1 | 5 | 73.6 | 72.1 | 73.1 | 78.7 | 86.8 | 88.6 | 82.6 | 76.6 |
| 6 | 72.6 | 71.1 | 71.1 | 82.3 | 86.6 | 90.7 | 84.9 | 80.3 | 6 | 73.6 | 71.1 | 72.1 | 78.6 | 86.6 | 89.7 | 83.6 | 78.6 |
| 7 | 77.1 | 74.1 | 73.6 | 84.1 | 88.6 | 93.4 | 86.2 | 77.9 | 7 | 75.9 | 74.6 | 72.1 | 84.1 | 92.1 | 94.1 | 85.9 | 75.5 |
| 8 | 76.6 | 74.1 | 75.1 | 87.6 | 93.1 | 98.5 | 94.6 | 83.1 | 8 | 74.1 | 72.1 | 71.6 | 82.1 | 89.3 | 78.4 | 76.9 | 74.6 |
| 9 | 79.7 | 77.6 | 78.1 | 90.6 | 96.6 | 101.1 | 93.1 | 83.6 | 9 | 73.9 | 73.1 | 69.6 | 81.1 | 86.1 | 86.9 | 81.7 | 74.3 |
| 10 | 79.6 | 77.1 | 78.1 | 92.1 | 98.5 | 91.1 | 81.8 | 79.4 | 10 | 71.4 | 70.1 | 70.6 | 80.6 | 81.3 | 85.6 | 80.9 | 76.1 |
| 11 | 79.1 | 77.6 | 76.7 | 88.3 | 94.9 | 97.7 | 90.8 | 83.6 | 11 | 74.1 | 71.1 | 74.1 | 78.1 | 73.6 | 81.6 | 79.7 | 76.6 |
| 12 | 80.1 | 77.6 | 75.7 | 87.6 | 96.1 | 99.3 | 86.1 | 80.6 | 12 | 75.1 | 73.6 | 72.1 | 79.3 | 73.6 | 75.6 | 74.6 | 72.6 |
| 13 | 77.1 | 75.1 | 74.4 | 84.6 | 93.9 | 99.1 | 83.6 | 79.1 | 13 | 70.3 | 69.3 | 72.1 | 81.0 | 85.5 | 85.3 | 80.1 | 74.0 |
| 14 | 75.1 | 73.1 | 73.7 | 82.1 | 89.3 | 91.4 | 85.5 | 80.1 | 14 | 70.9 | 69.1 | 71.6 | 77.6 | 79.7 | 86.0 | 78.1 | 73.6 |
| 15 | 78.1 | 77.1 | 77.1 | 77.6 | 79.1 | 88.9 | 76.7 | 77.7 | 15 | 71.6 | 69.6 | 70.1 | 79.4 | 86.3 | 87.9 | 83.1 | 76.6 |
| 16 | 73.1 | 70.1 | 69.7 | 83.1 | 89.7 | 90.1 | 87.1 | 77.1 | 16 | 74.6 | 72.1 | 72.6 | 83.6 | 87.6 | 90.3 | 85.1 | 78.6 |
| 17 | 73.1 | 71.1 | 70.5 | 83.6 | 89.9 | 91.6 | 86.6 | 79.1 | 17 | 77.1 | 74.1 | 75.1 | 85.1 | 89.6 | 89.9 | 77.1 | 74.1 |
| 18 | 70.7 | 72.6 | 73.1 | 83.7 | 93.3 | 93.3 | 89.6 | 82.6 | 18 | 74.6 | 72.1 | 72.6 | 74.6 | 76.1 | 76.1 | 76.6 | 74.1 |
| 19 | 81.1 | 76.6 | 75.6 | 87.1 | 94.0 | 92.1 | 88.9 | 85.1 | 19 | 73.1 | 71.1 | 70.6 | 79.6 | 82.3 | 77.1 | 78.6 | 73.6 |
| 20 | 81.7 | 79.6 | 79.8 | 88.7 | 96.6 | 98.1 | 91.1 | 83.1 | 20 | 73.1 | 71.1 | 70.6 | 79.6 | 83.6 | 83.6 | 79.1 | 71.1 |
| 21 | 78.5 | 77.1 | 76.1 | 85.7 | 89.1 | 91.1 | 87.4 | 75.6 | 21 | 64.8 | 56.1 | 55.1 | 68.6 | 73.9 | 77.6 | 69.5 | 66.1 |
| 22 | 69.9 | 66.7 | 67.3 | 80.2 | 89.1 | 89.8 | 86.1 | 76.1 | 22 | 58.1 | 53.6 | 54.1 | 68.8 | 77.7 | 83.3 | 76.0 | 68.1 |
| 23 | 72.6 | 72.1 | 72.0 | 80.1 | 88.1 | 85.1 | 77.9 | 70.3 | 23 | 65.1 | 64.1 | 65.3 | 70.1 | 75.6 | 78.6 | 75.6 | 71.1 |
| 24 | 64.6 | 62.1 | 59.1 | 69.8 | 74.1 | 72.0 | 69.3 | 62.1 | 24 | 68.5 | 68.1 | 68.6 | 77.6 | 82.1 | 81.7 | 78.6 | 73.1 |
| 25 | 59.7 | 58.1 | 57.6 | 74.6 | 83.6 | 85.3 | 75.6 | 68.7 | 25 | 72.6 | 71.1 | 72.1 | 77.6 | 80.1 | 85.1 | 78.1 | 73.9 |
| 26 | 66.1 | 65.6 | 66.1 | 74.3 | 81.1 | 81.6 | 80.6 | 69.6 | 26 | 74.1 | 73.9 | 72.6 | 78.1 | 84.6 | 85.3 | 76.5 | 68.3 |
| 27 | 63.1 | 61.6 | 59.6 | 77.9 | 86.1 | 81.6 | 81.3 | 73.4 | 27 | 64.7 | 61.6 | 58.6 | 71.1 | 77.1 | 81.3 | 72.6 | 62.0 |
| 28 | 69.1 | 67.1 | 65.6 | 81.6 | 88.5 | 87.1 | 72.6 | 71.1 | 28 | 58.1 | 56.1 | 55.6 | 71.3 | 78.6 | 81.3 | 73.6 | 65.4 |
| 29 | 71.1 | 69.1 | 68.3 | 78.1 | 87.6 | 86.6 | 79.6 | 74.6 | 29 | 61.1 | 59.7 | 55.9 | 72.6 | 84.2 | 87.9 | 80.1 | 72.6 |
| 30 | 73.4 | 71.6 | 67.6 | 68.1 | 71.6 | 75.1 | 69.5 | 66.1 | 30 | 69.1 | 67.1 | 67.6 | 77.9 | 85.7 | 88.4 | 79.1 | 73.5 |
| 31 | 64.4 | 63.6 | 64.3 | 68.5 | 69.8 | 71.9 | 69.6 | 67.5 | 31 | 72.1 | 68.9 | 68.6 | 79.4 | 85.9 | 89.7 | 81.0 | 75.1 |
| Hourly means. | 73.7 | 72.4 | 71.4 | 82.0 | 88.1 | 90.0 | 84.0 | 76.9 | Hourly means | 70.3 | 68.4 | 68.3 | 76.4 | 81.3 | 83.2 | 78.1 | 72.8 |

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . | Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|--------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. September | ° | ° | ° | ° | ° | ° | ° | ° | 1876. October | ° | ° | ° | ° | ° | ° | ° | ° |
| 1 | 73.3 | 72.1 | 71.1 | 78.6 | 88.6 | 89.1 | 81.1 | 77.1 | 1 | 49.1 | 47.1 | 45.1 | 54.3 | 62.1 | 61.1 | 53.5 | 51.1 |
| 2 | 75.1 | 73.1 | 72.1 | 72.7 | 77.9 | 80.1 | 71.5 | 62.6 | 2 | 47.6 | 45.1 | 42.1 | 54.9 | 62.6 | 61.9 | 53.1 | 46.6 |
| 3 | 58.1 | 56.3 | 53.6 | 67.6 | 75.4 | 79.6 | 69.1 | 60.1 | 3 | 44.6 | 41.1 | 41.6 | 52.6 | 64.1 | 66.1 | 56.3 | 50.0 |
| 4 | 57.1 | 55.6 | 54.1 | 72.1 | 81.6 | 86.1 | 76.9 | 69.6 | 4 | 50.0 | 47.6 | 49.1 | 53.6 | 62.1 | 62.6 | 54.1 | 51.1 |
| 5 | 68.7 | 67.4 | 60.3 | 68.6 | 73.6 | 74.1 | 66.7 | 58.1 | 5 | 50.1 | 48.1 | 49.1 | 50.7 | 60.1 | 62.1 | 55.1 | 52.1 |
| 6 | 54.6 | 51.1 | 50.5 | 63.1 | 73.1 | 71.6 | 66.6 | 63.6 | 6 | 51.9 | 48.6 | 50.1 | 63.1 | 75.7 | 79.1 | 62.6 | 60.6 |
| 7 | 62.6 | 60.1 | 62.6 | 66.6 | 76.1 | 79.1 | 70.6 | 67.3 | 7 | 55.1 | 52.6 | 48.6 | 52.9 | 59.1 | 58.6 | 49.6 | 45.6 |
| 8 | 67.1 | 65.6 | 68.1 | 76.6 | 85.9 | 84.8 | 79.1 | 75.6 | 8 | 41.6 | 42.0 | 37.6 | 50.3 | 60.6 | 61.6 | 52.6 | 48.2 |
| 9 | 72.1 | 66.6 | 65.0 | 72.6 | 78.3 | 79.8 | 73.1 | 68.6 | 9 | 43.1 | 40.6 | 37.6 | 48.8 | 57.6 | 57.1 | 50.1 | 45.6 |
| 10 | 64.1 | 62.6 | 62.1 | 65.1 | 67.3 | 65.6 | 65.1 | 63.6 | 10 | 44.1 | 43.1 | 42.1 | 51.4 | 65.6 | 68.3 | 58.1 | 56.1 |
| 11 | 64.1 | 62.6 | 61.1 | 64.1 | 66.4 | 64.3 | 64.1 | 62.6 | 11 | 50.6 | 47.6 | 43.6 | 48.7 | 56.1 | 55.6 | 44.6 | 38.9 |
| 12 | 62.1 | 61.1 | 60.6 | 60.7 | 64.6 | 65.9 | 64.1 | 62.1 | 12 | 37.1 | 33.6 | 31.6 | 43.4 | 53.4 | 54.6 | 44.3 | 39.1 |
| 13 | 60.1 | 59.1 | 58.1 | 61.1 | 71.4 | 69.6 | 66.6 | 61.7 | 13 | 35.6 | 34.6 | 32.1 | 43.1 | 62.3 | 64.1 | 52.3 | 47.6 |
| 14 | 60.6 | 58.6 | 60.1 | 67.1 | 75.6 | 77.1 | 71.9 | 69.1 | 14 | 46.1 | 43.1 | 42.9 | 53.6 | 63.8 | 79.1 | 63.1 | 58.6 |
| 15 | 66.1 | 63.7 | 61.3 | 68.1 | 75.6 | 78.8 | 68.9 | 63.1 | 15 | 46.6 | 38.6 | 34.1 | 37.1 | 44.6 | 43.1 | 37.6 | 33.6 |
| 16 | 60.1 | 59.1 | 59.1 | 62.8 | 65.6 | 64.6 | 61.6 | 61.5 | 16 | 30.7 | 29.1 | 27.6 | 39.9 | 52.6 | 55.1 | 44.4 | 38.1 |
| 17 | 61.1 | 60.1 | 59.9 | 61.1 | 67.1 | 71.1 | 63.1 | 62.1 | 17 | 36.9 | 36.1 | 35.6 | 47.6 | 64.1 | 64.6 | 53.6 | 43.1 |
| 18 | 60.9 | 58.9 | 57.1 | 67.8 | 74.1 | 75.6 | 68.6 | 66.1 | 18 | 39.9 | 35.1 | 33.1 | 42.1 | 60.6 | 62.6 | 49.6 | 43.6 |
| 19 | 61.1 | 58.9 | 58.9 | 69.8 | 72.6 | 73.6 | 67.1 | 61.6 | 19 | 37.1 | 34.1 | 32.7 | 42.1 | 63.6 | 63.1 | 64.1 | 51.1 |
| 20 | 59.1 | 57.6 | 55.9 | 69.1 | 76.1 | 78.3 | 69.3 | 63.5 | 20 | 50.2 | 50.1 | 50.3 | 53.3 | 60.1 | 61.6 | 58.1 | 58.6 |
| 21 | 61.1 | 62.1 | 62.6 | 68.1 | 71.1 | 73.1 | 68.1 | 65.6 | 21 | 57.6 | 57.3 | 57.7 | 60.1 | 66.6 | 68.1 | 64.6 | 56.7 |
| 22 | 63.1 | 61.3 | 60.6 | 62.1 | 63.6 | 63.1 | 62.2 | 62.4 | 22 | 57.1 | 59.1 | 59.6 | 60.6 | 63.6 | 66.3 | 61.6 | 59.7 |
| 23 | 62.6 | 63.1 | 65.1 | 67.1 | 71.6 | 68.1 | 66.7 | 66.9 | 23 | 59.3 | 57.6 | 58.1 | 60.6 | 72.7 | 68.1 | 63.1 | 58.1 |
| 24 | 65.1 | 63.3 | 63.1 | 62.6 | 64.5 | 64.5 | 62.6 | 62.1 | 24 | 56.6 | 53.1 | 48.1 | 54.3 | 63.7 | 66.4 | 55.1 | 51.6 |
| 25 | 61.8 | 61.1 | 60.6 | 64.3 | 68.5 | 73.1 | 67.6 | 62.6 | 25 | 51.6 | 45.1 | 43.1 | 50.9 | 51.7 | 50.1 | 43.9 | 43.9 |
| 26 | 62.6 | 63.1 | 62.1 | 65.7 | 69.7 | 72.1 | 58.1 | 53.1 | 26 | 42.6 | 43.1 | 42.6 | 45.7 | 48.6 | 48.4 | 43.9 | 44.1 |
| 27 | 49.1 | 47.9 | 47.6 | 56.6 | 63.1 | 62.1 | 54.1 | 47.4 | 27 | 43.1 | 42.1 | 41.6 | 48.1 | 54.1 | 54.3 | 47.3 | 39.6 |
| 28 | 45.1 | 44.7 | 43.9 | 59.7 | 67.6 | 68.1 | 56.6 | 52.6 | 28 | 36.1 | 34.1 | 38.6 | 56.9 | 55.5 | 61.6 | 54.1 | 52.1 |
| 29 | 50.1 | 49.6 | 48.3 | 60.1 | 71.6 | 72.5 | 64.1 | 57.6 | 29 | 46.1 | 45.1 | 44.1 | 47.1 | 45.1 | 54.1 | 44.1 | 44.1 |
| 30 | 57.1 | 56.6 | 55.1 | 55.3 | 53.6 | 54.6 | 53.3 | 49.3 | 30 | 45.7 | 44.7 | 46.1 | 49.1 | 52.6 | 52.1 | 50.1 | 49.6 |
| | | | | | | | | | 31 | 49.3 | 48.1 | 49.6 | 52.3 | 55.8 | 57.1 | 53.7 | 50.6 |
| Hourly means. | 61.5 | 60.1 | 59.4 | 66.0 | 71.7 | 72.7 | 66.6 | 62.6 | Hourly means. | 46.2 | 44.1 | 43.1 | 50.6 | 59.4 | 60.6 | 52.8 | 48.7 |

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . | Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|-------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. November | ° | ° | ° | ° | ° | ° | ° | ° | 1876. December | ° | ° | ° | ° | ° | ° | ° | ° |
| 1 | 47.8 | 47.6 | 45.6 | 51.8 | 72.3 | 75.1 | 66.1 | 60.4 | 1 | 24.6 | 22.1 | 22.3 | 23.7 | 26.0 | 24.1 | 18.9 | 17.6 |
| 2 | 57.5 | 55.1 | 52.9 | 58.1 | 76.6 | 72.1 | 67.1 | 65.3 | 2 | 20.6 | 22.1 | 23.1 | 24.6 | 29.1 | 30.7 | 28.9 | 27.3 |
| 3 | 65.3 | 62.1 | 60.1 | 55.5 | 58.1 | 57.3 | 50.4 | 47.7 | 3 | 27.1 | 27.6 | 27.6 | 31.1 | 33.7 | 33.6 | 31.3 | 29.1 |
| 4 | 46.3 | 41.7 | 38.1 | 47.1 | 54.8 | 55.6 | 47.6 | 42.9 | 4 | 25.1 | 23.1 | 21.6 | 27.7 | 37.1 | 33.6 | 29.9 | 27.3 |
| 5 | 41.6 | 40.1 | 40.6 | 46.1 | 56.6 | 55.5 | 47.9 | 42.6 | 5 | 25.6 | 25.1 | 20.6 | 25.6 | 32.6 | 33.9 | 31.1 | 29.3 |
| 6 | 38.1 | 35.3 | 35.6 | 40.8 | 52.1 | 53.6 | 53.1 | 53.1 | 6 | 26.4 | 23.1 | 18.6 | 24.3 | 39.1 | 39.6 | 34.6 | 31.1 |
| 7 | 51.9 | 50.1 | 48.6 | 49.7 | 48.7 | 50.0 | 45.1 | 42.1 | 7 | 35.6 | 27.1 | 25.1 | 27.6 | 40.9 | 45.9 | 38.8 | 33.9 |
| 8 | 37.9 | 35.1 | 35.1 | 40.9 | 53.6 | 52.1 | 44.1 | 42.1 | 8 | 33.1 | 32.1 | 32.6 | 32.1 | 36.7 | 39.3 | 36.6 | 33.6 |
| 9 | 40.6 | 40.6 | 36.6 | 43.1 | 51.1 | 52.6 | 43.6 | 43.6 | 9 | 32.1 | 26.1 | 12.1 | 8.1 | 13.3 | 12.1 | 7.1 | 5.6 |
| 10 | 40.8 | 36.9 | 35.1 | 41.1 | 50.6 | 50.7 | 41.6 | 37.6 | 10 | 4.9 | 4.9 | 4.9 | 8.3 | 16.9 | 17.8 | 16.9 | 15.6 |
| 11 | 36.6 | 35.3 | 35.3 | 37.7 | 47.3 | 46.6 | 41.3 | 39.6 | 11 | 22.1 | 21.9 | 22.1 | 24.1 | 31.8 | 33.1 | 29.6 | 27.4 |
| 12 | 35.6 | 32.1 | 31.6 | 39.9 | 51.3 | 53.9 | 45.7 | 40.1 | 12 | 26.6 | 25.1 | 25.6 | 26.6 | 36.1 | 43.4 | 38.4 | 35.1 |
| 13 | 36.6 | 36.1 | 35.6 | 41.9 | 62.1 | 67.4 | 61.4 | 57.1 | 13 | 31.5 | 29.6 | 28.3 | 33.1 | 53.1 | 56.1 | 46.9 | 43.1 |
| 14 | 56.1 | 51.1 | 47.1 | 52.1 | 66.1 | 60.7 | 55.6 | 53.6 | 14 | 39.0 | 37.3 | 36.1 | 39.6 | 52.6 | 57.1 | 47.6 | 40.7 |
| 15 | 51.1 | 49.6 | 49.6 | 47.6 | 49.6 | 48.1 | 46.1 | 44.8 | 15 | 41.3 | 39.1 | 34.1 | 24.1 | 30.6 | 31.9 | 27.6 | 24.1 |
| 16 | 44.3 | 44.1 | 42.1 | 42.1 | 44.7 | 46.1 | 44.1 | 43.1 | 16 | 27.7 | 31.1 | 31.7 | 40.6 | 35.1 | 27.6 | 18.1 | 14.6 |
| 17 | 43.1 | 41.1 | 41.6 | 42.6 | 45.6 | 43.6 | 42.1 | 42.1 | 17 | 11.5 | 11.1 | 11.3 | 13.1 | 19.3 | 19.7 | 17.6 | 17.1 |
| 18 | 44.8 | 45.1 | 46.1 | 47.3 | 50.6 | 52.6 | 51.1 | 50.1 | 18 | 18.8 | 20.1 | 22.1 | 25.1 | 28.7 | 28.1 | 18.6 | 16.6 |
| 19 | 49.3 | 48.1 | 48.6 | 48.8 | 50.6 | 50.8 | 50.7 | 51.3 | 19 | 11.6 | 9.1 | 8.6 | 14.5 | 26.3 | 27.9 | 23.6 | 22.8 |
| 20 | 51.6 | 50.6 | 49.1 | 48.1 | 50.1 | 50.6 | 48.6 | 46.9 | 20 | 18.1 | 14.6 | 9.3 | 10.7 | 26.1 | 23.6 | 20.6 | 18.1 |
| 21 | 47.6 | 45.8 | 46.1 | 47.8 | 52.1 | 50.8 | 48.9 | 48.6 | 21 | 11.1 | 13.9 | 17.1 | 20.0 | 24.7 | 27.7 | 23.1 | 18.6 |
| 22 | 45.6 | 45.1 | 45.1 | 47.8 | 58.6 | 55.6 | 49.9 | 44.6 | 22 | 13.6 | 22.6 | 22.1 | 23.3 | 27.3 | 29.9 | 31.6 | 29.1 |
| 23 | 43.0 | 37.1 | 36.1 | 39.5 | 42.6 | 42.6 | 40.3 | 35.3 | 23 | 27.3 | 25.1 | 27.1 | 29.1 | 31.7 | 32.1 | 26.7 | 23.9 |
| 24 | 36.1 | 34.1 | 33.1 | 35.6 | 40.4 | 39.6 | 33.6 | 30.4 | 24 | 22.6 | 21.1 | 21.6 | 23.6 | 24.9 | 24.6 | 22.1 | 20.3 |
| 25 | 30.6 | 30.3 | 29.8 | 32.8 | 39.8 | 44.9 | 40.0 | 37.6 | 25 | 20.6 | 20.6 | 20.9 | 21.6 | 23.1 | 24.0 | 24.6 | 24.6 |
| 26 | 38.2 | 37.6 | 37.1 | 35.9 | 39.1 | 41.1 | 36.6 | 33.1 | 26 | 24.3 | 24.8 | 25.1 | 26.7 | 32.7 | 33.1 | 27.3 | 25.7 |
| 27 | 30.4 | 30.1 | 30.6 | 34.1 | 32.7 | 34.6 | 32.6 | 32.6 | 27 | 25.6 | 21.6 | 17.6 | 17.7 | 32.1 | 32.6 | 26.6 | 19.1 |
| 28 | 35.6 | 33.6 | 32.9 | 34.8 | 41.0 | 44.1 | 35.6 | 35.1 | 28 | 16.1 | 15.1 | 17.1 | 22.1 | 26.1 | 25.6 | 24.9 | 25.1 |
| 29 | 31.1 | 30.1 | 29.1 | 33.3 | 43.5 | 42.3 | 34.6 | 30.9 | 29 | 23.1 | 23.6 | 24.1 | 27.1 | 31.9 | 32.5 | 27.6 | 30.9 |
| 30 | 31.1 | 32.6 | 31.6 | 29.1 | 30.6 | 32.9 | 31.1 | 29.1 | 30 | 29.6 | 26.1 | 25.6 | 26.6 | 29.1 | 29.3 | 24.6 | 21.6 |
| | | | | | | | | | 31 | 19.1 | 19.1 | 18.6 | 20.6 | 24.1 | 25.1 | 20.7 | 19.1 |
| Hourly means. | 42.9 | 41.1 | 40.2 | 43.1 | 50.4 | 50.8 | 45.9 | 43.4 | Hourly means. | 23.8 | 22.8 | 21.8 | 24.0 | 30.7 | 31.5 | 27.2 | 24.9 |

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . | Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. January | | | | | | | | | 1876. February | | | | | | | | |
| 1 | 53.5 | 52.5 | 54.0 | 54.0 | 56.5 | 60.0 | 56.0 | 54.5 | 1 | 27.0 | 25.5 | 25.8 | 31.8 | 38.0 | 38.5 | 38.5 | 39.0 |
| 2 | 53.0 | 52.4 | 51.5 | 55.5 | 63.5 | 62.0 | 57.5 | 55.3 | 2 | 38.8 | 33.0 | 23.3 | 23.5 | 27.2 | 27.0 | 21.0 | 18.5 |
| 3 | 52.0 | 50.5 | 44.5 | 43.6 | 45.0 | 45.0 | 40.0 | 35.6 | 3 | . | . | . | 17.6 | 22.5 | 24.0 | 26.0 | 25.5 |
| 4 | 31.6 | 32.0 | 32.0 | 34.3 | 39.5 | 39.5 | 35.5 | 30.5 | 4 | 25.5 | 25.8 | 25.0 | 27.0 | 30.2 | 28.0 | 26.0 | 18.5 |
| 5 | 28.0 | 26.5 | 24.5 | 27.5 | 36.5 | 44.0 | 41.5 | 44.5 | 5 | 19.0 | 15.6 | . | 12.5 | 24.0 | 24.2 | 19.0 | 14.0 |
| 6 | 45.5 | 43.5 | 42.0 | 43.5 | 40.7 | 39.5 | 35.0 | 33.4 | 6 | 11.5 | 16.5 | 20.5 | 23.0 | 28.0 | 30.5 | 31.5 | 32.0 |
| 7 | 31.5 | 29.0 | 26.6 | 28.0 | 40.5 | 43.5 | 38.0 | 33.0 | 7 | 32.5 | 33.0 | 31.5 | 31.6 | 43.2 | 49.0 | 42.0 | 37.0 |
| 8 | 31.4 | 28.0 | 27.0 | 31.0 | 39.0 | 47.0 | 42.2 | 44.0 | 8 | 32.5 | 32.0 | 30.0 | 30.6 | 44.0 | 47.0 | 42.1 | 39.4 |
| 9 | 44.5 | 43.0 | 40.5 | 46.0 | 49.5 | 51.2 | 50.5 | 52.0 | 9 | 38.0 | 37.5 | 35.5 | 37.5 | 45.5 | 48.6 | 45.4 | 46.0 |
| 10 | 53.0 | 54.0 | 46.0 | 36.5 | 34.0 | 32.0 | 24.5 | 22.0 | 10 | 49.5 | 40.8 | 47.0 | 47.8 | 55.5 | 57.2 | 50.2 | 46.5 |
| 11 | 21.0 | 20.0 | 17.8 | 19.5 | 23.6 | 27.2 | 24.5 | 21.0 | 11 | 42.8 | 42.0 | 41.5 | 45.0 | 50.2 | 60.0 | 58.0 | 55.0 |
| 12 | 19.5 | 18.5 | 20.0 | 25.2 | 30.2 | 30.5 | 27.0 | 23.8 | 12 | 32.5 | 50.5 | 48.5 | 40.5 | 45.2 | 48.0 | 44.5 | 39.5 |
| 13 | 21.8 | 19.2 | . | 22.0 | 25.5 | 24.0 | 23.5 | 21.8 | 13 | 36.0 | 35.5 | 35.0 | 38.5 | 48.7 | 49.5 | 49.0 | 50.2 |
| 14 | 19.4 | . | . | 21.6 | 26.0 | 29.5 | 26.5 | 23.5 | 14 | 51.2 | 51.0 | 51.0 | 55.0 | 60.8 | 62.0 | 57.0 | 56.0 |
| 15 | 21.5 | 19.0 | . | 21.6 | 32.5 | 36.6 | 33.5 | 34.6 | 15 | 51.6 | 51.0 | 40.6 | 36.0 | 39.7 | 39.5 | 39.0 | 38.5 |
| 16 | 35.5 | 37.0 | 36.0 | 38.6 | 42.5 | 42.7 | 39.5 | 37.3 | 16 | 27.8 | 28.5 | 27.8 | 30.4 | 33.0 | 32.5 | 30.6 | 28.0 |
| 17 | 38.0 | 39.8 | 40.0 | 40.5 | 44.5 | 48.0 | 47.6 | 47.5 | 17 | 27.4 | 25.3 | 25.6 | 30.0 | 34.0 | 33.7 | 29.5 | 29.0 |
| 18 | 44.5 | 44.3 | 48.0 | 50.0 | 55.6 | 56.0 | 55.5 | 54.6 | 18 | 28.5 | 26.3 | 27.5 | 30.5 | 35.5 | 37.5 | 33.6 | 32.4 |
| 19 | 54.5 | 55.3 | 56.5 | 56.0 | 58.5 | 53.0 | 53.0 | 41.6 | 19 | 28.0 | 27.0 | 25.0 | 29.5 | 43.5 | 44.5 | 42.0 | 37.8 |
| 20 | 36.0 | 33.0 | 29.0 | 29.9 | 34.5 | 37.0 | 34.3 | 31.6 | 20 | 34.5 | 35.0 | 32.2 | 34.0 | 40.0 | 43.0 | 41.5 | 35.5 |
| 21 | 32.0 | 33.5 | 33.0 | 34.0 | 44.6 | 41.0 | 40.2 | 35.3 | 21 | 32.0 | 31.8 | 29.0 | 31.5 | 37.8 | 38.9 | 41.5 | 41.0 |
| 22 | 34.0 | 34.5 | 30.5 | 30.0 | 32.6 | 33.0 | 34.5 | 34.0 | 22 | 41.0 | 40.0 | 33.6 | 30.0 | 36.5 | 40.5 | 38.0 | 36.0 |
| 23 | 35.2 | 35.0 | 34.0 | 36.2 | 41.0 | 45.0 | 47.5 | 45.5 | 23 | 35.0 | 33.0 | 27.5 | 22.5 | 24.2 | 22.0 | 18.0 | 16.0 |
| 24 | 48.0 | 44.0 | 42.0 | 38.0 | 39.0 | 38.5 | 34.0 | 30.6 | 24 | 15.5 | 11.7 | 15.8 | 22.8 | 27.5 | 33.0 | 31.5 | 30.5 |
| 25 | 29.0 | 28.2 | 27.8 | 29.0 | 34.7 | 34.7 | 32.0 | 30.6 | 25 | 25.6 | 21.7 | 20.0 | 25.5 | 33.0 | 36.6 | 33.5 | 31.0 |
| 26 | 29.6 | 28.0 | 29.0 | 28.8 | 34.0 | 34.8 | 31.0 | 29.0 | 26 | 28.5 | 28.0 | 28.0 | 31.8 | 43.5 | 49.0 | 43.6 | 38.5 |
| 27 | 29.2 | 33.0 | 34.0 | 37.5 | 45.0 | 50.7 | 50.0 | 47.0 | 27 | 37.0 | 36.5 | 34.5 | 32.0 | 33.2 | 36.5 | 30.8 | 36.0 |
| 28 | 46.0 | 43.0 | 41.4 | 43.8 | 61.0 | 61.2 | 56.0 | 54.5 | 28 | 36.5 | 35.7 | 34.8 | 35.5 | 40.0 | 39.6 | 39.4 | 38.0 |
| 29 | 53.2 | 54.0 | 55.0 | 56.0 | 58.0 | 47.0 | 37.2 | 29.0 | 29 | 36.5 | 36.5 | 34.0 | 32.5 | 35.0 | 35.0 | 30.8 | 31.0 |
| 30 | 27.5 | 26.0 | 22.0 | 22.5 | 29.0 | 33.5 | 25.5 | 24.0 | | | | | | | | | |
| 31 | 22.6 | 20.5 | 19.0 | 23.0 | 30.5 | 33.5 | 30.5 | 28.0 | | | | | | | | | |
| Hourly means. | 36.1 | 35.9 | 35.9 | 35.6 | 40.9 | 42.0 | 38.8 | 36.5 | Hourly means. | 33.6 | 32.7 | 31.5 | 31.6 | 37.9 | 39.8 | 37.2 | 34.7 |

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . | Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|----------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|----------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. March | | | | | | | | | 1876. April | | | | | | | | |
| 1 | 29.0 | 29.5 | 30.5 | 30.0 | 32.5 | 33.8 | 33.8 | 33.0 | 1 | 32.0 | 30.0 | 30.2 | 35.5 | 40.0 | 41.0 | 45.0 | 34.6 |
| 2 | 32.5 | 32.3 | 32.0 | 27.5 | 28.0 | 33.4 | 30.5 | 29.5 | 2 | 32.5 | 30.0 | 29.0 | 34.0 | 41.0 | 40.7 | 40.5 | 36.0 |
| 3 | 29.5 | 24.8 | 22.0 | 25.4 | 33.8 | 33.4 | 31.2 | 30.2 | 3 | 37.5 | 38.0 | 38.6 | 40.0 | 41.7 | 42.0 | 43.0 | 42.5 |
| 4 | 30.0 | 27.5 | 24.5 | 32.5 | 35.6 | 37.0 | 36.0 | 34.0 | 4 | 42.2 | 41.0 | 40.0 | 45.5 | 47.5 | 42.5 | 40.5 | 38.0 |
| 5 | 31.5 | 30.2 | 29.5 | 33.0 | 43.5 | 50.0 | 46.5 | 42.5 | 5 | 38.0 | 35.5 | 33.0 | 42.8 | 49.0 | 52.3 | 50.7 | 45.0 |
| 6 | 40.0 | 38.8 | 39.0 | 47.0 | 59.0 | 58.7 | 52.5 | 50.0 | 6 | 42.0 | 37.0 | 35.8 | 39.5 | 44.5 | 46.2 | 46.0 | 40.5 |
| 7 | 48.5 | 49.5 | 50.0 | 54.7 | 59.5 | 62.0 | 57.0 | 57.0 | 7 | 36.2 | 33.5 | 34.0 | 46.5 | 48.5 | 52.5 | 46.0 | 40.0 |
| 8 | 57.5 | 52.0 | 46.0 | 39.5 | 42.5 | 42.5 | 37.6 | 35.5 | 8 | 35.8 | 32.0 | 31.0 | 39.0 | 44.4 | 46.0 | 44.8 | 39.5 |
| 9 | 32.2 | 31.6 | 30.8 | 38.5 | 43.5 | 47.0 | 44.5 | 40.0 | 9 | 37.5 | 36.5 | 32.5 | 38.4 | 42.4 | 47.0 | 42.0 | 38.6 |
| 10 | 37.2 | 35.0 | 32.6 | 35.5 | 48.0 | 51.0 | 46.5 | 45.5 | 10 | 32.5 | 32.5 | 30.5 | 39.5 | 45.6 | 49.0 | 45.0 | 42.6 |
| 11 | 45.0 | 42.0 | 41.5 | 44.5 | 48.5 | 49.5 | 44.0 | 40.2 | 11 | 39.0 | 37.0 | 36.0 | 47.0 | 53.6 | 56.8 | 53.5 | 51.0 |
| 12 | 38.0 | 37.0 | 38.0 | 39.5 | 41.6 | 43.0 | 45.0 | 44.5 | 12 | 50.0 | 50.0 | 49.8 | 53.0 | 62.5 | 66.5 | 63.8 | 61.2 |
| 13 | 44.5 | 44.0 | 42.0 | 37.5 | 40.7 | 40.0 | 31.0 | 29.5 | 13 | 57.0 | 55.5 | 55.7 | 56.6 | 61.6 | 64.0 | 65.5 | 65.2 |
| 14 | 27.5 | 25.5 | 25.0 | 31.5 | 35.0 | 39.0 | 37.5 | 33.5 | 14 | 64.2 | 61.0 | 63.2 | 62.2 | 65.0 | 66.2 | 63.6 | 53.0 |
| 15 | 31.5 | 32.0 | 29.5 | 30.2 | 34.3 | 37.2 | 35.0 | 34.5 | 15 | 48.0 | 46.8 | 43.0 | 48.0 | 51.5 | 51.6 | 51.5 | 47.0 |
| 16 | 34.5 | 36.0 | 34.5 | 35.8 | 38.2 | 44.6 | 48.0 | 43.8 | 16 | 45.0 | 47.0 | 47.0 | 51.0 | 53.8 | 54.0 | 50.5 | 47.0 |
| 17 | 40.0 | 39.4 | 36.3 | 41.5 | 39.0 | 35.3 | 34.5 | 36.0 | 17 | 47.5 | 45.0 | 44.0 | 44.5 | 47.0 | 47.0 | 42.0 | 42.5 |
| 18 | 27.5 | 28.0 | 25.2 | 28.0 | 29.0 | 27.8 | 22.5 | 20.8 | 18 | 39.8 | 39.0 | 38.0 | 42.5 | 44.8 | 46.0 | 41.0 | 38.0 |
| 19 | 18.0 | 15.5 | 14.0 | 16.5 | 26.0 | 32.5 | 31.0 | 26.0 | 19 | 35.0 | 31.8 | 31.5 | 39.5 | 46.0 | 48.7 | 44.2 | 41.0 |
| 20 | 24.2 | 26.5 | 26.8 | 27.5 | 29.0 | 32.6 | 36.0 | 44.5 | 20 | 37.3 | 34.2 | 33.5 | 43.5 | 50.7 | 53.0 | 53.0 | 50.6 |
| 21 | 36.0 | 33.5 | 33.0 | 31.5 | 33.0 | 31.5 | 27.0 | 27.5 | 21 | 49.0 | 52.0 | 53.0 | 49.0 | 53.0 | 54.5 | 52.0 | 48.0 |
| 22 | 27.0 | 26.0 | 27.5 | 31.3 | 35.6 | 33.0 | 30.5 | 29.0 | 22 | 43.7 | 40.5 | 39.3 | 46.0 | 49.5 | 52.5 | 50.0 | 48.0 |
| 23 | 28.5 | 28.0 | 28.5 | 32.0 | 37.0 | 39.5 | 37.2 | 32.0 | 23 | 46.5 | 43.4 | 44.0 | 55.0 | 58.0 | 57.2 | 51.5 | 54.0 |
| 24 | 31.0 | 28.3 | 39.5 | 34.0 | 39.0 | 39.0 | 39.0 | 36.8 | 24 | 49.5 | 49.0 | 47.5 | 48.3 | 48.8 | 47.5 | 46.2 | 44.7 |
| 25 | 38.0 | 43.0 | 41.0 | 50.6 | 49.5 | 48.0 | 45.5 | 42.5 | 25 | 43.2 | 40.3 | 40.0 | 42.5 | 44.0 | 43.6 | 42.7 | 39.0 |
| 26 | 41.5 | 37.0 | 36.0 | 42.0 | 43.5 | 43.0 | 38.5 | 36.7 | 26 | 36.2 | 35.5 | 35.5 | 44.6 | 50.5 | 53.6 | 50.5 | 46.0 |
| 27 | 36.6 | 34.0 | 33.0 | 39.2 | 43.4 | 48.0 | 44.0 | 40.0 | 27 | 43.0 | 40.3 | 39.5 | 50.2 | 53.2 | 55.0 | 54.7 | 54.5 |
| 28 | 37.0 | 31.3 | 34.5 | 36.0 | 42.8 | 45.0 | 56.5 | 41.0 | 28 | 53.5 | 53.0 | 52.0 | 63.6 | 65.5 | 60.0 | 60.7 | 59.0 |
| 29 | 40.0 | 39.0 | 39.5 | 35.0 | 35.5 | 38.0 | 34.0 | 31.0 | 29 | 55.5 | 45.0 | 42.8 | 47.5 | 52.5 | 57.5 | 55.0 | 50.0 |
| 30 | 31.5 | 30.2 | 31.5 | 34.5 | 36.5 | 37.5 | 34.6 | 33.6 | 30 | 50.5 | 50.0 | 51.0 | 54.0 | 57.0 | 54.0 | 40.2 | 31.5 |
| 31 | 33.6 | 31.5 | 30.5 | 38.0 | 40.0 | 44.3 | 39.5 | 34.0 | | | | | | | | | |
| Hourly means. | 34.8 | 33.6 | 32.8 | 35.5 | 39.4 | 41.2 | 38.9 | 36.6 | Hourly means. | 43.3 | 41.4 | 40.6 | 46.3 | 50.4 | 51.6 | 49.1 | 45.6 |

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . | Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|---------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|---------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | | | | | | | | | 1876. | | | | | | | | |
| May | 1 | 30.5 | 30.0 | 30.5 | 40.0 | 45.6 | 50.0 | 48.0 | June | 1 | 53.0 | 49.0 | 51.0 | 61.5 | 65.5 | 69.0 | 62.5 |
| | 2 | 41.0 | 40.0 | 39.0 | 45.5 | 49.6 | 47.9 | 47.0 | | 2 | 59.8 | 56.0 | 56.5 | 67.5 | 75.5 | 79.3 | 69.0 |
| | 3 | 46.0 | 45.5 | 45.7 | 48.0 | 51.0 | 49.5 | 49.0 | | 3 | 67.5 | 67.0 | 68.0 | 74.5 | 79.0 | 78.5 | 71.0 |
| | 4 | 42.8 | 40.5 | 40.8 | 50.6 | 56.5 | 57.5 | 50.0 | | 4 | 69.0 | 66.3 | 68.4 | 74.5 | 76.5 | 72.5 | 67.5 |
| | 5 | 50.5 | 49.5 | 49.5 | 57.5 | 62.0 | 63.0 | 60.5 | | 5 | 66.5 | 63.2 | 60.0 | 64.5 | 67.0 | 68.8 | 59.5 |
| | 6 | 59.0 | 60.5 | 59.4 | 66.5 | 68.2 | 69.5 | 68.2 | | 6 | 58.5 | 56.0 | 55.0 | 62.0 | 63.0 | 66.1 | 61.5 |
| | 7 | 63.5 | 60.0 | 64.0 | 72.5 | 75.5 | 74.5 | 70.5 | | 7 | 58.5 | 55.5 | 56.0 | 64.6 | 69.4 | 69.0 | 65.5 |
| | 8 | 67.6 | 66.2 | 66.5 | 69.5 | 71.9 | 70.5 | 69.0 | | 8 | 63.6 | 62.0 | 62.0 | 70.6 | 73.7 | 73.4 | 67.0 |
| | 9 | 67.0 | 64.0 | 58.8 | 58.0 | 60.0 | 60.0 | 57.5 | | 9 | 65.0 | 63.5 | 63.0 | 70.4 | 73.5 | 75.2 | 71.0 |
| | 10 | 57.2 | 52.5 | 52.5 | 59.5 | 63.5 | 55.0 | 48.5 | | 10 | 68.0 | 66.0 | 65.6 | 74.0 | 76.5 | 75.5 | 69.5 |
| | 11 | 46.8 | 45.0 | 45.6 | 51.5 | 56.5 | 59.8 | 59.5 | | 11 | 66.5 | 65.5 | 67.0 | 75.5 | 78.0 | 79.5 | 72.0 |
| | 12 | 51.5 | 49.6 | 52.0 | 58.5 | 69.5 | 63.5 | 61.5 | | 12 | 71.0 | 69.5 | 70.8 | 78.2 | 79.6 | 78.5 | 71.5 |
| | 13 | 57.0 | 50.5 | 51.5 | 54.8 | 58.0 | 55.0 | 52.0 | | 13 | 71.0 | 70.5 | 70.0 | 73.0 | 76.0 | 74.0 | 69.0 |
| | 14 | 44.0 | 43.0 | 41.5 | 51.5 | 55.7 | 58.5 | 57.5 | | 14 | 68.0 | 68.2 | 69.0 | 72.6 | 75.0 | 75.4 | 69.6 |
| | 15 | 52.0 | 51.0 | 50.6 | 59.2 | 65.2 | 71.5 | 68.5 | | 15 | 69.0 | 67.0 | 68.8 | 73.0 | 76.0 | 76.0 | 68.0 |
| | 16 | 61.5 | 56.0 | 52.5 | 54.0 | 54.6 | 54.4 | 54.5 | | 16 | 68.0 | 67.0 | 67.0 | 72.5 | 75.0 | 76.2 | 70.8 |
| | 17 | 51.0 | 51.0 | 51.0 | 52.8 | 54.8 | 55.6 | 55.5 | | 17 | 71.5 | 71.5 | 71.0 | 73.0 | 75.2 | 73.0 | 72.5 |
| | 18 | 53.5 | 54.0 | 54.5 | 58.6 | 63.6 | 68.6 | 70.0 | | 18 | 71.5 | 71.0 | 70.8 | 70.5 | 71.5 | 74.0 | 70.0 |
| | 19 | 63.5 | 60.2 | 59.0 | 67.6 | 69.6 | 74.0 | 71.0 | | 19 | 68.4 | 67.0 | 68.2 | 73.0 | 76.0 | 73.0 | 70.0 |
| | 20 | 68.5 | 67.0 | 67.5 | 71.0 | 73.7 | 75.0 | 73.2 | | 20 | 70.0 | 66.2 | 65.6 | 70.5 | 73.0 | 73.0 | 66.5 |
| | 21 | 68.5 | 64.0 | 65.5 | 74.0 | 79.0 | 77.5 | 68.9 | | 21 | 64.5 | 63.0 | 63.0 | 67.5 | 63.5 | 68.2 | 64.0 |
| | 22 | 69.0 | 67.5 | 67.0 | 73.0 | 78.0 | 77.0 | 67.2 | | 22 | 60.5 | 58.0 | 60.5 | 68.5 | 72.5 | 73.0 | 69.2 |
| | 23 | 65.0 | 50.0 | 50.7 | 53.0 | 55.5 | 59.0 | 54.5 | | 23 | 66.0 | 64.5 | 64.4 | 70.0 | 71.7 | 74.8 | 69.0 |
| | 24 | 50.0 | 49.5 | 47.5 | 53.0 | 58.0 | 61.0 | 61.6 | | 24 | 69.4 | 68.8 | 69.8 | 74.5 | 78.0 | 79.0 | 70.6 |
| | 25 | 53.8 | 54.0 | 55.5 | 63.5 | 65.5 | 71.4 | 65.5 | | 25 | 68.5 | 66.5 | 68.0 | 74.8 | 77.8 | 77.6 | 72.6 |
| | 26 | 61.0 | 61.0 | 60.0 | 63.5 | 67.5 | 70.0 | 64.3 | | 26 | 72.0 | 71.6 | 70.0 | 77.0 | 81.2 | 81.0 | 75.0 |
| | 27 | 59.2 | 57.0 | 58.0 | 66.5 | 71.0 | 73.0 | 69.5 | | 27 | 74.8 | 73.5 | 72.0 | 79.0 | 81.5 | 83.0 | 74.5 |
| | 28 | 60.7 | 60.0 | 61.5 | 68.0 | 72.8 | 69.0 | 67.0 | | 28 | 73.0 | 72.5 | 72.5 | 79.5 | 81.8 | 81.5 | 73.0 |
| | 29 | 62.0 | 62.0 | 61.0 | 71.0 | 74.5 | 74.5 | 71.5 | | 29 | 72.0 | 71.0 | 71.5 | 78.5 | 81.5 | 81.5 | 77.0 |
| | 30 | 65.6 | 62.5 | 64.0 | 67.5 | 68.0 | 64.5 | 61.9 | | 30 | 74.3 | 72.0 | 69.5 | 74.0 | 76.0 | 79.5 | 73.0 |
| | 31 | 54.4 | 53.5 | 53.0 | 57.0 | 61.5 | 62.5 | 60.5 | | | | | | | | | |
| Hourly means. | 56.2 | 54.1 | 54.0 | 59.9 | 63.7 | 64.2 | 61.7 | 58.6 | Hourly means. | 67.3 | 65.6 | 65.8 | 71.9 | 74.8 | 75.3 | 72.7 | 69.3 |

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . | Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|---------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|---------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | | | | | | | | | 1876. | | | | | | | | |
| July | 1 | 70.5 | 67.5 | 69.0 | 78.5 | 84.5 | 82.3 | 81.0 | August | 1 | 66.8 | 67.0 | 66.2 | 67.5 | 68.8 | 69.7 | 66.3 |
| | 2 | 77.5 | 75.0 | 74.5 | 81.0 | 85.5 | 87.5 | 82.0 | | 2 | 65.5 | 65.0 | 65.5 | 66.5 | 71.5 | 72.7 | 68.5 |
| | 3 | 78.5 | 77.0 | 74.5 | 77.0 | 77.5 | 78.2 | 78.5 | | 3 | 68.0 | 67.5 | 67.5 | 68.5 | 71.5 | 68.5 | 72.4 |
| | 4 | 73.0 | 72.0 | 72.0 | 79.0 | 79.5 | 81.5 | 80.0 | | 4 | 72.0 | 71.0 | 70.0 | 71.8 | 75.4 | 76.5 | 73.5 |
| | 5 | 74.0 | 72.5 | 74.0 | 78.5 | 85.4 | 89.0 | 80.0 | | 5 | 73.5 | 72.5 | 73.5 | 76.5 | 79.8 | 80.0 | 75.2 |
| | 6 | 72.5 | 71.0 | 71.0 | 75.5 | 77.5 | 80.0 | 76.5 | | 6 | 73.5 | 71.0 | 72.0 | 76.5 | 80.0 | 83.4 | 78.0 |
| | 7 | 74.5 | 73.5 | 73.5 | 78.6 | 80.2 | 81.0 | 81.2 | | 7 | 75.0 | 74.5 | 72.5 | 80.5 | 88.0 | 92.5 | 74.0 |
| | 8 | 75.5 | 74.0 | 74.5 | 80.5 | 83.0 | 84.0 | 83.5 | | 8 | 74.0 | 72.5 | 72.0 | 78.2 | 81.5 | 76.2 | 74.0 |
| | 9 | 78.5 | 77.0 | 75.5 | 81.5 | 84.5 | 86.8 | 83.0 | | 9 | 74.0 | 73.5 | 69.5 | 73.5 | 72.6 | 73.0 | 72.2 |
| | 10 | 79.0 | 76.2 | 77.0 | 83.5 | 91.0 | 82.0 | 77.5 | | 10 | 71.5 | 70.5 | 71.0 | 76.6 | 75.5 | 78.0 | 75.2 |
| | 11 | 77.0 | 76.0 | 76.5 | 82.5 | 84.2 | 84.5 | 85.0 | | 11 | 74.0 | 71.0 | 74.3 | 76.0 | 73.8 | 76.6 | 75.0 |
| | 12 | 76.8 | 75.5 | 74.3 | 79.5 | 83.0 | 84.5 | 76.5 | | 12 | 74.5 | 74.0 | 72.5 | 76.2 | 72.8 | 74.5 | 73.0 |
| | 13 | 75.5 | 74.0 | 73.5 | 78.5 | 83.5 | 85.5 | 76.8 | | 13 | 69.5 | 69.0 | 72.5 | 76.4 | 78.5 | 82.5 | 73.5 |
| | 14 | 75.0 | 73.5 | 74.0 | 78.5 | 80.7 | 82.5 | 80.5 | | 14 | 70.5 | 69.5 | 72.0 | 74.6 | 76.4 | 79.5 | 73.5 |
| | 15 | 77.5 | 76.0 | 76.4 | 77.0 | 77.5 | 81.5 | 79.6 | | 15 | 71.0 | 69.5 | 70.2 | 77.0 | 79.2 | 83.0 | 76.5 |
| | 16 | 72.5 | 66.5 | 66.0 | 73.5 | 83.0 | 86.5 | 84.5 | | 16 | 74.0 | 72.0 | 72.5 | 75.5 | 79.5 | 81.5 | 77.0 |
| | 17 | 73.0 | 71.5 | 70.5 | 81.0 | 76.5 | 78.0 | 77.5 | | 17 | 76.0 | 74.0 | 75.5 | 79.5 | 80.6 | 80.7 | 74.0 |
| | 18 | 70.0 | 69.5 | 69.5 | 74.5 | 81.0 | 80.5 | 80.5 | | 18 | 74.0 | 72.0 | 73.0 | 72.0 | 73.2 | 73.5 | 72.0 |
| | 19 | 76.8 | 74.0 | 73.0 | 78.8 | 83.0 | 82.5 | 83.0 | | 19 | 72.0 | 72.2 | 73.0 | 74.5 | 77.2 | 76.2 | 73.5 |
| | 20 | 78.7 | 78.5 | 78.0 | 82.5 | 82.8 | 83.6 | 82.0 | | 20 | 73.0 | 71.3 | 71.0 | 74.0 | 77.5 | 79.6 | 68.5 |
| | 21 | 75.6 | 76.0 | 73.0 | 76.0 | 75.8 | 74.0 | 63.0 | | 21 | 62.6 | 55.0 | 53.8 | 65.5 | 71.8 | 75.5 | 66.5 |
| | 22 | 69.5 | 65.0 | 64.0 | 70.5 | 75.2 | 74.5 | 71.2 | | 22 | 58.5 | 53.5 | 54.0 | 64.0 | 69.0 | 72.5 | 66.5 |
| | 23 | 70.5 | 70.0 | 70.0 | 73.0 | 75.6 | 70.5 | 63.6 | | 23 | 65.3 | 64.5 | 65.0 | 69.0 | 73.2 | 74.5 | 69.5 |
| | 24 | 60.6 | 60.0 | 58.8 | 62.0 | 62.0 | 62.5 | 59.4 | | 24 | 67.5 | 67.0 | 68.5 | 74.0 | 76.5 | 70.8 | 72.5 |
| | 25 | 58.5 | 56.0 | 57.5 | 64.9 | 68.0 | 70.0 | 66.2 | | 25 | 71.8 | 71.5 | 72.0 | 76.0 | 77.1 | 79.5 | 73.2 |
| | 26 | 60.5 | 61.5 | 62.5 | 67.5 | 65.5 | 67.6 | 64.0 | | 26 | 74.0 | 73.8 | 72.0 | 72.5 | 75.0 | 70.5 | 67.5 |
| | 27 | 61.5 | 61.0 | 59.5 | 69.5 | 74.0 | 75.0 | 68.0 | | 27 | 64.8 | 61.5 | 59.0 | 64.0 | 67.2 | 70.0 | 60.2 |
| | 28 | 65.5 | 66.0 | 64.5 | 71.5 | 78.0 | 80.5 | 70.5 | | 28 | 58.0 | 56.0 | 55.8 | 63.8 | 69.0 | 71.3 | 64.9 |
| | 29 | 71.0 | 69.0 | 68.5 | 74.0 | 76.0 | 75.2 | 73.0 | | 29 | 61.5 | 60.0 | 56.0 | 68.8 | 75.0 | 78.8 | 70.6 |
| | 30 | 73.5 | 71.5 | 68.0 | 68.5 | 72.0 | 75.5 | 68.5 | | 30 | 68.0 | 66.5 | 67.5 | 74.0 | 76.4 | 79.0 | 72.0 |
| | 31 | 63.6 | 63.5 | 64.0 | 65.5 | 66.5 | 68.0 | 66.5 | | 31 | 72.0 | 68.5 | 67.8 | 74.6 | 78.5 | 81.0 | 73.8 |
| Hourly means. | 72.1 | 70.6 | 70.2 | 75.5 | 78.4 | 79.2 | 76.7 | 73.7 | Hourly means. | 69.8 | 68.3 | 68.3 | 72.8 | 75.6 | 77.1 | 74.7 | 71.7 |

WET THERMOMETER.

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . | Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . | |
|--------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|---------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|------|
| 1876. September | 1 | 73.0 | 72.0 | 71.0 | 76.5 | 81.2 | 82.0 | 78.0 | October | 1 | 49.8 | 47.7 | 45.8 | 52.1 | 55.8 | 54.5 | 51.5 | 49.0 |
| 2 | 74.0 | 72.5 | 72.0 | 62.0 | 62.5 | 62.2 | 60.5 | 58.0 | 2 | 47.0 | 44.5 | 42.0 | 51.2 | 55.4 | 55.5 | 50.6 | 47.0 | |
| 3 | 56.5 | 53.5 | 52.5 | 61.0 | 64.0 | 65.5 | 62.2 | 58.5 | 3 | 45.0 | 41.5 | 42.0 | 50.1 | 57.2 | 59.0 | 54.5 | 50.5 | |
| 4 | 56.7 | 55.0 | 54.4 | 65.5 | 69.0 | 72.5 | 69.0 | 64.8 | 4 | 49.9 | 47.5 | 49.0 | 52.6 | 57.0 | 58.5 | 52.5 | 50.5 | |
| 5 | 64.0 | 62.5 | 58.5 | 60.5 | 60.0 | 62.5 | 58.5 | 54.8 | 5 | 49.0 | 47.5 | 49.0 | 50.2 | 56.8 | 58.0 | 53.5 | 51.6 | |
| 6 | 54.5 | 50.5 | 50.0 | 58.5 | 63.5 | 64.3 | 63.0 | 62.0 | 6 | 51.7 | 48.5 | 50.5 | 60.8 | 66.5 | 69.5 | 61.5 | 60.5 | |
| 7 | 62.5 | 60.5 | 62.5 | 65.0 | 71.0 | 74.5 | 68.0 | 66.5 | 7 | 55.0 | 51.0 | 46.5 | 48.0 | 52.6 | 52.0 | 46.5 | 44.0 | |
| 8 | 66.2 | 65.6 | 68.2 | 74.5 | 79.0 | 78.0 | 76.5 | 74.5 | 8 | 42.0 | 41.9 | 38.5 | 47.0 | 54.2 | 55.0 | 49.0 | 46.6 | |
| 9 | 72.0 | 65.5 | 64.0 | 67.0 | 70.0 | 70.0 | 66.0 | 64.0 | 9 | 43.0 | 40.0 | 38.5 | 44.3 | 51.3 | 50.7 | 48.5 | 45.5 | |
| 10 | 60.2 | 59.5 | 60.2 | 63.5 | 65.0 | 65.5 | 65.2 | 64.0 | 10 | 44.5 | 43.5 | 42.8 | 51.0 | 60.0 | 61.0 | 58.0 | 54.0 | |
| 11 | 64.6 | 62.6 | 61.8 | 63.2 | 64.0 | 63.5 | 63.0 | 62.2 | 11 | 50.7 | 44.0 | 41.0 | 43.5 | 48.5 | 48.0 | 41.2 | 38.6 | |
| 12 | 62.0 | 61.3 | 60.8 | 60.6 | 63.0 | 63.9 | 64.0 | 62.0 | 12 | 35.8 | 34.0 | 32.0 | 38.7 | 47.0 | 48.2 | 43.0 | 39.2 | |
| 13 | 60.0 | 59.0 | 58.0 | 61.5 | 66.5 | 65.5 | 64.5 | 61.5 | 13 | 35.6 | 35.5 | 32.7 | 42.0 | 55.0 | 55.5 | 49.1 | 47.0 | |
| 14 | 60.8 | 59.0 | 60.5 | 67.0 | 71.0 | 72.0 | 68.8 | 67.2 | 14 | 45.0 | 43.5 | 43.0 | 51.5 | 59.8 | 63.8 | 61.0 | 54.5 | |
| 15 | 65.0 | 63.5 | 62.0 | 67.5 | 67.5 | 69.5 | 64.0 | 60.0 | 15 | 46.0 | 37.0 | 34.0 | 34.0 | 39.2 | 37.5 | 34.0 | 32.0 | |
| 16 | 58.5 | 57.5 | 57.5 | 59.8 | 62.5 | 63.5 | 61.6 | 61.5 | 16 | 30.0 | 29.0 | 27.8 | 36.4 | 45.9 | 47.5 | 42.0 | 38.0 | |
| 17 | 61.0 | 60.0 | 59.5 | 61.5 | 67.8 | 72.0 | 63.5 | 61.8 | 17 | 36.2 | 36.0 | 35.5 | 43.8 | 63.5 | 54.0 | 48.0 | 42.5 | |
| 18 | 60.3 | 58.0 | 57.0 | 65.0 | 68.5 | 69.5 | 65.5 | 64.0 | 18 | 40.0 | 35.5 | 34.0 | 40.5 | 52.0 | 53.0 | 45.5 | 42.5 | |
| 19 | 60.0 | 58.5 | 58.2 | 64.5 | 67.5 | 69.0 | 66.8 | 60.0 | 19 | 37.6 | 34.5 | 33.2 | 41.2 | 55.2 | 55.5 | 49.5 | 49.0 | |
| 20 | 58.5 | 57.0 | 56.2 | 65.5 | 69.0 | 69.0 | 65.0 | 62.3 | 20 | 49.1 | 50.0 | 50.2 | 52.6 | 68.4 | 58.3 | 57.5 | 57.5 | |
| 21 | 61.0 | 62.0 | 62.5 | 66.5 | 66.8 | 67.5 | 65.5 | 68.0 | 21 | 57.6 | 57.8 | 58.0 | 60.2 | 63.3 | 67.0 | 63.7 | 57.0 | |
| 22 | 62.0 | 60.0 | 59.5 | 62.5 | 62.5 | 63.2 | 62.2 | 62.6 | 22 | 57.8 | 59.5 | 60.0 | 61.0 | 62.6 | 64.0 | 61.0 | 60.6 | |
| 23 | 63.0 | 63.5 | 65.5 | 67.5 | 71.5 | 68.0 | 66.5 | 67.0 | 23 | 60.0 | 58.3 | 58.7 | 60.7 | 67.5 | 64.5 | 63.0 | 58.5 | |
| 24 | 65.0 | 64.0 | 63.5 | 63.0 | 64.4 | 64.5 | 62.5 | 62.2 | 24 | 56.5 | 53.5 | 48.5 | 51.5 | 56.5 | 57.8 | 52.0 | 50.5 | |
| 25 | 62.0 | 61.0 | 60.5 | 62.6 | 65.5 | 68.5 | 66.0 | 62.5 | 25 | 48.7 | 44.5 | 42.0 | 45.5 | 46.6 | 45.2 | 41.5 | 41.4 | |
| 26 | 62.8 | 63.0 | 62.5 | 65.5 | 63.0 | 63.0 | 57.5 | 52.5 | 26 | 40.7 | 42.0 | 42.0 | 42.0 | 44.0 | 45.0 | 42.2 | 42.0 | |
| 27 | 48.2 | 46.0 | 46.0 | 51.5 | 55.5 | 55.5 | 49.5 | 46.0 | 27 | 43.0 | 42.0 | 41.5 | 44.0 | 48.3 | 48.2 | 43.5 | 39.5 | |
| 28 | 44.2 | 44.0 | 43.0 | 54.5 | 58.5 | 59.5 | 55.0 | 51.0 | 28 | 36.5 | 34.5 | 38.5 | 46.2 | 49.8 | 54.0 | 50.0 | 51.0 | |
| 29 | 49.7 | 49.0 | 48.2 | 57.0 | 64.5 | 65.2 | 60.0 | 56.5 | 29 | 48.5 | 48.0 | 46.0 | 45.0 | 45.3 | 46.0 | 45.5 | 45.0 | |
| 30 | 56.0 | 56.0 | 55.5 | 55.0 | 53.0 | 54.6 | 53.0 | 50.0 | 30 | 45.4 | 44.5 | 46.0 | 47.8 | 50.5 | 50.0 | 49.3 | 49.2 | |
| | | | | | | | | | 31 | 48.8 | 48.5 | 49.5 | 52.3 | 53.4 | 56.0 | 54.0 | 51.0 | |
| Hourly means. | 60.8 | 59.4 | 59.0 | 63.1 | 65.9 | 66.7 | 63.7 | 61.3 | Hourly means. | 46.0 | 44.0 | 43.1 | 47.9 | 54.5 | 54.6 | 50.4 | 47.9 | |

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . | Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . | |
|---------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|---------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|------|
| 1876. | ° | ° | ° | ° | | | | | 1876. | ° | ° | ° | | ° | | | | |
| November | 1 | 48.5 | 48.3 | 46.3 | 52.0 | 66.0 | 66.8 | 61.6 | December | 1 | 25.0 | 23.0 | 23.0 | 24.0 | 26.7 | 25.0 | 20.0 | 18.5 |
| | 2 | 56.8 | 55.0 | 53.0 | 56.7 | 66.8 | 64.0 | 60.7 | | 2 | 21.0 | 22.5 | 24.0 | 25.4 | 30.0 | 31.5 | 30.0 | 28.0 |
| | 3 | 62.0 | 62.5 | 60.0 | 50.5 | 51.7 | 51.0 | 45.8 | | 3 | 28.0 | 28.0 | 28.0 | 32.0 | 34.2 | 31.0 | 29.8 | 28.6 |
| | 4 | 44.0 | 40.5 | 38.5 | 42.5 | 49.5 | 49.0 | 44.5 | | 4 | 26.0 | 24.0 | 22.7 | 28.0 | 32.4 | 30.6 | 28.5 | 27.5 |
| | 5 | 41.3 | 40.0 | 40.5 | 43.0 | 48.8 | 48.5 | 44.5 | | 5 | 26.0 | 25.5 | 21.3 | 25.5 | 29.6 | 31.4 | 30.0 | 28.6 |
| | 6 | 38.0 | 35.6 | 36.0 | 41.0 | 48.0 | 49.5 | 52.5 | | 6 | 26.8 | 24.0 | 19.5 | 24.5 | 33.0 | 35.0 | 32.4 | 30.5 |
| | 7 | 52.0 | 50.0 | 49.3 | 48.0 | 45.5 | 46.0 | 44.5 | | 7 | 26.0 | 27.5 | 25.7 | 27.6 | 36.0 | 39.0 | 35.0 | 31.2 |
| | 8 | 37.5 | 35.0 | 35.2 | 39.6 | 47.5 | 45.6 | 42.5 | | 8 | 31.0 | 32.5 | 33.0 | 31.0 | 33.0 | 36.5 | 35.9 | 33.0 |
| | 9 | 39.4 | 39.0 | 36.3 | 41.0 | 46.5 | 46.7 | 42.7 | | 9 | 32.0 | 26.0 | 12.0 | 8.6 | 13.0 | 12.2 | 7.5 | 6.5 |
| | 10 | 38.5 | 36.5 | 35.0 | 39.5 | 44.5 | 44.8 | 39.5 | | 10 | . | . | . | . | . | . | 16.5 | 17.0 |
| | 11 | 37.0 | 36.0 | 36.0 | 37.5 | 43.5 | 44.0 | 40.1 | | 11 | 20.3 | 21.5 | 22.0 | 23.5 | 31.8 | 33.0 | 30.0 | 27.0 |
| | 12 | 36.0 | 32.5 | 32.0 | 38.2 | 46.0 | 48.2 | 44.0 | | 12 | 26.5 | 26.0 | 26.0 | 27.0 | 32.8 | 33.7 | 35.2 | 33.5 |
| | 13 | 37.8 | 36.6 | 36.0 | 41.8 | 56.3 | 60.2 | 57.2 | | 13 | 31.0 | 33.0 | 29.0 | 32.5 | 44.2 | 45.6 | 41.0 | 39.0 |
| | 14 | 54.5 | 50.0 | 47.0 | 51.5 | 60.8 | 59.5 | 55.5 | | 14 | 36.8 | 35.6 | 34.8 | 37.5 | 45.7 | 50.0 | 44.5 | 39.2 |
| | 15 | 51.7 | 50.0 | 50.0 | 48.5 | 49.5 | 47.8 | 45.0 | | 15 | 38.5 | 34.0 | 30.0 | 22.5 | 28.0 | 30.7 | 27.2 | 24.0 |
| | 16 | 43.5 | 43.5 | 43.0 | 42.5 | 43.4 | 44.5 | 42.9 | | 16 | 26.0 | 28.5 | 30.0 | 34.0 | 35.0 | 29.0 | 18.8 | 15.5 |
| | 17 | 42.0 | 41.0 | 40.5 | 41.0 | 43.6 | 43.2 | 42.5 | | 17 | 12.0 | 12.0 | 12.0 | 12.5 | 18.0 | 19.0 | 18.0 | 17.0 |
| | 18 | 45.2 | 45.0 | 46.7 | 47.8 | 51.0 | 53.0 | 51.5 | | 18 | 19.5 | 20.0 | 22.5 | 25.8 | 29.5 | 18.8 | 19.0 | . |
| | 19 | 49.9 | 48.9 | 49.0 | 49.5 | 50.7 | 51.2 | 51.4 | | 19 | 12.6 | 10.0 | 9.3 | 15.0 | 25.0 | 27.4 | 24.0 | 22.5 |
| | 20 | 52.0 | 50.6 | 49.0 | 48.5 | 50.7 | 50.5 | 48.8 | | 20 | 18.5 | 15.0 | 10.0 | 11.0 | 24.0 | 22.5 | 20.5 | 18.5 |
| | 21 | 47.0 | 44.8 | 45.0 | 46.5 | 49.0 | 49.2 | 48.2 | | 21 | 11.8 | 14.0 | 17.0 | 20.5 | 24.9 | 27.5 | 24.0 | 19.8 |
| | 22 | 45.0 | 45.2 | 40.5 | 47.4 | 54.5 | 53.0 | 48.6 | | 22 | 14.2 | 23.0 | 23.0 | 24.0 | 28.0 | 30.6 | 32.3 | 30.0 |
| | 23 | 41.2 | 37.0 | 36.0 | 39.0 | 40.5 | 40.5 | 38.6 | | 23 | 28.0 | 26.0 | 27.8 | 29.0 | 31.0 | 31.4 | 27.0 | 24.5 |
| | 24 | 36.0 | 34.0 | 31.5 | 33.5 | 37.0 | 36.0 | 32.2 | | 24 | 23.5 | 22.0 | 22.5 | 24.0 | 23.5 | 23.3 | 21.6 | 19.6 |
| | 25 | 30.0 | 30.5 | 30.0 | 32.0 | 37.0 | 38.7 | 37.2 | | 25 | 21.0 | 21.0 | 21.2 | 21.8 | 23.2 | 24.6 | 25.0 | 25.0 |
| | 26 | 38.0 | 37.0 | 37.0 | 36.5 | 38.9 | 37.5 | 34.5 | | 26 | 25.0 | 25.5 | 26.0 | 27.2 | 32.0 | 32.5 | 28.0 | 26.4 |
| | 27 | 29.5 | 29.0 | 29.8 | 32.7 | 33.4 | 34.6 | 33.0 | | 27 | 26.0 | 22.0 | 18.5 | 18.5 | 30.0 | 30.5 | 26.5 | 19.8 |
| | 28 | 33.5 | 32.0 | 32.3 | 33.5 | 37.5 | 39.5 | 35.0 | | 28 | 17.0 | 16.0 | 18.0 | 22.0 | 25.5 | 25.3 | 24.5 | 24.5 |
| | 29 | 31.5 | 30.0 | 29.8 | 31.6 | 38.5 | 37.5 | 33.5 | | 29 | 23.7 | 24.5 | 25.0 | 27.8 | 32.2 | 32.5 | 28.0 | 31.0 |
| | 30 | 31.5 | 31.6 | 30.8 | 29.6 | 30.5 | 31.0 | 30.7 | | 30 | 29.5 | 26.0 | 24.8 | 25.5 | 26.5 | 27.0 | 24.5 | 21.0 |
| | | | | | | | | | | 31 | 19.5 | 19.0 | 19.0 | 20.5 | 24.5 | 25.5 | 21.5 | 20.0 |
| Hourly means. | 42.3 | 40.9 | 40.2 | 42.0 | 46.9 | 47.0 | 44.3 | 42.5 | Hourly means. | 24.0 | 23.4 | 22.5 | 24.2 | 29.4 | 30.0 | 26.0 | 24.9 | |

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . | Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. January | ° | ° | ° | ° | ° | ° | ° | ° | 1876. February | ° | ° | ° | ° | ° | ° | ° | ° |
| 1 | 51.5 | 51.5 | 53.5 | 57.2 | 68.0 | 65.5 | 51.0 | 49.5 | 1 | 22.0 | 21.5 | 19.6 | 36.5 | 55.5 | 45.0 | 38.0 | 38.0 |
| 2 | 50.0 | 50.0 | 50.0 | 54.0 | 114.5 | 120.5 | 56.0 | 54.0 | 2 | 37.0 | 31.0 | 23.5 | 30.0 | 88.0 | 33.0 | 19.0 | 14.0 |
| 3 | 52.5 | 52.0 | 48.0 | 67.0 | 70.5 | 53.0 | 39.0 | 28.0 | 3 | 12.4 | 12.4 | 13.0 | 33.5 | 40.2 | 34.5 | 25.0 | 24.0 |
| 4 | 27.0 | 29.0 | 29.5 | 70.0 | 100.0 | 87.0 | 35.0 | 30.0 | 4 | 26.0 | 26.0 | 25.0 | 30.0 | 50.0 | 47.0 | 39.0 | 15.0 |
| 5 | 27.0 | 24.0 | 20.0 | 34.5 | 60.5 | 50.0 | 40.5 | 44.0 | 5 | 9.0 | 6.2 | 1.0 | 15.0 | 91.5 | 32.0 | 16.0 | 9.0 |
| 6 | 44.0 | 42.0 | 39.0 | 47.0 | 50.5 | 52.0 | 35.0 | 32.0 | 6 | 8.0 | 14.5 | 18.5 | 33.0 | 53.5 | 38.0 | 31.5 | 31.3 |
| 7 | 28.0 | 23.5 | 22.0 | 48.0 | 96.5 | 46.5 | 34.0 | 26.0 | 7 | 30.5 | 32.0 | 30.5 | 41.5 | 97.0 | 108.5 | 39.0 | 34.0 |
| 8 | 25.5 | 23.5 | 20.0 | 53.0 | 70.0 | 60.0 | 43.0 | 46.0 | 8 | 29.0 | 30.0 | 27.0 | 36.0 | 100.0 | 53.2 | 37.5 | 38.0 |
| 9 | 48.0 | 46.0 | 47.0 | 53.0 | 66.0 | 58.5 | 49.0 | 51.0 | 9 | 37.5 | 37.0 | 32.5 | 53.0 | 69.2 | 65.0 | 46.0 | 45.0 |
| 10 | 54.0 | 55.0 | 51.0 | 45.0 | 50.5 | 42.0 | 24.0 | 19.5 | 10 | 49.0 | 49.5 | 46.0 | 53.5 | 115.0 | 67.5 | 50.1 | 46.0 |
| 11 | 15.5 | 15.5 | 13.0 | 59.5 | 84.5 | 32.0 | 15.0 | 12.5 | 11 | 42.0 | 41.0 | 40.5 | 47.0 | 60.0 | 76.8 | 55.0 | 53.5 |
| 12 | 14.6 | 15.5 | 14.0 | 48.0 | 41.5 | 43.0 | 23.5 | 20.0 | 12 | 51.0 | 47.8 | 46.0 | 48.5 | 110.5 | 60.0 | 38.5 | 34.0 |
| 13 | 17.8 | 14.0 | 12.0 | 69.0 | 46.0 | 39.0 | 20.5 | 20.0 | 13 | 34.0 | 31.3 | 32.0 | 46.0 | 86.0 | 58.5 | 50.8 | 51.0 |
| 14 | 14.0 | 9.0 | 12.0 | 60.2 | 62.0 | 43.0 | 22.0 | 17.5 | 14 | 51.0 | 51.0 | 49.8 | 58.0 | 75.0 | 67.0 | 56.0 | 55.0 |
| 15 | 16.0 | 14.0 | 12.6 | 28.5 | 59.0 | 48.0 | 27.3 | 36.0 | 15 | 50.0 | 50.0 | 40.0 | 37.0 | 65.5 | 57.0 | 41.0 | 34.0 |
| 16 | 38.0 | 38.5 | 37.0 | 50.9 | 66.0 | 56.0 | 38.6 | 36.0 | 16 | 30.0 | 26.0 | 24.5 | 35.0 | 100.0 | 47.0 | 25.0 | 24.0 |
| 17 | 36.5 | 36.0 | 38.5 | 45.0 | 63.0 | 54.0 | 45.0 | 43.5 | 17 | 24.0 | 20.0 | 20.5 | 38.0 | 105.0 | 46.0 | 28.2 | 25.0 |
| 18 | 43.0 | 42.5 | 46.0 | 52.0 | 72.0 | 66.2 | 57.0 | 55.0 | 18 | 20.5 | 22.0 | 22.0 | 37.0 | 101.0 | 50.0 | 32.0 | 25.5 |
| 19 | 56.0 | 57.0 | 56.5 | 56.0 | 70.8 | 54.2 | 51.0 | 41.5 | 19 | 24.0 | 22.0 | 20.0 | 32.0 | 113.0 | 65.0 | 44.5 | 35.5 |
| 20 | 38.5 | 31.5 | 30.0 | 37.0 | 71.5 | 45.5 | 34.5 | 30.0 | 20 | 30.0 | 31.5 | 28.0 | 42.0 | 108.3 | 59.0 | 37.0 | 30.5 |
| 21 | 31.5 | 30.0 | 30.0 | 46.0 | 102.0 | 56.0 | 38.2 | 31.0 | 21 | 26.0 | 25.0 | 26.0 | 46.0 | 70.0 | 47.0 | 40.5 | 41.0 |
| 22 | 34.0 | 35.0 | 28.0 | 37.0 | 41.8 | 39.5 | 35.0 | 33.5 | 22 | 40.0 | 39.0 | 34.5 | 39.2 | 103.0 | 55.1 | 35.0 | 30.5 |
| 23 | 35.0 | 34.0 | 33.0 | 41.0 | 46.0 | 55.0 | 46.0 | 47.0 | 23 | 35.5 | 33.0 | 30.0 | 30.0 | 94.2 | 94.0 | 16.0 | 13.0 |
| 24 | 46.0 | 43.0 | 40.5 | 43.0 | 101.0 | 49.5 | 33.0 | 30.5 | 24 | 11.5 | 13.0 | 13.0 | 29.5 | 93.5 | 78.0 | 30.0 | 29.5 |
| 25 | 30.0 | 27.0 | 26.5 | 39.5 | 63.0 | 49.0 | 29.0 | 26.0 | 25 | 22.0 | 16.0 | 15.0 | 30.0 | 95.0 | 91.0 | 34.0 | 30.5 |
| 26 | 25.0 | 22.0 | 26.0 | 32.0 | 95.0 | 51.0 | 29.5 | 26.0 | 26 | 26.0 | 26.0 | 25.0 | 45.0 | 103.0 | 99.0 | 42.0 | 39.0 |
| 27 | 20.0 | 32.5 | 33.2 | 37.0 | 58.0 | 60.5 | 50.0 | 46.5 | 27 | 36.5 | 36.0 | 33.5 | 40.0 | 46.0 | 50.5 | 37.5 | 35.5 |
| 28 | 46.0 | 39.0 | 38.0 | 51.0 | 113.0 | 73.0 | 57.0 | 56.2 | 28 | 36.0 | 35.0 | 35.0 | 43.0 | 50.0 | 47.5 | 39.0 | 35.0 |
| 29 | 54.0 | 55.0 | 56.0 | 60.0 | 60.6 | 56.8 | 42.5 | 33.0 | 29 | 36.0 | 36.0 | 32.5 | 49.0 | 100.0 | 89.5 | 33.0 | 32.0 |
| 30 | 30.0 | 28.0 | 20.5 | 28.5 | 91.0 | 36.0 | 25.0 | 19.0 | | | | | | | | | |
| 31 | 18.0 | 16.0 | 13.0 | 33.0 | 64.0 | 39.0 | 30.5 | 26.5 | | | | | | | | | |
| Hourly means. | 34.7 | 33.2 | 32.1 | 48.8 | 71.6 | 54.2 | 37.3 | 34.4 | Hourly means. | 30.5 | 29.7 | 27.7 | 39.1 | 84.4 | 60.7 | 36.4 | 32.7 |
| | | | | | | | | | | | | | | | | | |
| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . | Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
| 1876. March | ° | ° | ° | ° | ° | ° | ° | ° | 1876. April | ° | ° | ° | ° | ° | ° | ° | ° |
| 1 | 26.0 | 27.0 | 27.5 | 49.0 | 45.0 | 45.5 | 32.6 | 32.0 | 1 | 29.0 | 27.0 | 27.0 | 95.0 | 112.0 | 105.0 | 44.0 | 34.0 |
| 2 | 32.0 | 32.0 | 32.0 | 45.5 | 90.0 | 92.0 | 27.0 | 27.5 | 2 | 26.8 | 26.5 | 26.0 | 87.0 | 110.0 | 95.0 | 43.0 | 33.0 |
| 3 | 26.5 | 20.0 | 16.0 | 58.0 | 99.0 | 98.5 | 28.2 | 29.0 | 3 | 39.0 | 39.0 | 39.0 | 40.5 | 42.0 | 42.5 | 42.0 | 41.5 |
| 4 | 29.0 | 23.5 | 18.5 | 66.0 | 103.0 | 78.0 | 35.5 | 34.5 | 4 | 40.0 | 39.0 | 38.0 | 105.0 | 104.8 | 60.6 | 44.0 | 39.0 |
| 5 | 27.0 | 26.2 | 23.5 | 79.0 | 108.0 | 106.0 | 48.0 | 41.0 | 5 | 34.0 | 30.5 | 28.0 | 103.6 | 111.3 | 105.8 | 54.0 | 43.0 |
| 6 | 35.0 | 37.0 | 36.0 | 93.6 | 118.0 | 113.0 | 56.5 | 50.0 | 6 | 15.0 | 35.0 | 33.5 | 106.0 | 119.5 | 117.0 | 54.0 | 40.0 |
| 7 | 50.0 | 49.0 | 47.0 | 92.0 | 82.0 | 110.0 | 60.0 | 58.0 | 7 | 32.0 | 28.0 | 32.0 | 92.0 | 97.0 | 125.0 | 115.0 | 44.0 |
| 8 | 58.5 | 52.0 | 46.0 | 49.0 | 115.0 | 100.0 | 48.5 | 32.5 | 8 | 36.0 | 28.0 | 27.6 | 105.5 | 119.0 | 116.5 | 63.0 | 35.5 |
| 9 | 25.5 | 20.0 | 27.5 | 85.0 | 110.0 | 106.0 | 43.0 | 36.5 | 9 | 31.0 | 30.0 | 26.0 | 103.8 | 118.0 | 116.5 | 57.0 | 35.0 |
| 10 | 33.0 | 33.0 | 28.0 | 80.0 | 114.5 | 117.0 | 98.5 | 49.0 | 10 | 30.0 | 30.0 | 28.0 | 104.0 | 119.5 | 104.5 | 55.0 | 38.6 |
| 11 | 41.0 | 42.0 | 41.0 | 85.0 | 102.5 | 97.0 | 45.0 | 41.0 | 11 | 33.5 | 32.0 | 29.5 | 103.0 | 123.0 | 115.2 | 61.0 | 53.0 |
| 12 | 38.0 | 37.0 | 37.0 | 44.0 | 52.0 | 46.0 | 43.0 | 43.0 | 12 | 51.0 | 50.0 | 49.0 | 98.0 | 127.0 | 128.2 | 68.2 | 62.0 |
| 13 | 43.0 | 43.5 | 43.0 | 96.2 | 110.4 | 102.5 | 35.0 | 27.0 | 13 | 53.5 | 51.5 | 55.0 | 71.0 | 92.0 | 79.0 | 70.0 | 66.0 |
| 14 | 26.0 | 23.0 | 23.0 | 82.0 | 107.0 | 104.0 | 33.0 | 29.0 | 14 | 63.0 | 59.0 | 62.0 | 73.0 | 84.0 | 82.0 | 73.0 | 57.0 |
| 15 | 26.0 | 27.0 | 30.0 | 43.5 | 81.2 | 78.0 | 38.0 | 37.5 | 15 | 53.0 | 44.0 | 37.0 | 110.0 | 126.3 | 136.2 | 130.0 | 66.0 |
| 16 | 35.0 | 35.0 | 33.0 | 37.0 | 40.0 | 44.3 | 50.0 | 43.5 | 16 | 46.0 | 56.0 | 52.0 | 83.0 | 127.0 | 100.5 | 58.0 | 49.0 |
| 17 | 40.5 | 40.0 | 40.5 | 92.0 | 110.0 | 52.5 | 35.0 | 34.0 | 17 | 48.0 | 44.0 | 46.0 | 93.0 | 120.0 | 110.5 | 46.0 | 39.0 |
| 18 | 20.0 | 27.0 | 25.0 | 86.5 | 62.5 | 62.5 | 23.0 | 19.0 | 18 | 36.0 | 35.0 | 38.0 | 76.0 | 97.5 | 94.0 | 48.0 | 39.5 |
| 19 | 14.0 | 12.0 | 11.0 | 82.0 | 100.0 | 99.0 | 34.8 | 20.0 | 19 | 33.0 | 27.0 | 30.0 | 105.5 | 122.0 | 109.5 | 58.0 | 38.5 |
| 20 | 19.5 | 24.0 | 26.5 | 33.5 | 46.0 | 39.0 | 35.0 | 43.0 | 20 | 33.0 | 29.0 | 29.5 | 105.0 | 118.0 | 95.0 | 63.0 | 47.0 |
| 21 | 35.0 | 30.5 | 31.0 | 86.0 | 98.0 | 101.0 | 28.5 | 26.0 | 21 | 52.5 | 52.0 | 58.2 | 77.5 | 119.0 | 105.0 | 118.0 | 48.0 |
| 22 | 21.0 | 20.0 | 25.0 | 63.5 | 104.5 | 102.0 | 32.0 | 27.0 | 22 | 44.0 | 35.0 | 40.0 | 95.0 | 95.5 | 103.0 | 68.1 | 46.0 |
| 23 | 22.0 | 24.0 | 26.5 | 50.2 | 49.5 | 94.0 | 36.1 | 26.0 | 23 | 43.0 | 36.0 | 45.0 | 105.0 | 97.5 | 80.0 | 56.0 | 55.0 |
| 24 | 25.0 | 23.5 | 29.0 | 47.2 | 76.0 | 59.0 | 37.0 | 34.8 | 24 | 47.0 | 46.5 | 46.5 | 55.0 | 54.0 | 47.5 | 45.0 | 41.0 |
| 25 | 38.7 | 43.0 | 43.5 | 53.0 | 60.0 | 58.0 | 44.0 | 41.0 | 25 | 42.0 | 40.0 | 40.0 | 60.0 | 76.2 | 59.8 | 46.0 | 31.6 |
| 26 | 30.5 | 31.0 | 33.0 | 49.0 | 57.0 | 63.0 | 41.6 | 39.0 | 26 | 29.2 | 29.5 | 28.5 | 108.0 | 114.5 | 129.5 | 56.0 | 39.0 |
| 27 | 38.0 | 27.0 | 29.0 | 101.0 | 115.0 | 118.5 | 106.0 | 40.0 | 27 | 38.0 | 34.0 | 41.0 | 111.5 | 88.9 | 92.5 | 58.0 | 52.5 |
| 28 | 36.0 | 35.0 | 35.5 | 44.5 | 47.0 | 44.0 | 55.2 | 40.0 | 28 | 49.0 | 48.5 | 53.0 | 116.0 | 101.0 | 62.0 | 61.0 | 58.5 |
| 29 | 36.5 | 36.5 | 38.0 | 54.0 | 78.0 | 79.5 | 40.5 | 25.0 | 29 | 46.0 | 40.0 | 41.0 | 113.0 | 129.0 | 125.0 | 70.0 | 47.0 |
| 30 | 30.0 | 29.0 | 33.0 | 44.0 | 66.5 | 61.5 | 39.0 | 34.0 | 30 | 49.0 | 49.5 | 50.0 | 82.0 | 132.0 | 104.0 | 62.2 | 33.0 |
| 31 | 34.0 | 28.0 | 25.0 | 100.0 | 88.0 | 110.0 | 46.0 | 32.0 | | | | | | | | | |
| Hourly means. | 32.7 | 31.2 | 30.9 | 66.8 | 84.7 | 83.2 | 43.7 | 35.2 | Hourly means. | 41.0 | 38.3 | 39.2 | 92.7 | 106.5 | 98.2 | 62.9 | 45.1 |

SUN THERMOMETER.

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . | Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|---------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|---------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. May | | | | | | | | | 1876. June | | | | | | | | |
| 1 | 29.0 | 27.5 | 20.0 | 113.0 | 124.5 | 123.5 | 75.0 | 35.0 | 1 | 51.0 | 44.0 | 61.0 | 125.0 | 137.0 | 136.0 | 82.0 | 59.0 |
| 2 | 35.0 | 34.0 | 34.0 | 103.0 | 114.0 | 67.5 | 52.5 | 46.0 | 2 | 52.0 | 50.0 | 58.0 | 125.0 | 141.0 | 139.0 | 88.3 | 73.0 |
| 3 | 45.0 | 44.0 | 46.0 | 78.0 | 130.2 | 74.2 | 66.0 | 40.0 | 3 | 63.5 | 62.0 | 75.0 | 134.5 | 145.5 | 143.5 | 74.9 | 70.0 |
| 4 | 38.0 | 36.0 | 42.0 | 113.0 | 126.0 | 123.0 | 60.5 | 49.0 | 4 | 62.0 | 65.0 | 71.0 | 108.0 | 130.5 | 82.0 | 74.0 | 67.0 |
| 5 | 47.0 | 46.0 | 50.0 | 118.0 | 134.5 | 120.0 | 67.1 | 58.5 | 5 | 64.0 | 63.0 | 62.0 | 103.5 | 132.0 | 120.5 | 78.0 | 57.0 |
| 6 | 58.0 | 59.0 | 57.0 | 129.0 | 137.0 | 130.0 | 87.5 | 61.0 | 6 | 55.0 | 64.0 | 74.0 | 125.0 | 105.2 | 122.0 | 76.0 | 58.5 |
| 7 | 57.0 | 56.0 | 60.0 | 120.0 | 140.0 | 115.5 | 80.0 | 70.5 | 7 | 54.0 | 61.0 | 71.0 | 126.5 | 140.0 | 131.0 | 81.0 | 65.0 |
| 8 | 67.5 | 66.0 | 74.0 | 100.5 | 98.0 | 100.0 | 24.0 | 66.5 | 8 | 62.0 | 58.5 | 65.0 | 132.0 | 142.5 | 139.5 | 87.0 | 65.0 |
| 9 | 64.0 | 60.0 | 58.5 | 62.0 | 74.0 | 68.0 | 58.0 | 56.0 | 9 | 65.5 | 65.0 | 79.0 | 134.0 | 142.5 | 140.0 | 82.0 | 70.0 |
| 10 | 55.0 | 51.0 | 54.0 | 121.0 | 120.5 | 55.0 | 83.5 | 16.0 | 10 | 69.0 | 64.5 | 82.0 | 132.5 | 131.0 | 99.0 | 74.2 | 67.0 |
| 11 | 46.0 | 41.0 | 45.5 | 110.0 | 112.0 | 128.3 | 85.0 | 50.5 | 11 | 63.5 | 60.0 | 69.0 | 131.0 | 125.0 | 129.0 | 87.6 | 70.0 |
| 12 | 46.0 | 45.0 | 56.0 | 102.0 | 140.0 | 62.0 | 61.5 | 56.0 | 12 | 68.0 | 67.0 | 87.0 | 131.0 | 147.0 | 122.0 | 80.5 | 71.3 |
| 13 | 52.0 | 46.5 | 55.0 | 112.0 | 129.7 | 99.0 | 76.5 | 43.0 | 13 | 70.0 | 69.5 | 74.0 | 102.0 | 148.0 | 108.0 | 80.3 | 69.0 |
| 14 | 42.2 | 41.0 | 43.5 | 118.0 | 132.0 | 125.0 | 80.0 | 48.0 | 14 | 67.0 | 65.0 | 72.0 | 116.0 | 146.6 | 138.0 | 82.0 | 70.5 |
| 15 | 46.5 | 44.5 | 53.0 | 121.0 | 118.5 | 130.0 | 77.0 | 68.0 | 15 | 67.0 | 63.5 | 73.0 | 119.0 | 140.0 | 138.0 | 81.0 | 69.0 |
| 16 | 60.0 | 56.0 | 54.0 | 62.0 | 73.4 | 64.0 | 58.0 | 53.0 | 16 | 65.0 | 63.5 | 71.5 | 108.0 | 136.0 | 124.0 | 85.0 | 72.0 |
| 17 | 52.0 | 51.0 | 52.0 | 64.5 | 62.0 | 65.0 | 56.0 | 53.0 | 17 | 72.0 | 70.0 | 76.0 | 92.5 | 118.0 | 81.2 | 76.0 | 71.0 |
| 18 | 53.0 | 53.0 | 55.5 | 75.5 | 86.0 | 119.0 | 80.0 | 64.0 | 18 | 70.5 | 70.0 | 71.0 | 76.0 | 85.0 | 87.5 | 86.0 | 67.0 |
| 19 | 59.0 | 56.0 | 63.0 | 105.5 | 132.5 | 121.5 | 75.0 | 70.0 | 19 | 64.0 | 62.5 | 72.0 | 124.0 | 143.0 | 114.0 | 85.0 | 70.0 |
| 20 | 67.0 | 65.0 | 73.0 | 127.2 | 140.0 | 135.0 | 90.0 | 68.0 | 20 | 67.2 | 62.0 | 61.0 | 124.0 | 145.0 | 125.0 | 85.5 | 64.0 |
| 21 | 68.5 | 64.0 | 68.0 | 132.0 | 143.0 | 90.5 | 73.5 | 68.5 | 21 | 64.0 | 59.0 | 85.5 | 132.0 | 128.0 | 135.0 | 78.0 | 61.0 |
| 22 | 68.0 | 66.5 | 68.0 | 129.5 | 142.5 | 126.0 | 72.0 | 65.0 | 22 | 57.0 | 53.0 | 93.0 | 131.0 | 139.0 | 130.0 | 88.0 | 66.0 |
| 23 | 65.0 | 54.0 | 53.0 | 120.3 | 130.2 | 127.0 | 66.0 | 48.0 | 23 | 62.0 | 60.0 | 65.0 | 130.5 | 142.0 | 134.0 | 83.0 | 67.0 |
| 24 | 45.0 | 44.5 | 48.0 | 120.0 | 133.0 | 131.8 | 72.0 | 52.0 | 24 | 69.0 | 64.0 | 94.0 | 135.0 | 146.0 | 146.2 | 90.0 | 69.5 |
| 25 | 48.0 | 50.0 | 61.0 | 124.0 | 136.0 | 139.0 | 76.0 | 60.0 | 25 | 65.0 | 62.0 | 74.0 | 114.0 | 153.0 | 127.0 | 83.0 | 71.5 |
| 26 | 58.0 | 57.0 | 75.0 | 123.0 | 135.2 | 132.0 | 71.1 | 65.0 | 26 | 71.5 | 70.0 | 72.0 | 139.0 | 145.5 | 142.5 | 95.0 | 73.0 |
| 27 | 54.0 | 52.0 | 60.0 | 104.5 | 129.0 | 124.0 | 77.0 | 61.0 | 27 | 70.5 | 71.0 | 72.0 | 138.5 | 151.8 | 147.2 | 97.5 | 75.0 |
| 28 | 55.0 | 55.0 | 70.0 | 122.0 | 109.5 | 75.0 | 67.5 | 62.5 | 28 | 73.0 | 69.0 | 89.0 | 140.0 | 152.6 | 127.0 | 88.0 | 73.0 |
| 29 | 60.0 | 58.0 | 64.0 | 130.0 | 145.0 | 139.0 | 83.0 | 67.5 | 29 | 69.0 | 69.0 | 74.0 | 136.5 | 149.0 | 138.0 | 92.0 | 76.0 |
| 30 | 62.0 | 59.0 | 60.0 | 166.0 | 166.0 | 94.0 | 70.0 | 60.0 | 30 | 72.0 | 79.0 | 75.0 | 127.0 | 146.0 | 143.2 | 82.0 | 69.0 |
| 31 | 57.5 | 55.0 | 65.0 | 96.0 | 105.0 | 102.0 | 68.0 | 54.2 | | | | | | | | | |
| Hourly means. | 53.5 | 51.4 | 57.3 | 108.7 | 120.6 | 106.6 | 72.2 | 56.9 | Hourly means. | 65.0 | 62.5 | 73.9 | 123.2 | 137.7 | 126.3 | 83.4 | 68.2 |

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . | Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|---------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|-----------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. July | | | | | | | | | 1876. August | | | | | | | | |
| 1 | 66.0 | 65.0 | 73.0 | 136.2 | 149.5 | 126.0 | 82.5 | 76.0 | 1 | 66.5 | 67.0 | 67.0 | 72.0 | 92.0 | 80.5 | 73.0 | 68.5 |
| 2 | 75.0 | 74.0 | 78.0 | 115.0 | 152.0 | 148.0 | 104.2 | 79.0 | 2 | 64.5 | 65.0 | 66.0 | 77.0 | 94.5 | 77.5 | 72.0 | 69.0 |
| 3 | 77.0 | 73.5 | 98.0 | 134.0 | 154.0 | 148.5 | 95.0 | 71.0 | 3 | 67.5 | 67.5 | 67.5 | 77.0 | 89.3 | 94.0 | 75.2 | 71.5 |
| 4 | 69.0 | 68.0 | 91.0 | 144.0 | 152.5 | 149.0 | 86.5 | 72.0 | 4 | 71.0 | 70.0 | 69.5 | 89.0 | 115.0 | 120.5 | 92.0 | 70.6 |
| 5 | 72.0 | 70.0 | 81.0 | 139.0 | 151.0 | 149.0 | 87.0 | 79.0 | 5 | 72.5 | 70.0 | 80.0 | 107.0 | 150.0 | 146.0 | 96.8 | 73.2 |
| 6 | 69.5 | 68.0 | 71.0 | 136.0 | 126.0 | 146.0 | 88.0 | 88.0 | 6 | 70.0 | 67.5 | 73.0 | 111.0 | 141.0 | 142.0 | 82.0 | 74.0 |
| 7 | 74.8 | 72.0 | 90.0 | 118.0 | 110.0 | 141.0 | 93.0 | 74.0 | 7 | 72.0 | 71.0 | 74.0 | 123.5 | 153.0 | 154.8 | 82.3 | 73.0 |
| 8 | 72.0 | 71.0 | 86.0 | 139.0 | 149.5 | 150.5 | 123.0 | 79.5 | 8 | 74.0 | 70.0 | 70.0 | 120.0 | 155.8 | 90.7 | 79.0 | 71.5 |
| 9 | 77.0 | 74.5 | 81.5 | 138.5 | 155.0 | 154.0 | 114.0 | 79.0 | 9 | 71.0 | 70.5 | 69.0 | 120.0 | 144.7 | 136.0 | 79.0 | 69.5 |
| 10 | 76.5 | 73.5 | 70.0 | 143.0 | 156.0 | 140.0 | 85.0 | 76.0 | 10 | 67.0 | 65.0 | 70.0 | 120.0 | 117.0 | 131.0 | 86.0 | 74.0 |
| 11 | 77.5 | 76.0 | 79.0 | 138.0 | 150.0 | 148.0 | 93.0 | 80.0 | 11 | 72.0 | 70.0 | 76.0 | 94.5 | 80.0 | 91.5 | 83.0 | 73.0 |
| 12 | 78.0 | 74.0 | 75.5 | 140.0 | 158.0 | 153.0 | 87.0 | 77.0 | 12 | 72.0 | 70.0 | 72.0 | 114.0 | 75.0 | 82.9 | 74.0 | 71.5 |
| 13 | 75.0 | 72.0 | 80.0 | 125.0 | 130.0 | 151.0 | 80.0 | 77.5 | 13 | 70.0 | 68.0 | 75.5 | 129.5 | 144.0 | 144.0 | 85.5 | 71.5 |
| 14 | 74.0 | 72.0 | 76.0 | 124.0 | 146.0 | 127.0 | 86.0 | 78.0 | 14 | 68.0 | 64.5 | 73.0 | 99.8 | 129.0 | 148.0 | 84.0 | 70.0 |
| 15 | 76.0 | 75.0 | 80.0 | 80.0 | 103.0 | 140.0 | 95.5 | 74.0 | 15 | 68.0 | 65.0 | 73.0 | 131.5 | 147.0 | 140.0 | 82.0 | 72.0 |
| 16 | 69.0 | 65.0 | 70.2 | 133.0 | 146.0 | 143.5 | 111.0 | 72.0 | 16 | 71.5 | 68.0 | 70.0 | 132.0 | 136.0 | 130.5 | 86.5 | 75.0 |
| 17 | 69.0 | 67.5 | 71.0 | 137.0 | 148.0 | 145.0 | 110.0 | 78.0 | 17 | 76.0 | 72.0 | 78.0 | 132.0 | 130.0 | 128.5 | 77.0 | 74.0 |
| 18 | 72.5 | 69.0 | 75.0 | 138.0 | 154.2 | 142.2 | 110.2 | 79.0 | 18 | 73.0 | 71.5 | 74.0 | 84.0 | 84.0 | 88.6 | 79.0 | 73.0 |
| 19 | 79.0 | 73.0 | 79.0 | 137.5 | 151.0 | 113.0 | 88.0 | 82.0 | 19 | 72.0 | 70.0 | 76.0 | 79.0 | 103.0 | 88.0 | 78.0 | 71.0 |
| 20 | 79.0 | 75.5 | 81.0 | 140.0 | 151.0 | 119.0 | 110.0 | 80.0 | 20 | 70.0 | 68.5 | 73.0 | 131.0 | 126.0 | 107.0 | 70.5 | 66.0 |
| 21 | 75.5 | 75.0 | 77.0 | 138.0 | 132.0 | 145.0 | 117.0 | 69.5 | 21 | 59.0 | 52.0 | 53.0 | 125.0 | 136.0 | 134.0 | 64.0 | 63.0 |
| 22 | 68.0 | 62.0 | 67.0 | 131.0 | 152.0 | 146.0 | 113.0 | 79.5 | 22 | 55.0 | 50.0 | 54.0 | 122.0 | 138.0 | 136.5 | 75.0 | 63.5 |
| 23 | 68.0 | 69.5 | 71.0 | 100.0 | 135.5 | 140.0 | 107.0 | 67.0 | 23 | 62.0 | 60.0 | 65.0 | 83.6 | 99.0 | 93.0 | 75.0 | 70.0 |
| 24 | 59.5 | 57.0 | 59.0 | 69.0 | 106.0 | 87.0 | 75.5 | 56.1 | 24 | 65.0 | 7.2 | 69.0 | 128.5 | 113.0 | 105.0 | 76.5 | 69.0 |
| 25 | 54.5 | 53.0 | 56.0 | 139.0 | 145.5 | 132.0 | 75.2 | 67.0 | 25 | 69.0 | 68.0 | 72.0 | 101.0 | 103.0 | 132.5 | 77.0 | 71.5 |
| 26 | 62.0 | 63.5 | 68.0 | 128.0 | 144.0 | 138.0 | 102.5 | 63.0 | 26 | 71.0 | 72.5 | 72.1 | 129.0 | 144.2 | 138.0 | 72.2 | 63.5 |
| 27 | 59.0 | 57.5 | 60.0 | 127.0 | 144.0 | 110.0 | 103.5 | 70.0 | 27 | 61.0 | 60.0 | 54.0 | 129.0 | 140.0 | 130.0 | 68.2 | 57.0 |
| 28 | 65.0 | 64.5 | 67.0 | 134.0 | 145.0 | 109.0 | 72.0 | 69.5 | 28 | 53.0 | 51.0 | 52.0 | 128.5 | 141.3 | 120.0 | 68.0 | 59.5 |
| 29 | 69.0 | 66.0 | 69.0 | 95.0 | 153.0 | 164.0 | 79.0 | 74.0 | 29 | 57.5 | 56.0 | 58.5 | 125.1 | 144.0 | 138.0 | 79.0 | 66.0 |
| 30 | 72.0 | 70.0 | 69.0 | 72.0 | 77.5 | 94.0 | 79.0 | 66.0 | 30 | 65.0 | 64.5 | 67.0 | 112.0 | 143.2 | 136.2 | 78.0 | 70.0 |
| 31 | 64.0 | 63.0 | 65.0 | 93.5 | 87.0 | 87.5 | 78.0 | 66.2 | 31 | 69.5 | 66.5 | 69.0 | 110.5 | 129.5 | 139.0 | 80.0 | 70.5 |
| Hourly means. | 79.7 | 68.7 | 78.0 | 120.2 | 139.1 | 133.1 | 94.7 | 73.8 | Hourly means. | 67.6 | 65.7 | 68.8 | 110.5 | 123.8 | 120.6 | 78.5 | 69.5 |

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . | Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|--------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. September | ° | ° | ° | ° | ° | ° | ° | ° | 1876. October | ° | ° | ° | ° | ° | ° | ° | ° |
| 1 | 71.0 | 68.0 | 70.0 | 99.2 | 143.5 | 140.0 | 78.3 | 75.0 | 1 | 47.0 | 46.0 | 41.0 | 107.0 | 123.0 | 106.0 | 50.5 | 49.0 |
| 2 | 71.5 | 70.0 | 70.0 | 125.6 | 137.0 | 133.0 | 69.0 | 57.5 | 2 | 43.5 | 41.0 | 38.0 | 111.0 | 121.2 | 88.0 | 45.0 | 43.0 |
| 3 | 52.5 | 51.5 | 51.0 | 120.0 | 134.0 | 135.0 | 64.5 | 50.0 | 3 | 42.0 | 40.0 | 40.0 | 107.5 | 124.0 | 115.2 | 48.5 | 44.5 |
| 4 | 54.0 | 51.5 | 53.0 | 124.0 | 140.0 | 117.0 | 74.0 | 65.0 | 4 | 44.5 | 44.8 | 45.0 | 66.2 | 99.0 | 80.5 | 51.5 | 49.5 |
| 5 | 66.0 | 66.0 | 58.0 | 122.0 | 126.0 | 102.0 | 65.0 | 52.0 | 5 | 48.5 | 47.0 | 46.8 | 59.5 | 98.2 | 108.0 | 52.0 | 50.0 |
| 6 | 51.5 | 47.0 | 49.0 | 80.0 | 121.0 | 86.0 | 67.2 | 60.5 | 6 | 50.0 | 48.0 | 50.0 | 112.0 | 120.0 | 95.0 | 60.0 | 59.0 |
| 7 | 60.5 | 60.0 | 63.0 | 87.0 | 125.0 | 99.0 | 70.5 | 66.0 | 7 | 57.0 | 48.0 | 44.0 | 108.0 | 122.2 | 108.0 | 45.5 | 40.0 |
| 8 | 66.0 | 64.6 | 68.0 | 127.0 | 103.5 | 92.0 | 79.0 | 72.5 | 8 | 36.0 | 39.0 | 33.0 | 102.0 | 113.0 | 83.5 | 48.0 | 43.0 |
| 9 | 70.0 | 62.5 | 62.5 | 121.0 | 131.5 | 110.0 | 73.0 | 66.0 | 9 | 38.0 | 35.0 | 33.2 | 100.0 | 117.5 | 79.0 | 43.0 | 40.0 |
| 10 | 62.0 | 62.0 | 64.0 | 73.0 | 73.0 | 74.0 | 64.0 | 63.0 | 10 | 39.0 | 38.0 | 37.0 | 79.7 | 117.0 | 94.5 | 52.0 | 43.0 |
| 11 | 64.0 | 62.0 | 60.0 | 78.5 | 79.0 | 70.2 | 63.0 | 62.0 | 11 | 46.0 | 45.0 | 38.8 | 107.0 | 122.0 | 92.5 | 39.0 | 33.2 |
| 12 | 61.0 | 60.0 | 60.2 | 66.5 | 82.5 | 78.0 | 64.0 | 60.0 | 12 | 32.5 | 27.7 | 26.5 | 98.0 | 115.0 | 81.0 | 36.6 | 34.0 |
| 13 | 58.0 | 58.0 | 57.0 | 80.5 | 108.5 | 82.0 | 62.5 | 59.5 | 13 | 31.5 | 32.0 | 28.5 | 99.0 | 121.0 | 84.0 | 43.1 | 40.0 |
| 14 | 59.0 | 56.0 | 59.0 | 85.0 | 99.5 | 98.0 | 70.0 | 68.0 | 14 | 39.0 | 38.0 | 38.3 | 99.0 | 84.5 | 91.0 | 61.0 | 56.5 |
| 15 | 64.0 | 60.0 | 59.0 | 120.0 | 118.0 | 124.0 | 66.0 | 60.1 | 15 | 45.0 | 38.0 | 34.0 | 96.0 | 102.5 | 65.2 | 33.8 | 27.0 |
| 16 | 58.0 | 59.0 | 58.0 | 86.0 | 80.0 | 69.0 | 60.0 | 60.5 | 16 | 25.0 | 22.5 | 21.0 | 99.3 | 115.0 | 83.5 | 40.0 | 30.0 |
| 17 | 60.0 | 59.5 | 59.0 | 70.0 | 72.0 | 75.0 | 62.1 | 62.0 | 17 | 30.2 | 32.0 | 33.0 | 84.0 | 123.0 | 89.0 | 46.0 | 38.0 |
| 18 | 58.0 | 57.5 | 57.0 | 115.2 | 118.0 | 91.0 | 68.0 | 65.0 | 18 | 34.5 | 32.0 | 30.0 | 98.0 | 120.0 | 69.0 | 40.3 | 35.0 |
| 19 | 60.0 | 56.0 | 57.0 | 121.0 | 107.0 | 90.0 | 65.5 | 57.0 | 19 | 32.0 | 30.0 | 29.0 | 90.0 | 121.0 | 70.0 | 47.0 | 45.0 |
| 20 | 55.5 | 54.0 | 54.0 | 122.0 | 127.0 | 121.0 | 65.0 | 59.5 | 20 | 48.0 | 48.0 | 48.5 | 61.2 | 71.5 | 63.8 | 57.0 | 58.0 |
| 21 | 59.0 | 59.5 | 61.1 | 91.0 | 94.0 | 87.0 | 67.0 | 65.0 | 21 | 56.5 | 57.0 | 57.0 | 65.0 | 80.8 | 75.0 | 58.3 | 53.5 |
| 22 | 62.0 | 60.0 | 60.0 | 69.0 | 74.0 | 70.0 | 62.0 | 61.5 | 22 | 56.5 | 58.5 | 59.0 | 65.0 | 79.0 | 82.0 | 58.5 | 59.0 |
| 23 | 61.0 | 62.5 | 64.0 | 68.0 | 102.0 | 74.0 | 65.0 | 66.0 | 23 | 58.5 | 57.5 | 58.0 | 74.5 | 101.0 | 70.0 | 64.5 | 57.0 |
| 24 | 64.5 | 63.0 | 62.0 | 63.5 | 69.0 | 67.0 | 62.0 | 62.0 | 24 | 54.5 | 49.0 | 42.5 | 103.0 | 120.0 | 69.0 | 45.0 | 49.0 |
| 25 | 61.0 | 60.0 | 60.0 | 79.0 | 95.5 | 99.5 | 61.0 | 59.0 | 25 | 47.0 | 40.0 | 38.5 | 110.5 | 123.1 | 62.0 | 41.5 | 41.0 |
| 26 | 61.5 | 61.0 | 59.0 | 72.2 | 127.0 | 115.0 | 57.0 | 47.5 | 26 | 40.5 | 38.0 | 40.0 | 52.0 | 70.0 | 54.0 | 42.5 | 42.0 |
| 27 | 43.0 | 43.0 | 43.0 | 113.0 | 126.5 | 115.0 | 48.0 | 41.0 | 27 | 41.0 | 40.0 | 40.0 | 101.5 | 113.5 | 65.0 | 36.0 | 34.0 |
| 28 | 40.0 | 39.0 | 39.0 | 116.0 | 129.0 | 118.0 | 54.0 | 47.0 | 28 | 31.7 | 29.0 | 38.0 | 67.5 | 100.0 | 74.8 | 50.5 | 51.0 |
| 29 | 45.0 | 44.0 | 43.0 | 110.5 | 120.0 | 120.5 | 55.5 | 53.0 | 29 | 47.0 | 46.0 | 45.0 | 48.0 | 46.0 | 55.0 | 45.0 | 45.0 |
| 30 | 53.5 | 55.0 | 53.5 | 57.0 | 55.5 | 56.0 | 51.5 | 48.0 | 30 | 45.0 | 44.0 | 45.0 | 55.4 | 60.0 | 58.5 | 49.5 | 49.0 |
| | | | | | | | | | 31 | 48.5 | 47.5 | 49.0 | 59.0 | 66.0 | 67.0 | 50.0 | 47.0 |
| Hourly means. | 59.1 | 57.7 | 57.7 | 95.4 | 107.2 | 96.9 | 64.4 | 59.9 | Hourly means. | 43.1 | 41.2 | 40.2 | 86.6 | 103.5 | 79.9 | 47.8 | 44.7 |

| Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . | Mean Time. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|-------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|-------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. November | ° | ° | ° | ° | ° | ° | ° | ° | 1876. December | ° | ° | ° | ° | ° | ° | ° | ° |
| 1 | 44.0 | 43.8 | 43.5 | 97.0 | 121.0 | 77.5 | 55.0 | 51.5 | 1 | 21.0 | 20.0 | 20.1 | 54.2 | 80.2 | 32.2 | 14.0 | 13.5 |
| 2 | 50.0 | 49.0 | 46.0 | 97.0 | 126.5 | 80.5 | 65.0 | 63.5 | 2 | 18.5 | 20.5 | 22.0 | 37.0 | 39.0 | 33.0 | 28.0 | 26.0 |
| 3 | 65.0 | 62.5 | 58.0 | 62.5 | 81.5 | 100.0 | 44.5 | 41.0 | 3 | 21.0 | 23.5 | 24.0 | 77.2 | 53.5 | 41.5 | 29.5 | 25.0 |
| 4 | 45.0 | 35.5 | 32.0 | 96.0 | 101.0 | 57.0 | 39.0 | 36.6 | 4 | 18.0 | 16.5 | 15.0 | 69.0 | 86.0 | 43.0 | 25.2 | 23.5 |
| 5 | 39.5 | 38.0 | 38.0 | 62.3 | 103.8 | 57.0 | 40.0 | 37.0 | 5 | 23.0 | 21.0 | 15.0 | 46.0 | 52.0 | 41.0 | 26.0 | 25.0 |
| 6 | 32.5 | 31.5 | 31.0 | 54.0 | 51.5 | 58.0 | 52.0 | 52.0 | 6 | 21.0 | 20.0 | 14.0 | 69.0 | 93.0 | 40.0 | 31.5 | 24.9 |
| 7 | 50.0 | 49.0 | 47.0 | 68.0 | 53.2 | 59.0 | 41.0 | 36.0 | 7 | 21.0 | 25.0 | 20.0 | 34.0 | 77.0 | 49.0 | 33.0 | 25.5 |
| 8 | 32.0 | 30.0 | 30.0 | 90.2 | 108.5 | 64.2 | 39.0 | 40.0 | 8 | 28.0 | 30.0 | 29.5 | 40.0 | 50.0 | 44.0 | 35.0 | 27.0 |
| 9 | 35.5 | 37.0 | 33.0 | 96.0 | 83.0 | 56.0 | 39.0 | 40.0 | 9 | 30.0 | 21.0 | 6.0 | 62.0 | 73.5 | 16.0 | 4.0 | 2.5 |
| 10 | 38.0 | 34.0 | 30.2 | 90.0 | 94.0 | 58.0 | 33.0 | 30.0 | 10 | +1.5 | +2.0 | +3.5 | 29.0 | 52.0 | 29.0 | 17.0 | 18.0 |
| 11 | 35.0 | 32.5 | 34.0 | 42.0 | 74.0 | 55.0 | 36.0 | 38.0 | 11 | 32.0 | 24.0 | 21.5 | 31.0 | 57.5 | 42.0 | 29.2 | 27.0 |
| 12 | 30.0 | 27.5 | 25.5 | 88.0 | 105.5 | 55.0 | 37.5 | 36.0 | 12 | 26.0 | 25.0 | 25.0 | 29.0 | 83.0 | 46.0 | 33.5 | 32.0 |
| 13 | 33.5 | 33.0 | 32.5 | 79.0 | 108.0 | 73.0 | 57.0 | 55.0 | 13 | 27.0 | 24.0 | 22.5 | 75.5 | 93.0 | 56.0 | 44.0 | 39.0 |
| 14 | 54.0 | 46.5 | 43.0 | 84.0 | 104.5 | 64.0 | 54.0 | 52.0 | 14 | 34.6 | 33.5 | 30.5 | 67.0 | 80.0 | 60.0 | 43.6 | 39.0 |
| 15 | 50.0 | 48.0 | 49.0 | 49.9 | 54.5 | 50.0 | 45.0 | 44.0 | 15 | 36.0 | 34.0 | 32.0 | 43.0 | 87.0 | 33.0 | 22.5 | 18.5 |
| 16 | 43.3 | 43.5 | 42.0 | 44.0 | 51.8 | 50.2 | 43.0 | 43.0 | 16 | 24.8 | 28.8 | 30.0 | 75.2 | 87.0 | 30.5 | 15.0 | 12.5 |
| 17 | 41.5 | 40.0 | 40.0 | 49.2 | 58.1 | 45.5 | 41.0 | 41.6 | 17 | 9.0 | 8.0 | 8.0 | 55.0 | 41.0 | 32.0 | 12.0 | 13.0 |
| 18 | 43.0 | 44.3 | 45.5 | 50.0 | 55.0 | 54.0 | 51.0 | 49.5 | 18 | 19.0 | 20.0 | . | 28.0 | 34.0 | 31.0 | . | . |
| 19 | 48.2 | 46.8 | 47.0 | 50.0 | 59.5 | 54.0 | 50.1 | 50.6 | 19 | . | . | . | 30.0 | 97.0 | 29.0 | 17.0 | 16.5 |
| 20 | 50.8 | 49.5 | 48.0 | 47.0 | 54.0 | 51.0 | 47.0 | 46.0 | 20 | . | 12.0 | 5.0 | 56.0 | 92.0 | 34.0 | 15.0 | 14.0 |
| 21 | 46.0 | 44.0 | 44.0 | 51.0 | 104.0 | 53.0 | 47.6 | 48.0 | 21 | 12.0 | 14.0 | 17.0 | 30.0 | 84.0 | 34.0 | 15.0 | 14.8 |
| 22 | 41.0 | 42.0 | 44.0 | 83.0 | 109.0 | 56.0 | 43.0 | 41.0 | 22 | 11.0 | 22.0 | 22.0 | 27.2 | 34.0 | 35.5 | 31.5 | 29.0 |
| 23 | 38.0 | 32.0 | 31.0 | 46.2 | 49.0 | 45.0 | 38.0 | 33.0 | 23 | 27.0 | 25.0 | 22.0 | 34.6 | 45.0 | 34.0 | 21.0 | 21.0 |
| 24 | 34.5 | 31.0 | 28.5 | 82.0 | 88.5 | 41.0 | 27.0 | 25.0 | 24 | 22.0 | 20.0 | 19.5 | 28.5 | 41.0 | 30.0 | 21.0 | 19.0 |
| 25 | 25.0 | 28.0 | 28.0 | 78.0 | 66.0 | 49.0 | 38.0 | 34.3 | 25 | 19.0 | 20.0 | 19.5 | 27.5 | 36.0 | 39.0 | 25.5 | 25.0 |
| 26 | 36.6 | 36.0 | 35.5 | 40.5 | 53.0 | 47.5 | 33.0 | 30.0 | 26 | 24.5 | 24.5 | 25.0 | . | 101.0 | 42.0 | 21.2 | 24.0 |
| 27 | 25.0 | 26.0 | 29.0 | 40.2 | 37.0 | 37.2 | 26.0 | 26.5 | 27 | 23.5 | 18.0 | 12.0 | 45.0 | 90.0 | 36.5 | 19.0 | 14.0 |
| 28 | 31.0 | 30.0 | 29.8 | 42.0 | 57.4 | 47.0 | 30.0 | 30.0 | 28 | 10.5 | 11.0 | 15.0 | 27.0 | 41.0 | 32.8 | 24.0 | 24.2 |
| 29 | 27.0 | 27.0 | 27.0 | 43.2 | 91.8 | 42.5 | 27.0 | 27.0 | 29 | 22.0 | 21.5 | 22.5 | 32.0 | 41.2 | 35.0 | 27.0 | 30.0 |
| 30 | 29.5 | 31.5 | 30.5 | 37.5 | 42.2 | 37.0 | 30.0 | 27.0 | 30 | 27.0 | 21.0 | 19.5 | 71.0 | 75.0 | 40.0 | 18.0 | 18.0 |
| | | | | | | | | | 31 | 13.0 | 13.0 | 14.0 | 38.0 | 84.0 | 85.0 | 16.0 | 15.0 |
| Hourly means. | 39.8 | 38.3 | 37.4 | 64.6 | 78.3 | 55.8 | 41.6 | 40.3 | Hourly means. | 21.2 | 20.6 | 19.0 | 45.6 | 63.8 | 38.9 | 24.5 | 21.9 |

MONTHLY MAXIMUM AND MINIMUM CORRECTED READINGS OF THE BAROMETER AT THE HOURS OF OBSERVATION IN 1876.

| Month. | Day and Hour. | Maximum. | Day and Hour. | Minimum. | Range. |
|---------------------|---------------|----------|---------------|----------|--------|
| | d. h. | in. | d. h. | in. | in. |
| January | 30 9 a. m. | 30.521 | 19 6 p. m. | 29.471 | 1.050 |
| February | 5 Noon. | 30.847 | 2 0 | 29.175 | 1.672 |
| March | 4 9 a. m. | 30.446 | 28 9 p. m. | 29.188 | 1.258 |
| April | 2 9 a. m. | 30.418 | 14 6 p. m. | 29.480 | 0.938 |
| May | 17 9 a. m. | 30.304 | 22 3 p. m. | 29.608 | 0.696 |
| June | 1 0 | 30.110 | 25 0 | 29.647 | 0.463 |
| July | 17 9 a. m. | 30.167 | 30 3 p. m. | 29.703 | 0.464 |
| August | 21 9 a. m. | 30.152 | 19 6 p. m. | 29.680 | 0.472 |
| September | 28 9 a. m. | 30.142 | 17 6 p. m. | 29.228 | 0.914 |
| October | 12 9 a. m. | 30.362 | 6 3 p. m. | 29.502 | 0.860 |
| November | 5 9 a. m. | 30.315 | 20 Noon. | 29.402 | 0.913 |
| December | 17 9 a. m. | 30.619 | 29 3 p. m. | 29.077 | 1.542 |

| | |
|--------------------------------|--------|
| | in. |
| Maximum for the year | 30.847 |
| Minimum for the year | 29.077 |
| Range for the year | 1.770 |
| Mean monthly range | 0.937 |

DAILY MEAN OF THE CORRECTED READINGS OF THE BAROMETER IN 1876.

| Day. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. |
|------|----------|-----------|--------|--------|--------|--------|--------|---------|------------|----------|-----------|-----------|
| | in. | in. | in. | in. | in. | in. | in. | in. | in. | in. | in. | in. |
| 1 | 30.096 | 29.872 | 30.119 | 30.178 | 29.943 | 29.994 | 29.935 | 29.925 | 29.765 | 29.926 | 30.001 | 29.706 |
| 2 | 29.920 | 29.785 | 29.987 | 30.340 | 29.871 | 29.771 | 29.881 | 30.004 | 29.781 | 29.922 | 29.729 | 29.758 |
| 3 | 30.076 | 30.341 | 30.261 | 29.967 | 29.835 | 29.710 | 29.895 | 30.088 | 30.015 | 29.845 | 29.740 | 30.049 |
| 4 | 30.323 | 30.146 | 30.377 | 29.690 | 29.991 | 29.735 | 29.935 | 30.060 | 29.945 | 29.847 | 30.141 | 30.179 |
| 5 | 30.320 | 30.747 | 30.362 | 29.862 | 30.018 | 29.809 | 29.900 | 30.066 | 29.991 | 29.886 | 30.264 | 30.140 |
| 6 | 30.042 | 30.553 | 30.274 | 30.034 | 29.982 | 29.927 | 29.950 | 30.092 | 30.048 | 29.646 | 30.125 | 30.019 |
| 7 | 30.269 | 30.250 | 29.955 | 29.881 | 29.864 | 30.029 | 29.982 | 30.049 | 29.893 | 29.835 | 29.800 | 29.690 |
| 8 | 30.039 | 30.340 | 29.779 | 29.983 | 29.747 | 30.073 | 29.919 | 29.989 | 29.816 | 30.036 | 29.749 | 29.595 |
| 9 | 29.694 | 30.069 | 29.957 | 30.015 | 29.686 | 30.047 | 29.873 | 30.003 | 29.888 | 30.127 | 29.850 | 29.758 |
| 10 | 29.745 | 29.905 | 30.013 | 30.063 | 29.757 | 30.048 | 29.882 | 30.066 | 29.958 | 29.773 | 29.901 | 30.274 |
| 11 | 30.174 | 29.900 | 30.114 | 30.030 | 30.073 | 30.040 | 29.926 | 30.089 | 29.807 | 30.036 | 29.919 | 29.957 |
| 12 | 29.974 | 30.008 | 30.031 | 29.896 | 29.932 | 30.033 | 29.971 | 30.075 | 29.875 | 30.272 | 30.016 | 29.786 |
| 13 | 30.267 | 29.994 | 29.943 | 29.688 | 30.020 | 30.026 | 29.918 | 30.046 | 30.064 | 30.071 | 29.958 | 29.864 |
| 14 | 30.307 | 29.662 | 30.281 | 29.564 | 30.172 | 30.019 | 29.841 | 29.950 | 29.973 | 29.799 | 29.915 | 29.788 |
| 15 | 30.243 | 29.372 | 30.300 | 29.709 | 30.033 | 30.048 | 29.820 | 29.824 | 29.892 | 29.994 | 29.907 | 29.960 |
| 16 | 30.138 | 29.823 | 29.806 | 29.601 | 30.210 | 30.012 | 30.014 | 29.882 | 30.054 | 30.107 | 30.170 | 29.942 |
| 17 | 29.998 | 29.981 | 29.429 | 29.788 | 30.263 | 29.915 | 30.112 | 29.893 | 29.629 | 29.881 | 30.156 | 30.509 |
| 18 | 29.834 | 30.114 | 29.789 | 30.602 | 30.045 | 29.794 | 30.018 | 29.839 | 29.721 | 30.096 | 30.073 | 30.027 |
| 19 | 29.586 | 30.080 | 30.303 | 30.161 | 29.979 | 29.876 | 29.939 | 29.718 | 29.768 | 30.076 | 29.803 | 30.133 |
| 20 | 30.060 | 30.158 | 29.971 | 30.184 | 29.997 | 29.890 | 29.832 | 29.814 | 29.844 | 29.910 | 29.501 | 30.340 |
| 21 | 30.343 | 30.182 | 29.498 | 29.974 | 29.872 | 29.927 | 29.897 | 30.073 | 30.019 | 29.786 | 29.779 | 29.992 |
| 22 | 30.336 | 29.882 | 30.048 | 30.069 | 29.708 | 29.967 | 29.965 | 29.998 | 30.021 | 29.812 | 29.863 | 29.672 |
| 23 | 30.015 | 29.959 | 30.152 | 29.887 | 30.017 | 29.883 | 29.796 | 29.964 | 29.806 | 29.618 | 29.954 | 29.965 |
| 24 | 30.099 | 30.129 | 30.111 | 29.920 | 30.172 | 29.751 | 29.893 | 30.017 | 29.774 | 29.631 | 29.984 | 30.299 |
| 25 | 30.102 | 30.095 | 29.588 | 30.025 | 30.022 | 29.713 | 29.961 | 29.929 | 29.883 | 29.769 | 29.816 | 30.185 |
| 26 | 30.082 | 30.020 | 29.646 | 30.103 | 29.980 | 29.708 | 30.054 | 29.895 | 29.748 | 29.978 | 29.583 | 29.964 |
| 27 | 29.948 | 30.037 | 29.894 | 29.999 | 29.964 | 29.790 | 30.092 | 29.991 | 29.875 | 30.236 | 29.609 | 30.009 |
| 28 | 29.893 | 29.779 | 29.583 | 29.711 | 29.909 | 29.005 | 29.919 | 30.032 | 30.064 | 30.083 | 29.836 | 30.083 |
| 29 | 29.820 | 30.057 | 29.409 | 29.844 | 29.800 | 29.907 | 29.860 | 29.979 | 29.853 | 30.031 | 29.953 | 29.458 |
| 30 | 30.425 | . . | 29.638 | 29.684 | 29.892 | 29.941 | 29.765 | 29.897 | 29.855 | 30.163 | 29.699 | 29.587 |
| 31 | 30.284 | . . | 29.948 | . . | 30.125 | . . | 29.772 | 29.862 | . . | 30.132 | . . | 30.122 |
| | 30.079 | 30.043 | 29.954 | 29.928 | 29.964 | 29.910 | 29.920 | 29.971 | 29.888 | 29.946 | 29.893 | 29.962 |

in.
 Mean barometric pressure for the year 29.954
 Maximum daily pressure (occurred February 5). 30.747
 Minimum daily pressure (occurred February 15) 29.372
 Range 1.375

MEAN DAILY TEMPERATURE FROM THE DRY-BULB THERMOMETER IN 1876.

| Day. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. |
|------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|
| 1 | 54.9 | 33.0 | 32.5 | 39.2 | 45.9 | 64.2 | 79.0 | 69.3 | 78.9 | 52.9 | 58.3 | 22.5 |
| 2 | 58.0 | 26.8 | 30.7 | 38.4 | 49.6 | 71.6 | 83.5 | 69.0 | 73.1 | 51.7 | 63.1 | 25.8 |
| 3 | 48.0 | 20.6 | 29.7 | 40.3 | 51.4 | 76.0 | 83.1 | 70.8 | 65.0 | 52.0 | 57.1 | 30.1 |
| 4 | 38.7 | 26.0 | 34.2 | 44.5 | 52.6 | 71.7 | 82.0 | 75.1 | 69.1 | 53.8 | 46.8 | 28.2 |
| 5 | 35.6 | 17.6 | 41.3 | 46.8 | 60.8 | 68.5 | 81.0 | 79.0 | 67.2 | 53.4 | 46.4 | 28.0 |
| 6 | 42.8 | 24.0 | 52.6 | 48.4 | 70.2 | 65.0 | 80.0 | 79.2 | 61.8 | 61.5 | 45.2 | 29.6 |
| 7 | 35.4 | 38.1 | 58.7 | 48.0 | 72.8 | 68.5 | 81.9 | 81.7 | 68.1 | 52.8 | 48.3 | 33.1 |
| 8 | 37.8 | 38.6 | 46.4 | 44.4 | 72.9 | 74.0 | 85.3 | 77.4 | 75.4 | 49.3 | 42.6 | 34.5 |
| 9 | 51.1 | 42.7 | 41.3 | 43.5 | 61.2 | 75.9 | 87.6 | 78.3 | 72.1 | 47.6 | 44.0 | 14.6 |
| 10 | 41.9 | 53.4 | 45.1 | 44.4 | 57.9 | 75.0 | 84.7 | 77.1 | 64.4 | 53.6 | 41.8 | 11.7 |
| 11 | 22.2 | 49.7 | 46.7 | 50.8 | 58.0 | 75.3 | 86.1 | 76.1 | 63.8 | 48.2 | 40.0 | 26.5 |
| 12 | 24.7 | 50.7 | 40.7 | 60.6 | 60.8 | 77.3 | 85.4 | 74.6 | 62.7 | 42.1 | 41.3 | 32.1 |
| 13 | 22.1 | 44.3 | 41.4 | 61.5 | 57.6 | 75.6 | 83.4 | 77.2 | 63.8 | 46.5 | 49.9 | 40.2 |
| 14 | 23.8 | 55.3 | 35.3 | 66.0 | 55.8 | 75.6 | 81.3 | 75.8 | 67.5 | 55.2 | 55.3 | 43.8 |
| 15 | 28.7 | 43.0 | 35.7 | 55.4 | 65.0 | 75.6 | 80.3 | 78.1 | 68.2 | 39.4 | 48.3 | 31.6 |
| 16 | 41.5 | 30.9 | 39.9 | 56.9 | 55.9 | 74.3 | 80.0 | 80.6 | 61.8 | 39.7 | 44.0 | 28.3 |
| 17 | 42.9 | 30.2 | 39.0 | 50.2 | 53.9 | 74.4 | 80.7 | 80.3 | 63.2 | 47.7 | 42.7 | 15.1 |
| 18 | 52.6 | 33.8 | 26.2 | 45.2 | 62.0 | 72.8 | 82.4 | 74.6 | 66.1 | 45.8 | 48.5 | 22.3 |
| 19 | 54.9 | 37.4 | 22.7 | 44.7 | 69.5 | 73.9 | 85.1 | 75.7 | 65.4 | 47.2 | 49.8 | 18.0 |
| 20 | 38.1 | 41.7 | 30.4 | 48.2 | 74.0 | 73.4 | 87.3 | 76.5 | 66.1 | 55.3 | 49.4 | 17.6 |
| 21 | 41.1 | 36.4 | 33.4 | 60.4 | 73.1 | 69.6 | 83.6 | 66.5 | 66.5 | 61.1 | 48.5 | 19.5 |
| 22 | 34.3 | 39.4 | 31.1 | 53.3 | 72.8 | 70.5 | 78.2 | 67.5 | 62.3 | 61.0 | 49.0 | 24.9 |
| 23 | 40.2 | 26.6 | 34.2 | 55.8 | 60.7 | 73.4 | 77.3 | 70.7 | 66.4 | 62.2 | 39.6 | 27.9 |
| 24 | 42.0 | 23.8 | 35.9 | 47.6 | 59.8 | 78.4 | 66.6 | 74.8 | 63.5 | 56.1 | 35.4 | 22.6 |
| 25 | 33.3 | 29.9 | 44.7 | 43.3 | 65.4 | 76.8 | 70.4 | 76.3 | 65.0 | 47.5 | 35.7 | 22.5 |
| 26 | 33.2 | 39.2 | 41.1 | 47.2 | 67.2 | 81.0 | 73.1 | 76.7 | 63.3 | 44.9 | 37.3 | 27.5 |
| 27 | 41.9 | 36.4 | 44.3 | 52.4 | 67.6 | 82.8 | 73.4 | 68.6 | 53.5 | 46.2 | 32.2 | 24.1 |
| 28 | 53.5 | 37.0 | 41.8 | 60.9 | 67.2 | 81.6 | 75.3 | 67.5 | 54.8 | 48.6 | 36.6 | 21.5 |
| 29 | 52.4 | 35.9 | 38.7 | 56.8 | 72.9 | 78.5 | 76.9 | 71.8 | 59.2 | 46.3 | 34.4 | 27.6 |
| 30 | 28.1 | . . | 36.5 | 53.5 | 68.2 | 78.1 | 70.4 | 76.0 | 54.4 | 48.8 | 31.0 | 26.6 |
| 31 | 26.8 | . . | 40.2 | . . | 62.5 | . . | 67.4 | 77.6 | . . | 52.2 | . . | 20.8 |
| | 39.4 | 35.9 | 38.5 | 50.3 | 62.8 | 74.3 | 79.8 | 74.9 | 65.1 | 50.7 | 44.7 | 25.8 |

Mean temperature for the year by dry-bulb thermometer . . . 53.5
 Maximum mean daily temperature (occurred July 9) . . . 87.6
 Minimum mean daily temperature (occurred December 10) . . 11.7
 Range 75.9

TEMPERATURE FROM THE MAXIMUM AND MINIMUM THERMOMETERS IN 1876.

| Day. | January. | | February. | | March. | | April. | | May. | | June. | | July. | | August. | | September. | | October. | | November. | | December. | |
|------------|----------|------|-----------|------|--------|------|--------|------|------|------|-------|------|-------|------|---------|------|------------|------|----------|------|-----------|------|-----------|------|
| | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. | Max. | Min. |
| 1876. | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| 1 | 64.0 | 50.0 | 40.5 | 22.5 | 38.0 | 28.0 | 51.9 | 29.5 | 62.0 | 31.5 | 78.5 | 48.0 | 90.0 | 67.0 | 73.5 | 65.0 | 90.3 | 69.0 | 63.0 | 46.0 | 77.5 | 43.5 | 35.0 | 15.0 |
| 2 | 72.0 | 50.0 | 40.5 | 14.2 | 35.5 | 27.0 | 49.0 | 28.0 | 61.0 | 37.5 | 87.5 | 54.0 | 93.0 | 72.0 | 72.5 | 64.2 | 82.0 | 57.0 | 65.5 | 41.0 | 77.3 | 50.0 | 34.8 | 19.0 |
| 3 | 54.0 | 31.5 | 27.5 | 12.6 | 41.5 | 19.0 | 42.5 | 38.0 | 62.0 | 42.0 | 90.4 | 65.5 | 94.0 | 74.0 | 79.1 | 65.0 | 80.0 | 52.0 | 67.5 | 39.0 | 60.9 | 44.3 | 36.5 | 23.5 |
| 4 | 54.0 | 29.0 | 32.5 | 17.5 | 50.0 | 22.0 | 53.5 | 39.0 | 67.0 | 39.0 | 82.5 | 65.0 | 95.5 | 69.6 | 85.0 | 68.0 | 87.0 | 52.5 | 63.5 | 47.0 | 58.6 | 36.0 | 37.0 | 19.5 |
| 5 | 49.5 | 24.0 | 31.0 | 5.0 | 58.5 | 27.2 | 60.5 | 31.5 | 74.0 | 48.5 | 79.1 | 57.0 | 95.5 | 70.0 | 89.2 | 70.8 | 75.7 | 54.8 | 65.0 | 47.0 | 59.0 | 37.0 | 35.5 | 18.0 |
| 6 | 50.0 | 33.0 | 33.5 | 10.0 | 71.5 | 38.0 | 59.5 | 36.0 | 83.0 | 58.0 | 78.3 | 53.0 | 92.5 | 68.5 | 90.5 | 69.5 | 75.0 | 49.3 | 80.0 | 49.0 | 57.0 | 33.0 | 42.0 | 17.0 |
| 7 | 51.0 | 23.5 | 51.0 | 29.5 | 70.5 | 49.0 | 68.5 | 32.0 | 86.0 | 59.0 | 83.2 | 52.6 | 94.2 | 71.5 | 94.7 | 70.5 | 81.5 | 60.0 | 61.1 | 40.2 | 51.1 | 36.5 | 47.5 | 24.0 |
| 8 | 54.0 | 24.6 | 53.0 | 27.0 | 60.5 | 31.5 | 57.3 | 31.0 | 82.5 | 68.5 | 88.0 | 60.0 | 99.5 | 72.5 | 89.5 | 69.8 | 90.5 | 65.0 | 62.7 | 36.0 | 55.5 | 33.0 | 42.0 | 29.5 |
| 9 | 58.0 | 46.3 | 51.5 | 34.0 | 56.0 | 30.0 | 56.5 | 31.0 | 62.1 | 56.0 | 87.5 | 64.0 | 101.1 | 75.3 | 88.0 | 67.5 | 82.0 | 62.0 | 59.3 | 36.0 | 55.5 | 34.5 | 33.0 | 2.5 |
| 10 | 54.0 | 19.3 | 66.5 | 41.0 | 59.5 | 31.0 | 59.8 | 30.0 | 71.5 | 48.0 | 88.0 | 65.0 | 101.0 | 76.0 | 88.0 | 67.0 | 70.0 | 61.0 | 70.9 | 40.0 | 55.0 | 33.0 | 24.0 | 2.0 |
| 11 | 32.0 | 15.0 | 66.5 | 41.0 | 56.2 | 37.5 | 67.0 | 32.0 | 73.5 | 45.0 | 88.3 | 64.5 | 98.9 | 74.8 | 84.0 | 71.5 | 67.0 | 60.0 | 57.5 | 35.0 | 55.0 | 32.0 | 36.5 | 19.0 |
| 12 | 41.0 | 16.0 | 58.8 | 35.0 | 46.5 | 37.5 | 76.5 | 49.0 | 84.0 | 49.0 | 89.5 | 67.5 | 100.5 | 74.4 | 86.0 | 68.5 | 67.0 | 58.5 | 57.5 | 30.5 | 55.5 | 30.0 | 44.8 | 23.0 |
| 13 | 30.5 | 14.9 | 54.5 | 33.0 | 48.0 | 29.7 | 74.5 | 53.0 | 69.5 | 40.5 | 87.0 | 68.5 | 99.0 | 72.5 | 87.5 | 67.0 | 72.5 | 56.8 | 65.0 | 30.2 | 69.7 | 33.5 | 60.0 | 25.0 |
| 14 | 39.0 | 13.0 | 62.7 | 48.5 | 47.5 | 26.5 | 74.5 | 53.0 | 71.5 | 41.0 | 86.0 | 66.0 | 94.0 | 72.0 | 87.0 | 68.5 | 80.0 | 58.0 | 70.7 | 41.0 | 77.0 | 45.0 | 59.0 | 33.5 |
| 15 | 44.5 | 14.5 | 51.5 | 35.0 | 44.8 | 28.2 | 66.5 | 43.0 | 81.0 | 48.5 | 67.0 | 65.5 | 91.0 | 72.0 | 89.4 | 67.0 | 78.7 | 59.0 | 47.5 | 30.0 | 52.5 | 42.6 | 42.5 | 22.0 |
| 16 | 50.0 | 36.0 | 38.0 | 25.5 | 54.0 | 33.0 | 68.5 | 47.0 | 57.5 | 50.6 | 85.5 | 65.0 | 91.4 | 67.8 | 91.0 | 70.0 | 68.5 | 58.0 | 57.0 | 26.0 | 47.5 | 40.0 | 41.0 | 10.0 |
| 17 | 50.0 | 37.0 | 40.0 | 22.0 | 47.5 | 29.0 | 60.1 | 40.5 | 57.5 | 50.0 | 81.5 | 70.0 | 92.5 | 67.0 | 92.5 | 72.5 | 73.5 | 57.0 | 67.5 | 42.8 | 47.0 | 39.5 | 41.0 | 9.0 |
| 18 | 62.0 | 44.5 | 45.7 | 24.5 | 32.5 | 15.5 | 54.5 | 37.0 | 74.5 | 52.0 | 81.1 | 66.6 | 95.5 | 71.5 | 79.0 | 71.5 | 79.0 | 57.5 | 64.5 | 32.0 | 54.0 | 43.0 | 31.0 | 9.8 |
| 19 | 61.0 | 40.0 | 54.1 | 23.0 | 37.0 | 11.5 | 59.5 | 32.0 | 82.0 | 56.9 | 85.9 | 65.0 | 98.5 | 74.0 | 85.0 | 71.5 | 77.0 | 56.0 | 66.5 | 31.0 | 53.0 | 46.3 | 31.0 | 7.0 |
| 20 | 46.5 | 31.0 | 54.3 | 31.0 | 46.5 | 21.5 | 62.5 | 32.5 | 85.0 | 64.5 | 83.0 | 64.0 | 102.1 | 77.0 | 86.5 | 64.0 | 79.0 | 54.0 | 63.5 | 47.5 | 51.5 | 44.9 | 29.5 | 6.0 |
| 21 | 55.0 | 31.5 | 42.5 | 27.5 | 40.0 | 29.0 | 71.1 | 50.0 | 86.2 | 64.0 | 80.0 | 59.5 | 93.0 | 69.5 | 79.0 | 53.5 | 75.0 | 59.5 | 70.3 | 55.0 | 54.0 | 44.0 | 32.5 | 12.0 |
| 22 | 38.0 | 29.0 | 48.5 | 31.5 | 41.0 | 24.0 | 64.5 | 38.5 | 84.5 | 65.0 | 83.5 | 56.2 | 92.0 | 65.5 | 84.2 | 51.5 | 65.0 | 59.0 | 67.1 | 55.7 | 60.8 | 41.2 | 32.5 | 12.0 |
| 23 | 50.0 | 33.5 | 29.0 | 14.0 | 47.5 | 25.0 | 69.0 | 42.5 | 70.5 | 49.0 | 85.1 | 62.0 | 90.8 | 63.0 | 82.0 | 63.0 | 74.5 | 61.0 | 75.5 | 54.5 | 43.8 | 33.2 | 33.0 | 20.6 |
| 24 | 48.0 | 31.0 | 36.2 | 12.0 | 46.0 | 27.0 | 50.1 | 42.0 | 75.5 | 44.5 | 90.7 | 66.5 | 79.9 | 57.2 | 86.0 | 66.5 | 66.3 | 59.5 | 67.0 | 47.0 | 43.7 | 28.2 | 26.5 | 20.0 |
| 25 | 47.5 | 26.5 | 43.5 | 17.3 | 55.0 | 36.5 | 48.7 | 35.4 | 82.0 | 51.5 | 90.5 | 65.0 | 86.5 | 55.5 | 88.0 | 69.5 | 75.5 | 59.5 | 56.5 | 39.8 | 44.5 | 27.5 | 26.5 | 18.0 |
| 26 | 47.5 | 26.0 | 57.5 | 26.5 | 48.0 | 34.0 | 63.0 | 32.5 | 79.5 | 58.0 | 92.5 | 67.0 | 85.8 | 62.0 | 86.5 | 64.0 | 72.5 | 48.0 | 54.5 | 40.0 | 44.1 | 28.5 | 37.0 | 21.5 |
| 27 | 55.0 | 30.0 | 40.5 | 32.5 | 57.5 | 33.0 | 68.0 | 37.0 | 80.0 | 55.5 | 95.5 | 71.0 | 89.0 | 57.0 | 82.0 | 57.0 | 65.0 | 43.0 | 56.5 | 35.0 | 44.0 | 26.0 | 34.5 | 14.0 |
| 28 | 71.5 | 39.0 | 41.2 | 32.0 | 58.1 | 35.0 | 73.5 | 50.0 | 78.1 | 55.0 | 93.7 | 70.0 | 90.0 | 65.0 | 83.0 | 54.5 | 70.0 | 42.5 | 62.0 | 32.5 | 46.1 | 29.8 | 27.5 | 14.5 |
| 29 | 61.5 | 30.7 | 42.5 | 29.5 | 46.5 | 31.5 | 69.0 | 45.0 | 88.0 | 59.0 | 89.5 | 68.8 | 91.1 | 66.5 | 88.5 | 56.0 | 74.0 | 46.5 | 48.0 | 42.5 | 46.0 | 26.5 | 34.0 | 20.5 |
| 30 | 36.5 | 20.4 | . | . | 46.5 | 29.0 | 67.0 | 34.0 | 75.0 | 58.0 | 88.0 | 70.5 | 75.5 | 63.0 | 90.5 | 67.0 | 57.0 | 47.0 | 54.0 | 44.0 | 35.0 | 22.0 | 33.5 | 22.0 |
| 31 | 39.8 | 12.0 | . | . | 52.0 | 30.3 | . | . | 72.1 | 54.0 | . | . | 74.0 | 62.5 | 90.5 | 66.0 | . | . | 58.5 | 46.2 | . | . | 27.0 | 17.0 |
| Mean. | 50.6 | 29.1 | 46.0 | 26.0 | 49.7 | 29.3 | 62.2 | 38.4 | 74.8 | 51.6 | 85.6 | 63.4 | 92.5 | 68.6 | 82.5 | 65.7 | 75.0 | 56.1 | 62.8 | 40.3 | 54.4 | 36.2 | 36.4 | 17.0 |
| Mean temp. | 39.8 | | 36.0 | | 39.5 | | 50.3 | | 63.2 | | 74.5 | | 80.5 | | 74.1 | | 65.6 | | 51.5 | | 45.3 | | 26.7 | |

Mean temperature for the year from the maximum and minimum thermometers, 54°.0.

MAXIMUM AND MINIMUM TEMPERATURES FOR EACH MONTH IN 1876.

| Month. | Maximum. | | Minimum. | | Range. |
|---------------------|----------|--------------|----------|--------------|--------|
| | Day. | Temperature. | Day. | Temperature. | |
| January | 2 | 72.0 | 31 | 12.0 | 60.0 |
| February | 10, 11 | 66.5 | 5 | 5.0 | 61.5 |
| March | 6 | 71.5 | 19 | 11.5 | 60.0 |
| April | 12 | 76.5 | 2, 3 | 28.0 | 48.5 |
| May | 29 | 88.0 | 1 | 31.5 | 56.5 |
| June | 27 | 95.5 | 1 | 48.0 | 47.5 |
| July | 20 | 102.1 | 25 | 55.5 | 46.6 |
| August | 17 | 92.5 | 22 | 51.5 | 41.0 |
| September | 8 | 90.5 | 28 | 42.5 | 48.0 |
| October | 6 | 80.0 | 16 | 26.0 | 54.0 |
| November | 1 | 77.5 | 30 | 22.0 | 55.5 |
| December | 13 | 60.0 | 9 | 2.0 | 58.0 |

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|-----------------|-------|------------|--------|----------|-----------------|-----------------|-------|------------|--------|----------|-----------------|-----------------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. Jan. 1 | 0 | S. SE. | 1 | Fog | | 1876. Jan. 2 | 0 | S. | 1 | Clear | 0 | 1876. Jan. 3 | 0 | SW. | 1 | C. K. | 10 |
| | 3 | E. | 1 | Mist | 10 | | 3 | S. | 1 | Clear | 0 | | 3 | W. | 1 | C. K. | 10 |
| | 6 | SE. | 1 | Mist | 10 | | 6 | S. | 1 | Clear | 0 | | 6 | NW. | 2 | K. | 10 |
| | 9 | SW. | 1 | Mist | 10 | | 9 | S. SW. | 1 | C. S. | 1 | | 9 | NW. | 1 | C. K. S. | 8 |
| | Noon | S. | 1 | Haze | | | Noon | S. SW. | 3 | C. K. S. | 5 | | Noon | NW. | 1 | C. K. S. | 8 |
| | 3 | N. E. | 1 | C. K. | 8 | | 3 | S. SW. | 2 | C. K. | 10 | | 3 | NW. | 2 | C. K. | 4 |
| | 6 | SW. | 1 | C. K. | 1 | | 6 | W. | 1 | N. | 16 | | 6 | NW. | 2 | Clear | 0 |
| | 9 | SW. | 1 | S. | 1 | | 9 | NW. | 1 | N. | 10 | | 9 | NW. | 1 | Clear | 0 |
| Jan. 4 | 0 | NW. | 1 | Clear | 0 | Jan. 5 | 0 | E. | 1 | C. K. S. | 4 | Jan. 6 | 0 | SW. | 2 | C. K. S. | 9 |
| | 3 | SW. | 1 | Clear | 0 | | 3 | NE. | 1 | C. | 2 | | 3 | SW. | 2 | C. K. | 6 |
| | 6 | SW. | 1 | Clear | 0 | | 6 | NE. | 1 | C. K. S. | 4 | | 6 | W. | 2 | C. K. | 8 |
| | 9 | W. | 1 | C. K. | 1 | | 9 | NE. | 1 | C. K. | 10 | | 9 | NW. | 1 | C. K. | 1 |
| | Noon | NW. | 2 | Clear | 0 | | Noon | S. by E. | 1 | C. K. | 10 | | Noon | NW. | 3 | C. K. S. | 10 |
| | 3 | N. NW. | 2 | Clear | 0 | | 3 | S. | 3 | C. K. | 2 | | 3 | NW. | 3 | C. K. | 6 |
| | 6 | E. | 1 | S. S. | 1 | | 6 | S. | 1 | C. K. | 10 | | 6 | NW. | 3 | C. K. | 3 |
| | 9 | E. | 2 | Clear | 0 | | 9 | S. | 2 | C. K. | 10 | | 9 | NW. | 3 | Clear | 0 |
| Jan. 7 | 0 | N. W. | 1 | Clear | 0 | Jan. 8 | 0 | NW. | 1 | C. K. | 2 | Jan. 9 | 0 | S. | 2 | C. K. | 10 |
| | 3 | SW. | 1 | Clear | 0 | | 3 | NW. | 1 | C. S. | 4 | | 3 | SW. | 1 | C. K. | 10 |
| | 6 | W. | 1 | Clear | 0 | | 6 | NW. | 1 | C. S. | 2 | | 6 | SE. | 1 | C. K. | 10 |
| | 9 | NW. | 1 | Clear | 0 | | 9 | NW. | 1 | C. | 10 | | 9 | SE. | 1 | C. K. | 6 |
| | Noon | S. SE. | 1 | Clear | 0 | | Noon | SE. | 1 | Haze | 10 | | Noon | SE. | 1 | C. K. | 10 |
| | 3 | E. SE. | 1 | Clear | 0 | | 3 | S. | 1 | C. K. | 7 | | 3 | S. | 2 | C. K. | 9 |
| | 6 | SE. | 1 | C. K. | 2 | | 6 | S. | 1 | C. K. | 10 | | 6 | S. | 1 | C. K. | 10 |
| | 9 | S. | 1 | C. | 2 | | 9 | S. | 2 | K. | 10 | | 9 | S. | 3 | C. K. | 9 |
| Jan. 10 | 0 | S. | 3 | C. K. | 10 | Jan. 11 | 0 | NW. | 2 | C. K. | 2 | Jan. 12 | 0 | NW. | 1 | C. K. | 5 |
| | 3 | SW. | 3 | C. K. | 10 | | 3 | NW. | 2 | C. | 1 | | 3 | NW. | 1 | C. K. | 10 |
| | 6 | NW. | 2 | C. K. | 9 | | 6 | NW. | 2 | Clear | 0 | | 6 | S. | 1 | C. K. | 2 |
| | 9 | NW. | 3 | C. K. S. | 9 | | 9 | NW. | 2 | C. S. | 2 | | 9 | SW. | 1 | C. K. | 8 |
| | Noon | NW. | 3 | C. K. | 9 | | Noon | NW. | 2 | Clear | 0 | | Noon | W. NW. | 2 | C. K. | 10 |
| | 3 | W. NW. | 4 | Clear | 0 | | 3 | W. | 2 | C. | 1 | | 3 | NW. | 3 | C. K. S. | 5 |
| | 6 | NW. | 3 | Clear | 0 | | 6 | W. | 1 | Clear | 0 | | 6 | NW. | 3 | C. K. S. | 1 |
| | 9 | NW. | 3 | Clear | 0 | | 9 | NW. | 1 | Clear | 0 | | 9 | NW. | 2 | Clear | 0 |
| Jan. 13 | 0 | NW. | 3 | Clear | 0 | Jan. 14 | 0 | W. | 1 | C. K. | 4 | Jan. 15 | 0 | W. | 1 | Clear | 0 |
| | 3 | NW. | 2 | Clear | 0 | | 3 | NW. | 1 | Clear | 0 | | 3 | W. | 1 | Clear | 0 |
| | 6 | NW. | 1 | C. K. | 1 | | 6 | NW. | 1 | C. K. | 9 | | 6 | W. | 1 | Clear | 0 |
| | 9 | NW. | 1 | Clear | 0 | | 9 | W. SW. | 1 | Clear | 0 | | 9 | S. | 1 | C. | 1 |
| | Noon | NW. | 3 | C. K. | 6 | | Noon | SW. | 1 | C. K. | 7 | | Noon | S. | 1 | C. K. | 8 |
| | 3 | NW. | 3 | C. K. | 6 | | 3 | SW. | 1 | C. K. S. | 8 | | 3 | S. SW. | 1 | C. K. | 7 |
| | 6 | NW. | 2 | C. K. S. | 2 | | 6 | S. | 2 | C. S. | 1 | | 6 | SE. | 1 | C. K. | 8 |
| | 9 | NW. | 2 | C. K. | 9 | | 9 | W. | 1 | Clear | 0 | | 9 | SE. | 1 | K. | 10 |

REMARKS.

January 2. Rain in the evening; amount, 0.112 inch.

6. Light rain at 6^h 45^m a. m.7. Lunar halo at 8^h 30^m p. m.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. Jan. 16 | 0 | SW. | 1 | C. K. | 10 | 1876. Jan. 17 | 0 | SE. | 1 | N. | 10 | 1876. Jan. 18 | 0 | SE. | 1 | N. | 10 |
| | 3 | SE. | 1 | C. K. | 10 | | 3 | SE. | 1 | N. | 10 | | 3 | SE. | 1 | K. | 10 |
| | 6 | NW. | 1 | C. K. S. | 10 | | 6 | S. | 1 | K. | 10 | | 6 | SE. | 1 | Mist | 10 |
| | 9 | NW. | 1 | C. K. | 10 | | 9 | S. | 1 | C. K. | 10 | | 9 | S. SE. | 1 | Haze | 10 |
| | Noon | NW. | 1 | C. K. | 9 | | Noon | SE. | 1 | C. K. | 9 | | Noon | SW. | 3 | C. K. | 10 |
| | 3 | NW. | 1 | C. K. | 10 | | 3 | SE. | 1 | C. K. | 10 | | 3 | S. | 3 | C. K. | 10 |
| | 6 | N. | 1 | K. | 10 | | 6 | SE. | 1 | K. | 10 | | 6 | S. | 3 | C. K. | 9 |
| | 9 | SW. | 1 | N. | 10 | | 9 | SE. | 1 | K. | 10 | | 9 | S. | 3 | C. K. | 7 |
| Jan. 19 | 0 | S. | 2 | C. K. | 10 | Jan. 20 | 0 | NW. | 4 | K. | 10 | Jan. 21 | 0 | SW. | 1 | Haze | 1 |
| | 3 | S. | 1 | C. K. | 10 | | 3 | NW. | 3 | Clear | 0 | | 3 | SW. | 1 | C. K. | 1 |
| | 6 | S. | 1 | C. K. | 10 | | 6 | NW. | 3 | Clear | 0 | | 6 | SW. | 1 | C. K. | 9 |
| | 9 | S. | 2 | C. K. | 10 | | 9 | NW. | 3 | C. K. | 2 | | 9 | W. | 1 | C. K. | 7 |
| | Noon | S. | 2 | C. K. | 10 | | Noon | W. | 2 | C. K. | 9 | | Noon | SW. | 1 | C. K. | 7 |
| | 3 | E. NE. | 1 | N. | 10 | | 3 | W. | 2 | C. K. | 3 | | 3 | W. | 1 | C. K. | 5 |
| | 6 | W. | 1 | K. | 10 | | 6 | SW. | 1 | S. | 1 | | 6 | S. SW. | 1 | C. K. S. | 7 |
| | 9 | NW. | 3 | N. | 10 | | 9 | SW. | 1 | Clear | 0 | | 9 | N. | 1 | Clear | 0 |
| Jan. 22 | 0 | NE. | 1 | Clear | 0 | Jan. 23 | 0 | E. | 1 | K. | 10 | Jan. 24 | 0 | S. | 1 | C. K. | 8 |
| | 3 | E. | 2 | K. | 10 | | 3 | SE. | 1 | N. | 10 | | 3 | NE. | 1 | N. | 10 |
| | 6 | NE. | 2 | C. S. | 2 | | 6 | NW. | 1 | N. | 10 | | 6 | NW. | 1 | N. | 10 |
| | 9 | E. | 1 | C. K. | 10 | | 9 | SW. | 1 | C. K. | 10 | | 9 | NW. | 3 | C. K. | 5 |
| | Noon | NE. | 1 | C. K. | 10 | | Noon | SW. | 1 | C. K. S. | 10 | | Noon | NW. | 3 | C. K. | 3 |
| | 3 | NE. | 1 | K. | 10 | | 3 | S. | 1 | C. K. S. | 10 | | 3 | NW. | 3 | C. K. | 3 |
| | 6 | NE. | 1 | K. | 10 | | 6 | S. | 1 | C. K. | 10 | | 6 | NW. | 2 | C. K. S. | 1 |
| | 9 | NE. | 1 | K. | 10 | | 9 | S. | 1 | K. | 10 | | 9 | NW. | 2 | C. K. | 2 |
| Jan. 25 | 0 | NW. | 2 | C. K. | 9 | Jan. 26 | 0 | S. | 1 | Clear | 0 | Jan. 27 | 0 | SE. | 1 | K. | 10 |
| | 3 | NE. | 1 | C. K. | 6 | | 3 | S. | 1 | Clear | 0 | | 3 | SE. | 2 | N. | 10 |
| | 6 | SE. | 1 | C. K. | 4 | | 6 | NW. | 2 | Clear | 0 | | 6 | S. | 3 | N. | 10 |
| | 9 | S. | 1 | C. K. | 9 | | 9 | N. NW. | 1 | Clear | 0 | | 9 | S. | 2 | N. | 10 |
| | Noon | S. | 1 | C. K. | 10 | | Noon | N. NE. | 1 | C. K. | 2 | | Noon | S. SW. | 1 | C. K. S. | 10 |
| | 3 | S. | 2 | C. K. | 10 | | 3 | NE. | 1 | C. K. | 10 | | 3 | S. | 1 | C. K. S. | 10 |
| | 6 | S. | 1 | C. K. | 2 | | 6 | SE. | 1 | C. K. | 2 | | 6 | NE. | 1 | C. K. | 10 |
| | 9 | S. | 1 | Clear | 0 | | 9 | SE. | 1 | Clear | 0 | | 9 | NE. | 1 | K. | 10 |
| Jan. 28 | 0 | SE. | 1 | K. | 10 | Jan. 29 | 0 | S. | 1 | C. K. | 4 | Jan. 30 | 0 | NW. | 3 | C. K. | 10 |
| | 3 | W. | 1 | Clear | 0 | | 3 | S. | 2 | C. K. | 8 | | 3 | NW. | 3 | C. K. | 10 |
| | 6 | NW. | 1 | Haze | | | 6 | S. | 2 | K. | 10 | | 6 | NW. | 2 | C. K. S. | 2 |
| | 9 | N. | 1 | Haze | | | 9 | SW. | 2 | C. K. | 10 | | 9 | N. | 2 | Clear | 0 |
| | Noon | S. | 2 | C. K. | 2 | | Noon | W. | 2 | N. | 10 | | Noon | N. | 1 | C. | 2 |
| | 3 | S. | 2 | C. K. S. | 3 | | 3 | NW. | 2 | C. K. S. | 10 | | 3 | NE. | 1 | C. | 1 |
| | 6 | S. | 1 | C. K. | 2 | | 6 | NW. | 5 | C. K. S. | 10 | | 6 | E. | 1 | S. | 1 |
| | 9 | S. | 2 | Haze | | | 9 | NW. | 3 | K. | 10 | | 9 | E. | 1 | Clear | 0 |

REMARKS.

January 16. Rain at 8^h 25^m p. m.; amount, 0.372 inch.18. Light rain at 0^h p. m.; amount, 0.030 inch.

19. Rain during the evening; amount, 0.520 inch.

22. A light fall of hail at 0^h 30^m p. m.24. Rain at 3^h a. m.; amount, 0.242 inch.27. Hail at 1^h 40^m a. m., followed by rain; amount, 0.076.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|------------------|-------|------------|--------|----------|-----------------|---------|-------|------------|--------|----------|-----------------|---------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. Jan. 31 | 0 | NW. | 1 | Clear | 0 | 1876. | | | | | | 1876. | | | | | |
| | 3 | NE. | 1 | Clear | 0 | | | | | | | | | | | | |
| | 6 | N. | 1 | C. K. | 2 | | | | | | | | | | | | |
| | 9 | N. | 1 | C. K. | 10 | | | | | | | | | | | | |
| | Noon | E. | 1 | C. K. | 10 | | | | | | | | | | | | |
| | 3 | N. | 1 | Clear | 0 | | | | | | | | | | | | |
| | 6 | N. | 1 | C. S. | 1 | | | | | | | | | | | | |
| | 9 | N. | 1 | C. K. | 10 | | | | | | | | | | | | |
| Feb. 1 | 0 | NE. | 1 | C. K. | 5 | Feb. 2 | 0 | S. | 2 | C. K. | 10 | Feb. 3 | 0 | NW. | 1 | C. K. | 1 |
| | 3 | NE. | 1 | C. K. | 3 | | 3 | NW. | 5 | C. K. | 3 | | 3 | NW. | 1 | C. K. | 10 |
| | 6 | SE. | 1 | Haze | | | 6 | NW. | 7 | C. K. | 3 | | 6 | NE. | 1 | C. K. | 10 |
| | 9 | SE. | 1 | K. | 10 | | 9 | NW. | 7 | Clear | 0 | | 9 | SE. | 1 | C. K. S. | 9 |
| | Noon | S. | 2 | K. | 10 | | Noon | NW. | 6 | C. | 1 | | Noon | SE. | 1 | K. | 10 |
| | 3 | S. | 1 | K. | 10 | | 3 | NW. | 4 | Clear | 0 | | 3 | SE. | 1 | K. | 10 |
| | 6 | S. | 2 | N. | 10 | | 6 | W. NW. | 2 | S. | 1 | | 6 | SE. | 1 | K. | 10 |
| | 9 | S. | 2 | N. | 10 | | 9 | NW. | 1 | Clear | 0 | | 9 | N. NW. | 2 | Snow | 10 |
| Feb. 4 | 0 | NW. | 1 | Sleet | 10 | Feb. 5 | 0 | NW. | 1 | Clear | 0 | Feb. 6 | 0 | NE. | 1 | C. K. | 8 |
| | 3 | NW. | 1 | K. | 10 | | 3 | NW. | 1 | Clear | 0 | | 3 | NE. | 1 | C. K. | 10 |
| | 6 | NW. | 1 | Snow | 10 | | 6 | N. | 1 | Clear | 0 | | 6 | N. NW. | 1 | K. | 10 |
| | 9 | NW. | 1 | K. | 10 | | 9 | NW. | 1 | Clear | 0 | | 9 | NE. | 1 | K. | 10 |
| | Noon | N. NW. | 1 | K. | 10 | | Noon | E. | 1 | Clear | 0 | | Noon | SE. | 1 | K. | 10 |
| | 3 | NW. | 2 | C. K. | 9 | | 3 | SE. | 1 | Clear | 0 | | 3 | E. | 1 | N. | 10 |
| | 6 | N. | 1 | Clear | 0 | | 6 | E. | 1 | Clear | 0 | | 6 | SE. | 1 | N. | 10 |
| | 9 | N. | 1 | Clear | 0 | | 9 | E. | 1 | Clear | 0 | | 9 | SE. | 1 | N. | 10 |
| Feb. 7 | 0 | SE. | 1 | K. | 10 | Feb. 8 | 0 | NW. | 1 | C. K. | 5 | Feb. 9 | 0 | SE. | 1 | C. K. | 9 |
| | 3 | SE. | 1 | Fog | 10 | | 3 | NW. | 1 | C. K. | 9 | | 3 | S. | 1 | C. K. | 7 |
| | 6 | NW. | 1 | C. K. | 6 | | 6 | NW. | 1 | C. K. S. | 3 | | 6 | SE. | 1 | C. K. S. | 9 |
| | 9 | W. | 1 | Fog | | | 9 | NW. | 1 | Haze | | | 9 | SE. | 1 | C. K. | 10 |
| | Noon | SE. | 1 | Haze | | | Noon | E. | 1 | Haze | | | Noon | S. | 1 | C. K. | 10 |
| | 3 | W. NW. | 1 | Haze | | | 3 | S. | 1 | Haze | | | 3 | S. | 2 | C. K. | 10 |
| | 6 | NW. | 1 | K. | 10 | | 6 | E. | 1 | C. K. | 2 | | 6 | S. | 2 | K. | 10 |
| | 9 | N. | 1 | K. | 10 | | 9 | E. SE. | 1 | K. | 10 | | 9 | S. | 3 | C. K. | 4 |
| Feb. 10 | 0 | SW. | 3 | C. K. | 10 | Feb. 11 | 0 | SE. | 1 | C. K. | 9 | Feb. 12 | 0 | NW. | 1 | C. K. | 10 |
| | 3 | SW. | 2 | C. K. | 7 | | 3 | SE. | 1 | C. K. | 10 | | 3 | NW. | 1 | C. K. | 10 |
| | 6 | SE. | 1 | S. | 1 | | 6 | E. | 1 | K. | 10 | | 6 | NW. | 2 | C. K. | 8 |
| | 9 | W. | 1 | C. K. | 3 | | 9 | E. | 1 | Mist | 10 | | 9 | NW. | 2 | C. K. | 1 |
| | Noon | W. | 1 | C. K. | 2 | | Noon | S. | 1 | Mist | 10 | | Noon | NW. | 2 | Clear | 0 |
| | 3 | N. | 1 | C. K. | 2 | | 3 | S. | 3 | C. K. | 10 | | 3 | NW. | 1 | Clear | 0 |
| | 6 | SE. | 2 | C. S. | 4 | | 6 | SW. | 1 | N. | 10 | | 6 | NE. | 1 | C. S. | 1 |
| | 9 | SE. | 2 | C. K. S. | 6 | | 9 | S. | 1 | K. | 10 | | 9 | NE. | 1 | Haze | |

REMARKS.

February 6. Rain at 2^h 50^m p. m., followed by snow; amount of rain and melted snow, 0.926 inch.
 9. Light shower at 8^h p. m.; amount, 0.006 inch.
 11. Light rain and mist in the evening; amount, 0.130 inch.

METEOROLOGICAL OBSERVATIONS.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. Feb. 13 | 0 | W. | 1 | C. K. | 8 | 1876. Feb. 14 | 0 | SE. | 1 | K. | 10 | 1876. Feb. 15 | 0 | NE. | 1 | K. | 10 |
| | 3 | NW. | 1 | Clear | 0 | | 3 | S. | 1 | N. | 10 | | 3 | NE. | 1 | N. | 10 |
| | 6 | E. | 1 | C. K. | 4 | | 6 | S. | 1 | N. | 10 | | 6 | NW. | 5 | N. | 10 |
| | 9 | E. SE. | 1 | C. S. | 1 | | 9 | SE. | 1 | K. | 10 | | 9 | NW. | 3 | N. | 10 |
| Noon | | S. | 1 | C. K. | 9 | Noon | | SW. | 1 | C. K. | 10 | Noon | | NW. | 4 | C. K. | 10 |
| | 3 | S. | 1 | C. K. | 10 | | 3 | N. | 1 | N. | 10 | | 3 | NW. | 3 | C. K. | 3 |
| | 6 | S. | 1 | K. | 10 | | 6 | N. NW. | 1 | N. | 10 | | 6 | W. | 2 | C. K. | 10 |
| | 9 | S. | 1 | K. | 10 | | 9 | NE. | 1 | N. | 10 | | 9 | W. NW. | 5 | C. K. | 7 |
| Feb. 16 | 0 | W. | 1 | K. | 10 | Feb. 17 | 0 | NW. | 3 | C. K. | 3 | Feb. 18 | 0 | NW. | 1 | Clear | 0 |
| | 3 | W. | 1 | Clear | 0 | | 3 | NW. | 1 | S. | 1 | | 3 | SE. | 1 | C. K. S. | 4 |
| | 6 | NW. | 1 | C. | 1 | | 6 | W. | 1 | C. S. | 3 | | 6 | E. | 1 | C. K. S. | 5 |
| | 9 | NW. | 3 | C. S. | 2 | | 9 | NW. | 3 | C. K. | 6 | | 9 | W. NW. | 2 | C. | 1 |
| Noon | | W. | 3 | C. K. | 4 | Noon | | W. NW. | 3 | C. K. | 4 | Noon | | NW. | 2 | C. K. | 1 |
| | 3 | W. NW. | 2 | C. K. | 2 | | 3 | W. NW. | 2 | C. K. | 2 | | 3 | NW. | 2 | Clear | 0 |
| | 6 | NW. | 1 | Clear | 0 | | 6 | NW. | 2 | C. K. | 2 | | 6 | NW. | 1 | Clear | 0 |
| | 9 | NW. | 3 | Clear | 0 | | 9 | NW. | 1 | Clear | 0 | | 9 | N. | 1 | Clear | 0 |
| Feb. 19 | 0 | NW. | 1 | Clear | 0 | Feb. 20 | 0 | NW. | 1 | Clear | 0 | Feb. 21 | 0 | NW. | 1 | Clear | 0 |
| | 3 | NW. | 1 | Clear | 0 | | 3 | SW. | 2 | Clear | 0 | | 3 | NW. | 1 | Clear | 0 |
| | 6 | NW. | 1 | Haze | 0 | | 6 | W. | 1 | Clear | 0 | | 6 | E. | 1 | C. K. | 2 |
| | 9 | NW. | 1 | C. S. | 1 | | 9 | NW. | 2 | Clear | 0 | | 9 | E. | 1 | C. K. | 10 |
| Noon | | SW. | 2 | C. K. | 6 | Noon | | NW. | 3 | Clear | 0 | Noon | | E. | 1 | K. | 10 |
| | 3 | SW. | 2 | C. K. | 9 | | 3 | NW. | 2 | C. S. | 1 | | 3 | SE. | 1 | K. | 10 |
| | 6 | S. SW. | 1 | C. K. | 10 | | 6 | NW. | 1 | C. S. | 1 | | 6 | SE. | 1 | N. | 10 |
| | 9 | SW. | 1 | C. K. | 4 | | 9 | NW. | 1 | C. S. | 1 | | 9 | SE. | 1 | N. | 10 |
| Feb. 22 | 0 | SE. | 1 | N. | 10 | Feb. 23 | 0 | W. | 1 | Clear | 0 | Feb. 24 | 0 | NW. | 4 | Clear | 0 |
| | 3 | N. | 1 | N. | 10 | | 3 | NW. | 3 | C. K. | 4 | | 3 | NW. | 4 | Clear | 0 |
| | 6 | NW. | 3 | C. K. | 10 | | 6 | N. NW. | 3 | C. K. | 9 | | 6 | W. | 2 | Clear | 0 |
| | 9 | NW. | 2 | C. S. | 4 | | 9 | N. NW. | 4 | C. K. | 4 | | 9 | W. NW. | 2 | C. | 1 |
| Noon | | NW. | 3 | C. | 2 | Noon | | NW. | 3 | C. | 3 | Noon | | NW. | 3 | C. | 1 |
| | 3 | NW. | 1 | C. | 1 | | 3 | NW. | 4 | C. K. | 4 | | 3 | NW. | 3 | C. K. | 8 |
| | 6 | NW. | 1 | C. S. | 1 | | 6 | NW. | 3 | C. K. S. | 1 | | 6 | NW. | 2 | C. K. S. | 10 |
| | 9 | SE. | 1 | S. | 1 | | 9 | NW. | 4 | Clear | 0 | | 9 | NW. | 1 | K. | 10 |
| Feb. 25 | 0 | N. | 1 | C. K. | 2 | Feb. 26 | 0 | E. | 1 | Haze | | Feb. 27 | 0 | NE. | 2 | K. | 10 |
| | 3 | N. | 1 | Clear | 0 | | 3 | E. | 1 | C. K. | 9 | | 3 | NE. | 1 | K. | 10 |
| | 6 | NW. | 1 | Clear | 0 | | 6 | NE. | 1 | C. K. | 9 | | 6 | N. NE. | 1 | K. | 10 |
| | 9 | NW. | 1 | Haze | 0 | | 9 | N. | 1 | C. K. | 10 | | 9 | NE. | 1 | K. | 10 |
| Noon | | E. | 1 | Haze | | Noon | | NE. | 1 | C. K. | 6 | Noon | | E. | 2 | K. | 10 |
| | 3 | SE. | 1 | C. | 2 | | 3 | E. | 1 | C. | 2 | | 3 | NE. | 2 | K. | 10 |
| | 6 | E. | 1 | C. S. | 6 | | 6 | E. | 1 | C. K. | 10 | | 6 | NE. | 1 | K. | 10 |
| | 9 | E. | 1 | Haze | | | 9 | E. | 1 | C. K. | 9 | | 9 | NE. | 1 | K. | 10 |

REMARKS.

February 14. Rain at 5^h 15^m p. m., with lightning and thunder; amount, 0.556 inch.
 15. Rain in the morning; amount, 0.780 inch.
 21. Rain during the evening; amount, 0.524 inch.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|---------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. Feb. 28 | 0 | NE. | 1 | K. | 10 | 1876. Feb. 29 | 0 | NE. | 1 | K. | 10 | 1876. | | | | | |
| | 3 | NE. | 1 | K. | 10 | | 3 | NW. | 2 | N. | 10 | | | | | | |
| | 6 | E. | 1 | Mist | 10 | | 6 | NW. | 2 | C. K. S. | 7 | | | | | | |
| | 9 | E. | 1 | Mist | 10 | | 9 | NW. | 2 | C. K. | 10 | | | | | | |
| | Noon | N. | 1 | K. | 10 | | Noon | NW. | 3 | C. K. | 7 | | | | | | |
| | 3 | NE. | 1 | Haze | | | 3 | NW. | 3 | C. K. | 9 | | | | | | |
| | 6 | NE. | 1 | K. | 10 | | 6 | N. | 1 | K. | 10 | | | | | | |
| | 9 | NE. | 1 | C. K. | 4 | | 9 | N. | 1 | K. | 10 | | | | | | |
| Mar. 1 | 0 | NW. | 1 | Clear | 0 | Mar. 2 | 0 | NE. | 1 | Snow | 10 | Mar. 3 | 0 | N. NW. | 3 | C. K. S. | 9 |
| | 3 | N. | 1 | K. | 10 | | 3 | N. | 2 | K. | 10 | | 3 | NW. | 2 | Clear | 0 |
| | 6 | NW. | 1 | K. | 10 | | 6 | N. | 2 | K. | 10 | | 6 | NW. | 3 | S. | 1 |
| | 9 | NW. | 1 | C. K. | 10 | | 9 | N. | 3 | C. K. | 8 | | 9 | NW. | 2 | Clear | 0 |
| | Noon | SE. | 1 | C. K. | 10 | | Noon | N. NW. | 3 | C. K. | 7 | | Noon | NW. | 2 | C. | 1 |
| | 3 | S. | 2 | K. | 10 | | 3 | N. NW. | 3 | C. K. | 8 | | 3 | NW. | 2 | C. K. | 7 |
| | 6 | S. SE. | 1 | Snow | 10 | | 6 | NW. | 2 | C. K. | 3 | | 6 | NW. | 1 | C. S. | 3 |
| | 9 | S. | 1 | Snow | 10 | | 9 | NW. | 1 | C. K. | 10 | | 9 | NW. | 2 | Clear | 0 |
| Mar. 4 | 0 | NW. | 2 | Clear | 0 | Mar. 5 | 0 | S. by E. | 1 | C. K. | 2 | Mar. 6 | 0 | SE. | 1 | Haze | |
| | 3 | NW. | 1 | Clear | 0 | | 3 | SE. | 1 | Clear | 0 | | 3 | S. | 1 | Haze | |
| | 6 | NW. | 1 | Clear | 0 | | 6 | S. | 1 | Haze | | | 6 | S. | 1 | C. K. S. | 6 |
| | 9 | NE. | 1 | Clear | 0 | | 9 | S. SE. | 1 | C. K. | 6 | | 9 | S. | 1 | C. K. | 7 |
| | Noon | E. | 1 | C. K. | 6 | | Noon | E. SE. | 1 | C. | 6 | | Noon | S. | 1 | C. K. | 6 |
| | 3 | SE. | 1 | C. K. | 9 | | 3 | SE. | 1 | C. K. | 4 | | 3 | S. | 3 | C. | 1 |
| | 6 | S. SE. | 1 | C. K. | 9 | | 6 | SE. | 1 | C. K. | 9 | | 6 | S. | 2 | C. K. | 4 |
| | 9 | S. SE. | 1 | C. K. | 10 | | 9 | SE. | 1 | C. K. | 3 | | 9 | S. | 1 | C. K. | 3 |
| Mar. 7 | 0 | S. | 1 | C. K. S. | 4 | Mar. 8 | 0 | SW. | 3 | N. | 10 | Mar. 9 | 0 | NW. | 1 | Clear | 0 |
| | 3 | S. | 1 | C. K. S. | 5 | | 3 | NW. | 3 | N. | 10 | | 3 | NW. | 1 | C. K. S. | 8 |
| | 6 | S. | 1 | C. K. S. | 6 | | 6 | NW. | 3 | C. K. | 10 | | 6 | . | 1 | C. S. | 2 |
| | 9 | S. SW. | 2 | C. K. | 8 | | 9 | NW. | 3 | Snow | 10 | | 9 | N. | 1 | Clear | 0 |
| | Noon | S. | 3 | C. K. | 9 | | Noon | NW. | 4 | C. K. S. | 7 | | Noon | NW. | 1 | C. S. | 1 |
| | 3 | S. SW. | 2 | C. K. | 7 | | 3 | NW. | 3 | C. K. | 1 | | 3 | NW. | 1 | C. K. | 6 |
| | 6 | S. | 3 | C. K. | 10 | | 6 | NW. | 3 | C. S. | 1 | | 6 | N. NW. | 1 | C. K. | 7 |
| | 9 | S. | 2 | C. K. | 10 | | 9 | NW. | 1 | Clear | 0 | | 9 | N. NE. | 1 | C. K. | 2 |
| Mar. 10 | 0 | N. | 1 | C. | 2 | Mar. 11 | 0 | E. | 1 | C. K. | 10 | Mar. 12 | 0 | E. | 2 | C. K. | 10 |
| | 3 | N. | 1 | C. S. | 2 | | 3 | NE. | 1 | C. K. | 10 | | 3 | E. | 1 | C. K. | 10 |
| | 6 | NW. | 1 | S. | 1 | | 6 | NE. | 2 | C. K. | 8 | | 6 | E. | 1 | Mist | 10 |
| | 9 | NE. | 1 | C. | 4 | | 9 | E. | 1 | C. K. | 6 | | 9 | E. | 1 | Mist | 10 |
| | Noon | SE. | 1 | C. | 10 | | Noon | E. by S. | 2 | C. K. | 8 | | Noon | E. SE. | 1 | K. | 10 |
| | 3 | S. SE. | 1 | C. K. | 10 | | 3 | E SE. | 1 | C. K. | 4 | | 3 | E. | 2 | K. | 10 |
| | 6 | E. | 1 | K. | 10 | | 6 | E. | 3 | C. K. | 10 | | 6 | SE. | 1 | Mist | 10 |
| | 9 | E. | 1 | C. K. | 10 | | 9 | E. | 3 | K. | 10 | | 9 | E. | 1 | K. | 10 |

REMARKS.

February 29. Light rain in the morning; amount, 0.076 inch.

March 1. Snow at 3^h 30^m p. m.; depth, 1.5 inch; when melted, 0.226 inch.8. Rain at 11^h 40^m a. m.; amount, 0.510 inch.10. Light rain at 10^h 45^m p. m.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. Mar. 13 | 0 | E. | 1 | Mist | 10 | 1876. Mar. 14 | 0 | NW. | 3 | Clear | 0 | 1876. Mar. 15 | 0 | NW. | 1 | C. | 2 |
| | 3 | E. | 1 | Mist | 10 | | 3 | NW. | 2 | Clear | 0 | | 3 | NW. | 1 | C. K. | 9 |
| | 6 | NW. | 3 | C. K. S. | 10 | | 6 | NW. | 2 | Clear | 0 | | 6 | NE. | 1 | C. K. | 9 |
| | 9 | NW. | 3 | C. K. | 1 | | 9 | NW. | 3 | C. K. | 1 | | 9 | NE. | 2 | C. K. | 10 |
| | Noon | NW. | 4 | C. K. | 1 | | Noon | NW. | 2 | S. C. K. | 4 | | Noon | NE. | 2 | C. K. | 10 |
| | 3 | NW. | 4 | K. | 1 | | 3 | NW. | 2 | S. C. K. | 5 | | 3 | S. | 1 | C. K. | 10 |
| | 6 | NW. | 2 | C. S. | 1 | | 6 | NW. | 1 | C. K. S. | 10 | | 6 | E. SE. | 1 | C. K. S. | 9 |
| | 9 | NW. | 2 | C. K. S. | 2 | | 9 | NW. | 1 | Clear | 0 | | 9 | E. SE. | 2 | K. | 10 |
| Mar. 16 | 0 | SE. | 1 | N. | 10 | Mar. 17 | 0 | NW. | 1 | K. | 10 | Mar. 18 | 0 | NW. | 3 | C. K. | 10 |
| | 3 | E. | 1 | K. | 10 | | 3 | NW. | 1 | K. | 10 | | 3 | NW. | 3 | C. K. | 10 |
| | 6 | E. | 1 | N. | 10 | | 6 | NW. | 1 | C. K. | 10 | | 6 | NW. | 3 | C. K. | 9 |
| | 9 | E. | 2 | N. | 10 | | 9 | SE. | 1 | C. K. | 4 | | 9 | NW. | 3 | C. K. | 4 |
| | Noon | E. | 2 | N. | 10 | | Noon | W. | 3 | K. | 10 | | Noon | NW. | 3 | C. K. | 9 |
| | 3 | E. NE. | 2 | N. | 10 | | 3 | W. | 3 | K. | 10 | | 3 | NW. | 3 | C. K. | 8 |
| | 6 | NW. | 1 | K. | 10 | | 6 | NW. | 3 | C. K. S. | 10 | | 6 | NW. | 3 | C. K. | 10 |
| | 9 | NW. | 1 | K. | 10 | | 9 | NW. | 2 | K. | 10 | | 9 | NW. | 4 | C. K. | 9 |
| Mar. 19 | 0 | NW. | 4 | S. | 1 | Mar. 20 | 0 | NW. | 1 | Haze | | Mar. 21 | 0 | NW. | 1 | K. | 10 |
| | 3 | NW. | 3 | Clear | 0 | | 3 | NE. | 1 | K. | 10 | | 3 | NW. | 2 | C. K. S. | 4 |
| | 6 | NW. | 3 | Clear | 0 | | 6 | E. | 1 | K. | 10 | | 6 | NW. | 3 | C. K. | 7 |
| | 9 | NW. | 3 | Clear | 0 | | 9 | E. | 2 | Snow | 10 | | 9 | NW. | 3 | C. K. | 2 |
| | Noon | NW. | 2 | C. | 3 | | Noon | E. NE. | 2 | K. | 10 | | Noon | NW. | 3 | C. K. | 3 |
| | 3 | NW. | 1 | C. | 1 | | 3 | E. | 3 | Snow | 10 | | 3 | W. NW. | 3 | C. K. | 6 |
| | 6 | NW. | 1 | C. S. | 2 | | 6 | E. | 3 | N. | 10 | | 6 | NW. | 5 | C. K. S. | 4 |
| | 9 | NW. | 1 | Clear | 0 | | 9 | S. | 3 | N. | 10 | | 9 | NW. | 4 | C. K. | 4 |
| Mar. 22 | 0 | NW. | 2 | C. K. | 2 | Mar. 23 | 0 | NW. | 1 | Clear | 0 | Mar. 24 | 0 | NW. | 1 | Clear | 0 |
| | 3 | NW. | 2 | Clear | 0 | | 3 | NW. | 1 | Haze | | | 3 | NW. | 1 | C. S. | 4 |
| | 6 | NW. | 1 | C. K. S. | 6 | | 6 | N. NE. | 1 | C. K. | 10 | | 6 | N. | 1 | Snow | 10 |
| | 9 | W. NW. | 3 | C. K. | 9 | | 9 | NW. | 1 | Snow | 10 | | 9 | E. | 1 | K. | 10 |
| | Noon | W. | 3 | C. K. | 3 | | Noon | NW. | 1 | C. K. | 10 | | Noon | SE. | 1 | C. K. | 10 |
| | 3 | NW. | 3 | C. K. | 2 | | 3 | NW. | 1 | C. K. | 7 | | 3 | E. | 1 | K. | 10 |
| | 6 | NW. | 2 | Clear | 0 | | 6 | NW. | 1 | C. S. | 3 | | 6 | E. SE. | 1 | N. | 10 |
| | 9 | W. | 1 | Clear | 0 | | 9 | NW. | 1 | C. | 2 | | 9 | SE. | 1 | N. | 10 |
| Mar. 25 | 0 | E. | 2 | N. | 10 | Mar. 26 | 0 | NW. | 1 | C. K. | 8 | Mar. 27 | 0 | W. | 2 | K. | 10 |
| | 3 | NE. | 2 | N. | 10 | | 3 | W. | 1 | C. S. | 4 | | 3 | NW. | 1 | C. K. | 6 |
| | 6 | NE. | 1 | N. | 10 | | 6 | NW. | 1 | C. K. | 8 | | 6 | NW. | 1 | C. K. S. | 6 |
| | 9 | S. SE. | 2 | N. | 10 | | 9 | S. | 1 | C. K. | 10 | | 9 | NW. | 2 | C. K. | 1 |
| | Noon | NW. | 1 | K. | 10 | | Noon | W. | 1 | C. K. | 10 | | Noon | NW. | 2 | C. K. | 1 |
| | 3 | NW. | 1 | K. | 10 | | 3 | W. NW. | 2 | C. K. | 10 | | 3 | NW. | 1 | C. K. | 7 |
| | 6 | NW. | 1 | N. | 10 | | 6 | NW. | 3 | C. K. | 9 | | 6 | NW. | 1 | C. K. | 3 |
| | 9 | NW. | 2 | C. K. | 10 | | 9 | NW. | 3 | C. K. | 10 | | 9 | NW. | 1 | C. K. | 9 |

REMARKS.

- March 13. Light rain in the morning; amount, 0.140 inch.
 15. Light snow at 11^h 30^m p. m.
 16. Rain during the morning; amount, 0.770 inch.
 20. Snowing at 8^h 40^m a. m., followed by rain; amount, 0.620 inch.
 23. Light snow at 8^h 45^m a. m.
 25. Heavy rain in the morning; amount, 1.500 inch.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. Mar. 28 | 0 | NE. | 1 | C. K. | 2 | 1876. Mar. 29 | 0 | S. | 1 | C. K. S. | 3 | 1876. Mar. 30 | 0 | SW. | 1 | C. K. | 4 |
| | 3 | NE. | 1 | K. | 10 | | 3 | S. | 1 | K. | 10 | | 3 | SE. | 1 | C. K. | 3 |
| | 6 | NE. | 1 | K. | 10 | | 6 | W. | 1 | K. S. | 9 | | 6 | SW. | 1 | C. K. | 10 |
| | 9 | E. | 2 | C. K. | 10 | | 9 | NW. | 3 | C. K. | 3 | | 9 | W. | 1 | C. K. | 10 |
| | Noon | E. | 2 | N. | 10 | | Noon | W. | 3 | C. K. | 9 | | Noon | W. NW. | 2 | C. K. | 10 |
| | 3 | NE. | 3 | N. | 10 | | 3 | NW. | 2 | C. K. | 5 | | 3 | W. NW. | 2 | C. K. | 10 |
| | 6 | SE. | 3 | K. | 10 | | 6 | NW. | 1 | C. K. | 1 | | 6 | NW. | 2 | C. K. | 8 |
| | 9 | SE. | 1 | K. | 9 | | 9 | NW. | 1 | C. K. | 2 | | 9 | NW. | 1 | C. K. | 9 |
| Mar. 31 | 0 | NW. | 2 | C. K. S. | 6 | | | | | | | | | | | | |
| | 3 | NW. | 1 | C. S. | 5 | | | | | | | | | | | | |
| | 6 | NW. | 1 | S. | 2 | | | | | | | | | | | | |
| | 9 | NW. | 1 | C. K. | 2 | | | | | | | | | | | | |
| | Noon | NW. | 2 | C. K. | 4 | | | | | | | | | | | | |
| | 3 | NW. | 2 | C. K. | 2 | | | | | | | | | | | | |
| | 6 | N. | 1 | Clear | 0 | | | | | | | | | | | | |
| | 9 | N. | 1 | Clear | 0 | | | | | | | | | | | | |
| Apr. 1 | 0 | SE. | 1 | Clear | 0 | Apr. 2 | 0 | N. | 1 | C. | 4 | Apr. 3 | 0 | SE. | 2 | K. | 10 |
| | 3 | NW. | 1 | Clear | 0 | | 3 | N. | 1 | C. K. | 2 | | 3 | S. | 1 | K. | 10 |
| | 6 | NW. | 1 | C. S. | 6 | | 6 | N. | 1 | C. S. | 1 | | 6 | S. | 1 | N. | 10 |
| | 9 | N. NW. | 2 | C. K. | 9 | | 9 | NE. | 1 | C. K. | 6 | | 9 | SE. | 1 | N. | 10 |
| | Noon | N. | 1 | C. K. | 7 | | Noon | S. | 1 | C. K. | 8 | | Noon | E. SE. | 1 | N. | 10 |
| | 3 | NW. | 2 | C. K. | 6 | | 3 | E. | 1 | C. K. | 8 | | 3 | E. | 1 | N. | 10 |
| | 6 | N. | 1 | C. K. | 3 | | 6 | S. SE. | 1 | C. | 7 | | 6 | N. | 1 | N. | 10 |
| | 9 | N. | 1 | Clear | 0 | | 9 | S. E. | 1 | C. K. | 6 | | 9 | N. | 1 | N. | 10 |
| Apr. 4 | 0 | NW. | 1 | K. | 10 | Apr. 5 | 0 | NW. | 3 | Clear | 0 | Apr. 6 | 0 | NW. | 3 | C. K. S. | 4 |
| | 3 | NW. | 1 | C. K. | 8 | | 3 | NW. | 1 | Clear | 0 | | 3 | NW. | 1 | C. S. | 6 |
| | 6 | NW. | 2 | C. K. | 7 | | 6 | NW. | 1 | Clear | 0 | | 6 | W. NW. | 1 | C. S. | 2 |
| | 9 | NW. | 2 | C. K. | 1 | | 9 | NW. | 1 | C. K. | 2 | | 9 | W. NW. | 2 | Clear | 0 |
| | Noon | NW. | 3 | C. K. | 9 | | Noon | S. | 1 | C. K. | 10 | | Noon | NW. | 3 | Clear | 0 |
| | 3 | NW. | 3 | C. K. | 10 | | 3 | SW. | 1 | C. K. | 8 | | 3 | NW. | 3 | Clear | 0 |
| | 6 | NW. | 3 | C. K. S. | 10 | | 6 | SE. | 1 | C. K. S. | 5 | | 6 | NW. | 1 | Clear | 0 |
| | 9 | NW. | 2 | Clear | 0 | | 9 | S. SW. | 1 | Haze | | | 9 | NW. | 1 | Clear | 0 |
| Apr. 7 | 0 | NW. | 1 | Clear | 0 | Apr. 8 | 0 | NW. | 3 | Clear | 0 | Apr. 9 | 0 | W. | 1 | Clear | 0 |
| | 3 | NW. | 1 | Clear | 0 | | 3 | NW. | 2 | Clear | 0 | | 3 | NW. | 1 | Clear | 0 |
| | 6 | S. SE. | 1 | C. K. S. | 6 | | 6 | W. NW. | 1 | Clear | 0 | | 6 | NW. | 1 | Clear | 0 |
| | 9 | S. SE. | 1 | C. | 9 | | 9 | NW. | 2 | C. | 1 | | 9 | N. NE. | 1 | Clear | 0 |
| | Noon | SW. | 3 | C. | 7 | | Noon | NW. | 2 | C. K. | 2 | | Noon | NW. | 2 | Clear | 0 |
| | 3 | SW. | 3 | C. K. | 10 | | 3 | NW. | 2 | C. K. | 2 | | 3 | NW. | 2 | Clear | 0 |
| | 6 | NW. | 3 | C. K. S. | 6 | | 6 | NW. | 1 | C. | 1 | | 6 | N. | 1 | Clear | 0 |
| | 9 | NW. | 2 | C. K. S. | 3 | | 9 | NW. | 1 | Haze | | | 9 | NE. | 1 | Clear | 0 |

REMARKS.

March 28. Heavy rain, accompanied with lightning, thunder, and high wind; amount of rain, 1.014 inch.

April 3. Rain during the day; amount, 1.380 inch.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|------------------|---|--|--------------------------------------|---|---------------------------------------|------------------|---|---|--------------------------------------|--|--|------------------|---|--|--------------------------------------|---|--|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. Apr. 10 | 0 3 6 9 Noon 3 6 9 | NW. NE. NW. W. W. N. N. N. | 1 1 1 1 1 1 1 1 | Clear Clear Clear Clear C. C. K. C. K. C. S. | 0 0 0 0 2 9 8 3 | 1876. Apr. 11 | 0 3 6 9 Noon 3 6 9 | NW. NW. N. NW. E. SE. SE. E. SE. SE. | 1 1 1 1 1 1 1 1 | C. K. C. C. K. Haze Haze Haze K. K. | 1 1 2 2 10 10 | 1876. Apr. 12 | 0 3 6 9 Noon 3 6 9 | SE. S. SE. SE. S. SE. SE. S. S. | 1 1 1 1 1 1 1 1 | K. K. C. K. C. K. C. K. C. K. C. K. C. K. | 10 10 7 9 7 4 7 4 |
| Apr. 13 | 0 3 6 9 Noon 3 6 9 | E. NE. NE. E. E. SE. S. SW. S. | 1 1 1 1 1 1 2 1 | C. K. C. K. C. K. Fog Haze C. K. C. K. C. K. | 4 7 10 10 10 6 8 | Apr. 14 | 0 3 6 9 Noon 3 6 9 | S. SE. S. S. S. SW. SW. W. | 1 1 1 1 3 3 3 | C. K. C. K. C. K. N. C. K. C. K. C. K. N. | 4 5 10 10 10 10 10 10 | Apr. 15 | 0 3 6 9 Noon 3 6 9 | NW. NW. SW. W. W. W. SW. SW. | 3 2 1 2 3 3 1 1 | K. K. C. K. S. C. K. C. K. C. K. C. S. Clear | 10 10 2 6 8 8 1 0 |
| Apr. 16 | 0 3 6 9 Noon 3 6 9 | SW. SW. SW. W. NW. W. NW. NW. | 1 2 2 3 3 2 2 3 | C. S. K. C. K. S. C. K. C. K. C. K. C. K. C. K. | 3 10 9 7 3 9 9 8 | Apr. 17 | 0 3 6 9 Noon 3 6 9 | NW. N. NE. N. NW. NW. NW. NW. NW. | 1 1 1 2 3 2 1 1 | C. K. C. K. C. K. C. K. C. K. C. K. C. K. C. K. | 10 6 8 2 2 4 4 4 | Apr. 18 | 0 3 6 9 Noon 3 6 9 | NW. N. N. SW. N. W. NW. NW. NW. | 1 1 1 1 1 1 2 2 | C. C. K. C. K. C. K. C. K. C. K. C. K. C. K. | 3 6 10 7 9 6 8 3 |
| Apr. 19 | 0 3 6 9 Noon 3 6 9 | NW. NW. NW. NW. NW. NW. NE. NE. | 1 2 2 1 1 2 2 1 | C. C. S. Clear C. K. C. K. C. K. C. K. Clear | 3 4 0 1 4 9 2 0 | Apr. 20 | 0 3 6 9 Noon 3 6 9 | SW. W. NW. NW. SE. S. S. S. | 1 1 1 1 1 2 1 1 | Clear S. Clear C. C. K. C. K. C. K. C. K. | 0 1 0 1 10 10 6 3 | Apr. 21 | 0 3 6 9 Noon 3 6 9 | S. SW. NW. W. NW. NW. NW. N. | 2 1 3 2 2 3 2 2 | Haze C. K. K. C. K. C. K. C. K. C. K. C. K. | 10 10 10 10 7 2 2 2 |
| Apr. 22 | 0 3 6 9 Noon 3 6 9 | NW. NW. NW. S. SE. SE. SE. SE. | 1 1 1 1 1 1 1 1 | Clear Haze C. K. S. Haze Haze Haze C. K. S. Haze | 0 10 10 4 0 | Apr. 23 | 0 3 6 9 Noon 3 6 9 | SE. SE. SW. E. W. SW. NW. NW. NW. | 1 1 1 1 2 2 2 2 | C. K. Clear Haze C. K. C. K. N. K. | 2 0 7 8 10 10 10 | Apr. 24 | 0 3 6 9 Noon 3 6 9 | SE. SE. NE. NE. E. NE. SE. NE. | 1 1 1 1 1 1 1 1 | N. K. N. N. N. N. N. N. | 10 10 10 10 10 10 10 10 |

REMARKS.

- April 12. Light showers during the morning.
 14. Light rain in the morning; amount, 0.046 inch.
 17. Light rain at 7^h a. m.; amount, 0.050 inch.
 20. Lightning in the northwest at 10^h 55^m p. m.
 24. Rain during the day; amount, 0.626 inch.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. Apr. 25 | 0 | NE. | 1 | N. | 10 | 1876. Apr. 26 | 0 | NW. | 1 | Clear | 0 | 1876. Apr. 27 | 0 | NW. | 1 | Clear | 0 |
| | 3 | NE. | 1 | N. | 10 | | 3 | NW. | 1 | Clear | 0 | | 3 | NW. | 1 | Clear | 0 |
| | 6 | NE. | 2 | N. | 10 | | 6 | NW. | 1 | C. K. | 3 | | 6 | NW. | 1 | C. K. | 9 |
| | 9 | NE. | 1 | K. | 10 | | 9 | NW. | 1 | C. | 1 | | 9 | SE. | 1 | C. K. | 4 |
| | Noon | NE. | 1 | C. K. | 10 | | Noon | N. NE. | 2 | C. K. | 8 | | Noon | S. SE. | 1 | C. K. | 9 |
| | 3 | NE. | 1 | N. | 10 | | 3 | NW. | 3 | C. K. | 7 | | 3 | SE. | 1 | C. K. | 6 |
| | 6 | NE. | 1 | C. K. | 10 | | 6 | NW. | 1 | C. K. | 4 | | 6 | S. | 1 | C. K. | 9 |
| | 9 | NE. | 1 | Haze | 10 | | 9 | NW. | 1 | Clear | 0 | | 9 | SW. | 1 | C. K. | 10 |
| Apr. 28 | 0 | SW. | 1 | Haze | 8 | Apr. 29 | 0 | W. | 1 | C. K. | 2 | Apr. 30 | 0 | SW. | 2 | C. K. | 3 |
| | 3 | SW. | 1 | C. K. | 10 | | 3 | NW. | 1 | C. S. | 2 | | 3 | SW. | 1 | C. K. | 9 |
| | 6 | S. | 1 | C. K. | 10 | | 6 | NW. | 2 | Clear | 0 | | 6 | N. | 1 | C. K. | 10 |
| | 9 | S. | 1 | C. K. | 7 | | 9 | NW. | 2 | Clear | 0 | | 9 | NW. | 1 | C. K. | 10 |
| | Noon | S. | 3 | C. K. | 10 | | Noon | N. | 2 | Clear | 0 | | Noon | NW. | 1 | C. K. | 7 |
| | 3 | NW. | 3 | K. | 10 | | 3 | NE. | 1 | C. K. | 1 | | 3 | NW. | 3 | C. K. | 6 |
| | 6 | SW. | 1 | K. | 10 | | 6 | S. | 1 | C. K. | 3 | | 6 | NW. | 5 | C. | 2 |
| | 9 | SW. | 1 | K. | 10 | | 9 | SW. | 1 | Clear | 0 | | 9 | NW. | 4 | Clear | 0 |
| May 1 | 0 | N. NW. | 3 | Clear | 0 | May 2 | 0 | NW. | 1 | C. K. | 6 | May 3 | 0 | SW. | 1 | K. | 10 |
| | 3 | NW. | 2 | Clear | 0 | | 3 | SW. | 1 | Haze | 2 | | 3 | SW. | 1 | K. | 10 |
| | 6 | NW. | 2 | Clear | 0 | | 6 | NW. | 1 | C. K. | 2 | | 6 | NW. | 1 | K. | 10 |
| | 9 | NW. | 2 | C. K. | 2 | | 9 | E. NE. | 1 | C. K. | 9 | | 9 | NW. | 1 | C. K. | 10 |
| | Noon | NW. | 2 | C. K. | 1 | | Noon | NE. | 1 | C. K. | 10 | | Noon | NE. | 2 | C. K. | 9 |
| | 3 | W. | 2 | C. K. | 2 | | 3 | E. | 1 | K. | 10 | | 3 | N. NE. | 2 | C. K. | 9 |
| | 6 | NW. | 3 | Clear | 0 | | 6 | E. NE. | 1 | K. | 10 | | 6 | SE. | 2 | C. | 2 |
| | 9 | NW. | 1 | Clear | 0 | | 9 | NE. | 1 | K. | 10 | | 9 | SE. | 1 | S. | 1 |
| May 4 | 0 | SE. | 1 | Clear | 0 | May 5 | 0 | S. | 2 | Haze | 1 | May 6 | 0 | S. SE. | 2 | C. K. | 10 |
| | 3 | SE. | 1 | Clear | 0 | | 3 | S. | 1 | C. K. S. | 1 | | 3 | S. | 1 | C. K. | 10 |
| | 6 | S. | 1 | C. K. | 9 | | 6 | S. | 2 | C. K. | 5 | | 6 | S. | 1 | C. K. S. | 2 |
| | 9 | S. | 2 | C. K. | 8 | | 9 | S. | 3 | C. K. | 4 | | 9 | NW. | 1 | C. K. | 2 |
| | Noon | S. | 3 | C. K. | 4 | | Noon | S. | 3 | C. K. | 4 | | Noon | NW. | 1 | C. K. | 7 |
| | 3 | S. | 3 | C. K. | 3 | | 3 | S. | 3 | C. K. | 9 | | 3 | E. | 1 | C. K. | 6 |
| | 6 | S. | 3 | C. K. | 7 | | 6 | SE. | 1 | C. K. | 10 | | 6 | S. | 1 | C. K. | 2 |
| | 9 | S. | 2 | C. K. | 6 | | 9 | S. | 2 | N. | 10 | | 9 | S. | 1 | Clear | 0 |
| May 7 | 0 | S. | 1 | Haze | | May 8 | 0 | S. SW. | 1 | C. K. | 10 | May 9 | 0 | SW. | 1 | N. | 10 |
| | 3 | S. | 1 | Haze | | | 3 | SW. | 1 | C. K. | 10 | | 3 | W. | 1 | N. | 10 |
| | 6 | S. | 2 | C. K. | 4 | | 6 | SW. | 1 | C. K. | 10 | | 6 | N. | 2 | N. | 10 |
| | 9 | S. | 2 | C. K. | 8 | | 9 | S. SW. | 2 | C. K. | 10 | | 9 | N. | 1 | N. | 10 |
| | Noon | S. | 3 | C. K. | 7 | | Noon | SW. | 3 | C. K. | 10 | | Noon | N. NE. | 1 | C. K. | 10 |
| | 3 | S. | 2 | C. K. | 10 | | 3 | S. SW. | 2 | C. K. | 9 | | 3 | NE. | 1 | N. | 10 |
| | 6 | SW. | 3 | C. K. | 9 | | 6 | SW. | 2 | C. K. | 10 | | 6 | N. NW. | 1 | K. | 10 |
| | 9 | SW. | 1 | C. K. | 10 | | 9 | S. | 1 | C. K. | 10 | | 9 | NW. | 1 | K. | 10 |

REMARKS.

April 23. Rain. with lightning and thunder, at 3^h p. m.; amount of rain, 0.172 inch.
 May 1. Lunar halo at 11^h p. m.
 5. Light shower at 9^h p. m.; amount, 0.006 inch.
 9. Rain during the day; amount, 0.800 inch.

METEOROLOGICAL OBSERVATIONS.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|-----------------|-------|------------|--------|----------|-----------------|-----------------|-------|------------|--------|----------|-----------------|-----------------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. May 10 | 0 | NW. | 1 | K. | 10 | 1876. May 11 | 0 | NW. | 3 | C. K. | 4 | 1876. May 12 | 0 | W. | 1 | C. S. | 4 |
| | 3 | NW. | 1 | K. | 10 | | 3 | NW. | 1 | Clear | 0 | | 3 | SW. | 1 | C. S. | 6 |
| | 6 | NW. | 1 | C. K. | 4 | | 6 | NW. | 1 | Clear | 0 | | 6 | S. SW | 2 | C. K. | 8 |
| | 9 | S. | 1 | C. K. | 1 | | 9 | NW. | 2 | Clear | 0 | | 9 | S. | 1 | C. K. | 10 |
| | Noon | S. SW. | 2 | C. K. | 6 | | Noon | W. | 2 | C. K. | 2 | | Noon | S. | 2 | C. K. | 4 |
| | 3 | W. | 3 | N. | 10 | | 3 | W. NW. | 2 | C. K. | 1 | | 3 | NW. | 3 | N. | 10 |
| | 6 | NW. | 3 | Clear | 0 | | 6 | NW. | 1 | C. K. | 2 | | 6 | W. | 1 | C. K. | 10 |
| | 9 | NW. | 2 | Clear | 0 | | 9 | E. | 1 | C. K. | 2 | | 9 | NW. | 1 | C. K. | 10 |
| May 13 | 0 | NW. | 1 | C. S. | 4 | May 14 | 0 | NW. | 1 | Clear | 0 | May 15 | 0 | S. | 1 | Clear | 0 |
| | 3 | NW. | 1 | C. K. | 7 | | 3 | NW. | 1 | Clear | 0 | | 3 | SW. | 1 | Clear | 0 |
| | 6 | NW. | 2 | C. K. | 7 | | 6 | NW. | 1 | C. K. | 3 | | 6 | S. | 2 | C. K. | 3 |
| | 9 | N. | 2 | C. K. | 3 | | 9 | NW. | 1 | Clear | 0 | | 9 | S. | 1 | Haze | 10 |
| | Noon | N. NW. | 2 | C. K. | 3 | | Noon | SW. | 1 | C. | 2 | | Noon | SE. | 2 | C. K. | 5 |
| | 3 | NW. | 3 | C. K. | 6 | | 3 | SE. | 2 | C. K. | 4 | | 3 | SE. | 2 | C. K. | 3 |
| | 6 | NW. | 3 | Clear | 0 | | 6 | S. SW. | 1 | C. K. | 8 | | 6 | S. | 1 | C. K. | 10 |
| | 9 | NW. | 1 | Clear | 0 | | 9 | SW. | 1 | Clear | 0 | | 9 | SW. | 2 | C. K. | 9 |
| May 16 | 0 | NE. | 2 | N. | 10 | May 17 | 0 | E. | 1 | K. | 10 | May 18 | 0 | NE. | 1 | K. | 10 |
| | 3 | NE. | 2 | K. | 10 | | 3 | E. | 1 | K. | 10 | | 3 | NE. | 1 | K. | 10 |
| | 6 | NE. | 2 | N. | 10 | | 6 | E. | 1 | K. | 10 | | 6 | E. | 1 | K. | 10 |
| | 9 | NE. | 2 | K. | 10 | | 9 | E. | 1 | K. | 10 | | 9 | SE. | 1 | K. | 10 |
| | Noon | NE. | 2 | K. | 10 | | Noon | E. | 1 | K. | 10 | | Noon | E. | 1 | K. | 10 |
| | 3 | NE. | 2 | K. | 10 | | 3 | E. | 1 | K. | 10 | | 3 | S. | 1 | C. K. | 6 |
| | 6 | S. SW. | 1 | K. | 10 | | 6 | NE. | 2 | K. | 10 | | 6 | SE. | 1 | C. K. | 4 |
| | 9 | SE. | 2 | K. | 10 | | 9 | NE. | 1 | K. | 10 | | 9 | S. | 1 | C. K. | 3 |
| May 19 | 0 | SW. | 1 | C. | 1 | May 20 | 0 | W. | 1 | K. | 10 | May 21 | 0 | SW. | 1 | K. | 10 |
| | 3 | S. | 1 | Clear | 0 | | 3 | S. | 1 | C. K. | 10 | | 3 | NW. | 1 | Haze | 10 |
| | 6 | NW. | 1 | Haze | 0 | | 6 | S. | 1 | C. K. | 8 | | 6 | NW. | 1 | C. K. | 3 |
| | 9 | N. | 1 | C. K. | 8 | | 9 | S. | 1 | C. K. | 2 | | 9 | S. | 1 | C. K. | 7 |
| | Noon | SW. | 1 | C. K. | 9 | | Noon | S. | 1 | C. K. | 4 | | Noon | S. | 2 | C. K. | 6 |
| | 3 | S. | 1 | C. K. | 7 | | 3 | SE. | 1 | C. K. | 4 | | 3 | S. | 2 | N. | 10 |
| | 6 | W. | 1 | C. K. | 10 | | 6 | S. SE. | 2 | C. K. | 4 | | 6 | W. | 1 | K. | 10 |
| | 9 | W. | 1 | C. K. | 8 | | 9 | S. | 1 | C. K. | 10 | | 9 | N. | 1 | N. | 10 |
| May 22 | 0 | N. | 1 | N. | 10 | May 23 | 0 | W. | 2 | K. | 10 | May 24 | 0 | N. | 1 | Haze | 0 |
| | 3 | S. | 1 | N. | 10 | | 3 | NW. | 3 | K. | 10 | | 3 | N. NW. | 1 | Clear | 0 |
| | 6 | S. SW. | 1 | C. K. | 8 | | 6 | N. NE. | 2 | C. K. | 2 | | 6 | NW. | 1 | Clear | 0 |
| | 9 | S. SE. | 2 | C. K. | 7 | | 9 | NW. | 3 | C. K. | 1 | | 9 | N. NE. | 2 | Clear | 0 |
| | Noon | S. | 1 | C. K. | 4 | | Noon | NW. | 2 | C. | 1 | | Noon | NW. | 1 | Clear | 0 |
| | 3 | SE. | 1 | C. K. | 5 | | 3 | NE. | 2 | C. | 1 | | 3 | NW. | 1 | Clear | 0 |
| | 6 | NW. | 5 | K. | 10 | | 6 | N. NE. | 2 | Clear | 0 | | 6 | S. | 1 | C. | 1 |
| | 9 | NW. | 2 | C. K. | 9 | | 9 | N. | 1 | Clear | 0 | | 9 | SW. | 1 | Clear | 0 |

REMARKS.

May 10. Rain at 3^h p. m.; amount, 0.142 inch.12. Rain at 3^h p. m.; amount, 0.490 inch.15. Lightning and thunder in the north and west at 7^h p. m.16. Heavy shower of rain at 11^h 45^m p. m.; amount, 0.410 inch

20. Light showers in the morning; amount, 0.058 inch.

21, 22. Heavy showers, accompanied by lightning and thunder; amount, 1.020 inch.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|-----------------|-------|------------|--------|----------|-----------------|-----------------|-------|------------|--------|----------|-----------------|-----------------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. May 25 | 0 | NW. | 1 | Clear | 0 | 1876. May 26 | 0 | SW. | 1 | C. K. | 6 | 1876. May 27 | 0 | SE. | 1 | Clear | 0 |
| | 3 | NW. | 1 | C. K. | 6 | | 3 | SW. | 1 | C. K. | 9 | | 3 | S. | 1 | Clear | 0 |
| | 6 | W. | 1 | C. K. | 10 | | 6 | NE. | 2 | C. K. | 4 | | 6 | NE. | 1 | Haze | |
| | 9 | S. | 1 | C. K. | 9 | | 9 | NE. | 2 | C. K. | 2 | | 9 | E. | 1 | C. K. | 9 |
| | Noon | E. | 1 | C. K. | 9 | | Noon | E. | 1 | C. K. | 3 | | Noon | E. | 1 | C. K. | 8 |
| | 3 | W. | 1 | C. K. | 9 | | 3 | E. | 2 | C. K. | 3 | | 3 | SE. | 1 | C. K. | 8 |
| | 6 | S. SW. | 1 | C. K. | 10 | | 6 | SE. | 1 | C. | 2 | | 6 | S. | 1 | Haze | |
| | 9 | S. SW. | 1 | C. K. | 6 | | 9 | S. | 1 | Haze | | | 9 | SW. | 2 | Clear | 0 |
| | | | | | | | | | | | | | | | | | |
| May 28 | 0 | W. | 1 | Clear | 0 | May 29 | 0 | NE. | 1 | K. | 10 | May 30 | 0 | W. | 1 | C. S. | 3 |
| | 3 | E. | 1 | C. K. | 6 | | 3 | N. | 1 | K. | 10 | | 3 | N. | 1 | C. | 2 |
| | 6 | NE. | 1 | C. K. | 7 | | 6 | W. | 1 | C. | 4 | | 6 | NE. | 2 | C. K. | 6 |
| | 9 | SE. | 1 | C. K. | 10 | | 9 | W. | 2 | Ha | | | 9 | NE. | 2 | C. K. | 5 |
| | Noon | SW. | 1 | C. K. | 10 | | Noon | NW. | 1 | C. K. | 2 | | Noon | NE. | 2 | C. K. | 10 |
| | 3 | S. | 1 | N. | 10 | | 3 | NW. | 1 | C. K. | 2 | | 3 | NE. | 2 | C. K. | 10 |
| | 6 | S. | 1 | N. | 10 | | 6 | SW. | 1 | Clear | 0 | | 6 | E. | 2 | C. K. | 10 |
| | 9 | S. | 1 | C. K. | 10 | | 9 | S. | 1 | C. | 1 | | 9 | E. | 2 | C. K. | 10 |
| | | | | | | | | | | | | | | | | | |
| May 31 | 0 | E. | 2 | K. | 10 | | | | | | | | | | | | |
| | 3 | NE. | 1 | K. | 10 | | | | | | | | | | | | |
| | 6 | NE. | 1 | C. K. | 10 | | | | | | | | | | | | |
| | 9 | E. | 1 | C. K. | 10 | | | | | | | | | | | | |
| | Noon | SE. | 1 | C. K. | 10 | | | | | | | | | | | | |
| | 3 | E. | 1 | C. K. | 10 | | | | | | | | | | | | |
| | 6 | SE. | 1 | C. K. | 4 | | | | | | | | | | | | |
| | 9 | E. | 1 | Clear | 0 | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
| June 1 | 0 | E. | 1 | Clear | 0 | June 2 | 0 | SW. | 1 | Clear | 0 | June 3 | 0 | W. | 1 | C. K. | 7 |
| | 3 | . | 1 | Clear | 0 | | 3 | NW. | 1 | Clear | 0 | | 3 | W. | 1 | C. K. | 9 |
| | 6 | . | 1 | Clear | 0 | | 6 | NE. | 1 | Clear | 0 | | 6 | W. | 1 | C. K. | 3 |
| | 9 | S. | 1 | C. K. | 1 | | 9 | SE. | 1 | Haze | | | 9 | W. NW. | 1 | Clear | 0 |
| | Noon | E. SE. | 1 | Clear | 0 | | Noon | E. | 1 | Haze | | | Noon | E. SE. | 1 | C. K. | 1 |
| | 3 | SE. | 1 | Clear | 0 | | 3 | S. SE. | 1 | C. K. | 3 | | 3 | S. | 2 | C. K. | 3 |
| | 6 | S. | 1 | Clear | 0 | | 6 | S. | 1 | C. K. | 2 | | 6 | NW. | 2 | K. | 10 |
| | 9 | S. | 1 | Clear | 0 | | 9 | NW. | 3 | C. K. | 10 | | 9 | W. | 2 | K. | 10 |
| | | | | | | | | | | | | | | | | | |
| June 4 | 0 | E. | 1 | C. K. | 9 | June 5 | 0 | NW. | 2 | C. K. | 9 | June 6 | 0 | W. | 1 | C. K. | 8 |
| | 3 | E. | 1 | C. K. | 10 | | 3 | NW. | 2 | C. K. | 10 | | 3 | W. NW. | 1 | C. K. | 9 |
| | 6 | SW. | 1 | C. K. | 9 | | 6 | N. | 2 | C. K. | 10 | | 6 | NW. | 1 | Clear | 0 |
| | 9 | E. | 1 | C. K. | 9 | | 9 | N. NW. | 2 | C. K. | 10 | | 9 | NW. | 3 | C. K. | 3 |
| | Noon | E. | 1 | C. K. | 10 | | Noon | NW. | 2 | C. K. | 8 | | Noon | NW. | 3 | C. K. | 7 |
| | 3 | SW. | 1 | N. | 10 | | 3 | N. W. | 2 | C. K. | 4 | | 3 | NW. | 2 | C. K. | 7 |
| | 6 | W. | 1 | K. | 10 | | 6 | NW. | 1 | C. K. | 2 | | 6 | NW. | 1 | Clear | 0 |
| | 9 | W. | 1 | N. | 10 | | 9 | NW. | 1 | Clear | 0 | | 9 | NW. | 1 | C. K. | 3 |

REMARKS.

May 28. Light shower at 3^h p. m.; amount, 0.036 inch.
 June 3. Light showers in the evening; amount, 0.218 inch.
 4. Rain at 0^h 30^m p. m.; amount, 0.438 inch.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|-----------------|-------|------------|--------|----------|-----------------|-----------------|-------|------------|--------|----------|-----------------|-----------------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. June 7 | 0 | NW. | 1 | Clear | 0 | 1876. June 8 | 0 | S. | 1 | C. K. | 3 | 1876. June 9 | 0 | S. | 2 | Clear | 0 |
| | 3 | NW. | 1 | Clear | 0 | | 3 | S. | 1 | Clear | 0 | | 3 | S. | 3 | Clear | 0 |
| | 6 | NW. | 1 | Clear | 0 | | 6 | S. | 1 | C. K. | 7 | | 6 | S. | 2 | Clear | 0 |
| | 9 | NW. | 1 | Clear | 0 | | 9 | S. | 1 | C. K. | 6 | | 9 | S. | 2 | Clear | 0 |
| | Noon | E. | 1 | C. K. | 2 | | Noon | S. | 2 | C. K. | 5 | | Noon | S. SE. | 3 | Clear | 0 |
| | 3 | E. | 1 | C. K. | 4 | | 3 | S. | 3 | C. | 2 | | 3 | S. | 3 | C. K. | 4 |
| | 6 | S. | 1 | C. K. | 7 | | 6 | S. | 2 | C. K. | 6 | | 6 | S. | 1 | C. K. | 3 |
| | 9 | S. | 1 | C. K. | 2 | | 9 | SW. | 1 | S. | 1 | | 9 | S. | 1 | S. | 1 |
| June 10 | 0 | S. | 2 | C. K. | 9 | June 11 | 0 | W. | 1 | Clear | 0 | June 12 | 0 | S. | 1 | Clear | 0 |
| | 3 | S. | 1 | C. S. | 1 | | 3 | W. | 1 | Clear | 0 | | 3 | S. | 1 | C. K. | 1 |
| | 6 | SW. | 1 | Clear | 0 | | 6 | S. | 1 | C. K. | 3 | | 6 | S. | 1 | C. | 1 |
| | 9 | SE. | 1 | C. | 1 | | 9 | SE. | 2 | C. K. | 4 | | 9 | S. | 2 | C. K. | 3 |
| | Noon | SE. | 1 | C. K. | 6 | | Noon | E. | 2 | C. K. | 8 | | Noon | SW. | 3 | C. K. | 7 |
| | 3 | E. | 1 | C. K. | 9 | | 3 | SW. | 2 | C. K. | 8 | | 3 | S. | 2 | C. K. | 7 |
| | 6 | S. | 1 | C. K. | 10 | | 6 | S. | 1 | C. K. | 7 | | 6 | E. | 1 | C. K. | 10 |
| | 9 | SW. | 1 | C. K. | 2 | | 9 | S. | 1 | Haze | 7 | | 9 | E. | 1 | C. K. | 8 |
| June 13 | 0 | E. | 1 | C. K. | 4 | June 14 | 0 | S. | 1 | C. K. | 2 | June 15 | 0 | SE. | 1 | Clear | 0 |
| | 3 | SE. | 1 | C. K. | 10 | | 3 | SE. | 2 | C. K. | 2 | | 3 | S. | 1 | C. K. | 1 |
| | 6 | SW. | 1 | C. K. | 8 | | 6 | S. | 1 | C. K. | 9 | | 6 | S. | 1 | C. K. | 4 |
| | 9 | SW. | 1 | C. K. | 9 | | 9 | S. | 1 | C. K. | 7 | | 9 | SE. | 1 | C. K. | 8 |
| | Noon | S. | 2 | C. K. | 9 | | Noon | S. | 2 | C. K. | 6 | | Noon | S. | 1 | C. K. | 8 |
| | 3 | S. | 2 | C. K. | 9 | | 3 | S. SE. | 1 | C. K. | 6 | | 3 | S. | 2 | C. K. | 7 |
| | 6 | S. | 2 | C. K. | 8 | | 6 | S. SE. | 2 | C. K. | 4 | | 6 | S. | 2 | C. K. | 8 |
| | 9 | S. | 2 | C. | 2 | | 9 | S. | 2 | Clear | 0 | | 9 | S. SE. | 2 | C. | 4 |
| June 16 | 0 | SE. | 1 | Clear | 0 | June 17 | 0 | SE. | 2 | K. | 10 | June 18 | 0 | SE. | 3 | K. | 10 |
| | 3 | S. | 1 | C. | 5 | | 3 | SE. | 2 | C. K. | 10 | | 3 | SE. | 4 | K. | 10 |
| | 6 | E. | 1 | C. K. | 10 | | 6 | S. | 2 | C. K. | 10 | | 6 | S. SE. | 4 | N. | 10 |
| | 9 | S. SE. | 2 | C. K. | 10 | | 9 | S. SE. | 3 | C. K. | 10 | | 9 | S. | 3 | N. | 10 |
| | Noon | S. | 2 | C. K. | 9 | | Noon | SE. | 3 | C. K. | 10 | | Noon | S. | 3 | C. K. | 10 |
| | 3 | S. | 2 | C. K. | 8 | | 3 | SE. | 3 | N. | 10 | | 3 | S. SE. | 3 | C. K. | 4 |
| | 6 | SE. | 3 | C. K. | 9 | | 6 | S. SW. | 2 | N. | 10 | | 6 | SE. | 1 | C. K. | 10 |
| | 9 | SE. | 3 | C. K. | 6 | | 9 | S. | 2 | N. | 10 | | 9 | SE. | 1 | C. K. | 1 |
| June 19 | 0 | SE. | 1 | C. K. | 2 | June 20 | 0 | S. | 1 | C. K. | 6 | June 21 | 0 | W. | 2 | K. | 10 |
| | 3 | S. | 1 | C. S. | 4 | | 3 | W. | 1 | | 2 | | 3 | NW. | 1 | C. K. S. | 6 |
| | 6 | W. | 1 | C. K. S. | 7 | | 6 | SW. | 1 | | 6 | | 6 | NW. | 1 | | 2 |
| | 9 | S. | 1 | C. K. | 9 | | 9 | SW. | 1 | C. K. | 9 | | 9 | W. NW. | 2 | C. K. | 4 |
| | Noon | SW. | 2 | C. K. | 5 | | Noon | SE. | 1 | C. K. | 6 | | Noon | W. | 1 | C. K. | 6 |
| | 3 | SW. | 2 | C. K. | 7 | | 3 | S. SE. | 1 | C. K. | 5 | | 3 | NW. | 2 | C. K. | 2 |
| | 6 | S. | 2 | C. K. | 9 | | 6 | S. | 2 | C. K. | 3 | | 6 | NW. | 2 | C. K. | 3 |
| | 9 | S. SE. | 2 | C. K. | 10 | | 9 | S. | 1 | C. K. | 3 | | 9 | NW. | 2 | C. K. | 3 |

June 10. Heavy shower in the afternoon; amount, 1.160 inch.

12. Light shower in the afternoon; amount, 0.020 inch.

17. Rain at 3^h p. m.; amount, 0.432 inch.

18. Shower during the day; amount of rain, 0.450 inch.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. June 22 | 0 | NW. | 1 | Clear | 0 | 1876. June 23 | 0 | W. | 1 | Haze | | 1876. June 24 | 0 | SE. | 1 | C. K. | 8 |
| | 3 | NW. | 1 | C. | 1 | | 3 | N. | 1 | C. S. | 2 | | 3 | NW. | 1 | C. K. S. | 6 |
| | 6 | N. | 1 | C. K. | 4 | | 6 | N. | 2 | C. K. | 4 | | 6 | NW. | 2 | C. S. | 4 |
| | 9 | SW. | 1 | C. K. | 2 | | 9 | N. | 1 | C. K. | 1 | | 9 | NW. | 2 | C. K. | 8 |
| | Noon | NW. | 1 | C. K. | 3 | | Noon | W. | 1 | C. K. | 2 | | Noon | W. | 2 | C. K. | 6 |
| | 3 | W. NW. | 1 | C. K. | 7 | | 3 | N. NW. | 1 | C. K. | 10 | | 3 | N. NW. | 2 | C. K. | 2 |
| | 6 | W. | 1 | C. K. | 9 | | 6 | N. | 1 | C. K. | 9 | | 6 | N. NW. | 2 | C. K. S. | 6 |
| | 9 | W. SW. | 1 | C. K. | 3 | | 9 | SW. | 1 | C. K. | 5 | | 9 | NW. | 2 | C. | 2 |
| June 25 | 0 | NW. | 1 | Clear | 0 | June 26 | 0 | W. | 1 | C. K. | 8 | June 27 | 0 | NW. | 2 | C. K. | 2 |
| | 3 | NW. | 1 | C. K. | 2 | | 3 | SW. | 1 | C. K. S. | 4 | | 3 | NW. | 1 | C. K. | 9 |
| | 6 | NW. | 1 | C. K. | 9 | | 6 | NW. | 1 | C. K. | 4 | | 6 | W. | 1 | N. | 10 |
| | 9 | W. NW. | 1 | C. K. | 8 | | 9 | N. NW. | 2 | C. | 3 | | 9 | W. NW. | 1 | C. K. S. | 4 |
| | Noon | W. | 1 | C. K. | 4 | | Noon | W. NW. | 1 | C. K. | 5 | | Noon | W. | 2 | C. S. | 3 |
| | 3 | W. | 1 | C. K. | 8 | | 3 | W. | 1 | C. S. | 3 | | 3 | W. | 2 | C. K. | 4 |
| | 6 | W. | 1 | C. K. | 10 | | 6 | NW. | 1 | C. K. | 6 | | 6 | W. | 1 | C. K. | 7 |
| | 9 | W. | 1 | C. K. | 9 | | 9 | NW. | 1 | C. S. | 1 | | 9 | NW. | 2 | C. K. S. | 7 |
| June 28 | 0 | SW. | 1 | C. K. | 3 | June 29 | 0 | SW. | 1 | C. K. | 5 | June 30 | 0 | SE. | 1 | C. K. | 8 |
| | 3 | W. | 1 | C. K. | 8 | | 3 | NW. | 1 | C. K. | 3 | | 3 | NW. | 2 | C. K. | 9 |
| | 6 | W. | 1 | C. K. | 9 | | 6 | SW. | 1 | C. K. | 8 | | 6 | NW. | 1 | C. K. | 9 |
| | 9 | NW. | 1 | C. K. | 7 | | 9 | NW. | 1 | C. K. S. | 6 | | 9 | N. NE. | 1 | C. K. | 10 |
| | Noon | W. | 1 | C. K. | 4 | | Noon | W. | 1 | C. K. | 7 | | Noon | NW. | 1 | C. S. | 4 |
| | 3 | SW. | 1 | C. K. | 5 | | 3 | W. SW. | 1 | C. K. | 6 | | 3 | NW. | 1 | C. S. | 2 |
| | 6 | W. | 2 | C. K. | 10 | | 6 | W. | 1 | C. K. | 9 | | 6 | W. | 1 | C. K. | 3 |
| | 9 | E. SE. | 1 | C. K. S. | 9 | | 9 | S. SE. | 1 | N. | 10 | | 9 | W. | 1 | C. K. | 4 |
| July 1 | 0 | SW. | 1 | C. K. | 4 | July 2 | 0 | NW. | 1 | C. K. | 9 | July 3 | 0 | S. SW. | 2 | C. K. | 10 |
| | 3 | NE. | 1 | C. K. | 7 | | 3 | NW. | 1 | C. K. | 7 | | 3 | SW. | 1 | C. K. S. | 6 |
| | 6 | NE. | 1 | C. K. | 9 | | 6 | S. SW. | 1 | C. K. | 7 | | 6 | S. | 2 | C. K. | 1 |
| | 9 | S. | 1 | C. K. S. | 7 | | 9 | S. | 1 | C. K. | 4 | | 9 | W. | 2 | C. K. | 4 |
| | Noon | S. SE. | 2 | C. K. | 6 | | Noon | SW. | 2 | C. K. | 3 | | Noon | W. | 3 | C. K. | 6 |
| | 3 | S. | 3 | C. K. | 7 | | 3 | S. SW. | 2 | C. K. | 3 | | 3 | W. | 3 | C. K. | 4 |
| | 6 | S. | 1 | C. K. | 9 | | 6 | S. | 1 | C. K. | 4 | | 6 | SW. | 1 | C. | 3 |
| | 9 | S. | 1 | C. K. | 10 | | 9 | S. | 2 | C. K. | 8 | | 9 | NW. | 1 | C. S. | 3 |
| July 4 | 0 | N. | 1 | C. | 1 | July 5 | 0 | W. | 1 | C. K. | 7 | July 6 | 0 | NW. | 1 | C. K. | 4 |
| | 3 | NW. | 1 | C. K. S. | 3 | | 3 | SW. | 1 | C. K. S. | 4 | | 3 | W. | 1 | C. K. | 4 |
| | 6 | NW. | 1 | C. K. | 3 | | 6 | S. SW. | 1 | C. K. | 7 | | 6 | W. | 1 | C. K. | 3 |
| | 9 | SW. | 1 | C. K. | 2 | | 9 | SE. | 1 | C. K. | 3 | | 9 | NW. | 2 | C. K. | 3 |
| | Noon | W. | 2 | C. K. | 2 | | Noon | SE. | 2 | C. K. | 4 | | Noon | NW. | 2 | C. K. | 7 |
| | 3 | S. | 3 | C. K. | 4 | | 3 | S. SE. | 2 | C. K. | 4 | | 3 | NW. | 1 | C. K. | 4 |
| | 6 | SW. | 2 | C. K. | 9 | | 6 | W. NW. | 1 | C. K. | 9 | | 6 | NW. | 1 | C. K. | 8 |
| | 9 | W. | 1 | C. K. | 10 | | 9 | W. | 2 | C. K. | 4 | | 9 | NW. | 1 | C. K. | 8 |

REMARKS.

June 27. Light shower at 5^h 20^m a. m. ; amount, 0.034 inch.

28. Showers at intervals during the day ; amount, 0.650 inch.

July 4. Rain in the evening ; amount, 0.256 inch.

METEOROLOGICAL OBSERVATIONS.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|-----------------|-------|------------|--------|----------|-----------------|-----------------|-------|------------|--------|----------|-----------------|-----------------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. July 7 | 0 | W. NW. | 1 | C. K. | 8 | 1876. July 8 | 0 | S. | 1 | C. | 3 | 1876. July 9 | 0 | NW. | 1 | Clear | 0 |
| | 3 | N. NE. | 1 | C. K. S. | 6 | | 3 | W. | 1 | C. K. | 6 | | 3 | NW. | 2 | Clear | 0 |
| | 6 | NW. | 1 | C. K. | 2 | | 6 | NW. | 2 | C. | 6 | | 6 | NW. | 2 | C. K. | 6 |
| | 9 | NW. | 1 | C. K. | 7 | | 9 | NW. | 2 | C. | 3 | | 9 | NW. | 2 | C. K. | 5 |
| Noon | | NW. | 1 | C. K. | 7 | Noon | | NW. | 2 | C. K. | 7 | Noon | | N. NW. | 2 | C. K. | 5 |
| | 3 | NE. | 2 | C. K. | 4 | | 3 | NW. | 2 | C. K. | 7 | | 3 | NW. | 2 | C. K. | 6 |
| | 6 | S. | 1 | C. K. | 4 | | 6 | NW. | 2 | C. K. | 7 | | 6 | N. NE. | 1 | C. K. | 3 |
| | 9 | S. | 1 | C. S. | 6 | | 9 | NW. | 1 | C. S. | 2 | | 9 | NW. | 1 | C. | 1 |
| July 10 | 0 | NW. | 1 | Clear | 0 | July 11 | 0 | N. | 1 | C. K. | 9 | July 12 | 0 | W. | 1 | C. K. | 10 |
| | 3 | NW. | 1 | Clear | 0 | | 3 | W. | 1 | N. | 10 | | 3 | SW. | 1 | C. K. | 10 |
| | 6 | NW. | 1 | C. S. | 2 | | 6 | NW. | 1 | C. S. | 4 | | 6 | NW. | 1 | C. K. | 4 |
| | 9 | N. | 1 | C. K. | 1 | | 9 | S. | 1 | C. K. | 2 | | 9 | NW. | 2 | C. K. | 3 |
| Noon | | E. | 1 | C. K. | 3 | Noon | | E. | 1 | C. K. | 2 | Noon | | NW. | 1 | C. K. | 2 |
| | 3 | E. SE. | 1 | C. K. | 7 | | 3 | SE. | 1 | C. K. | 2 | | 3 | SW. | 1 | C. K. | 3 |
| | 6 | NW. | 1 | C. K. | 9 | | 6 | W. | 1 | C. K. | 10 | | 6 | N. | 2 | C. K. | 9 |
| | 9 | SW. | 1 | C. K. | 9 | | 9 | N. | 2 | C. K. | 9 | | 9 | E. | 1 | C. K. | 3 |
| July 13 | 0 | S. | 2 | C. K. | 8 | July 14 | 0 | NW. | 2 | N. | 10 | July 15 | 0 | NW. | 1 | C. K. | 10 |
| | 3 | SW. | 1 | C. K. | 8 | | 3 | NW. | 1 | C. K. | 10 | | 3 | N. | 1 | K. | 10 |
| | 6 | W. | 1 | C. K. | 10 | | 6 | N. | 1 | C. K. | 10 | | 6 | N. | 1 | K. | 10 |
| | 9 | NW. | 1 | C. K. | 7 | | 9 | W. | 1 | C. K. | 4 | | 9 | N. | 1 | N. | 10 |
| Noon | | NW. | 2 | C. K. | 7 | Noon | | NW. | 1 | C. K. | 4 | Noon | | NW. | 1 | C. K. | 10 |
| | 3 | NW. | 2 | C. K. | 3 | | 3 | W. | 1 | C. K. | 6 | | 3 | N. | 2 | C. K. | 6 |
| | 6 | E. | 2 | C. K. | 8 | | 6 | W. | 1 | N. | 10 | | 6 | N. | 1 | C. | 3 |
| | 9 | E. | 1 | C. K. | 9 | | 9 | NW. | 1 | C. K. | 10 | | 9 | NW. | 1 | C. S. | 3 |
| July 16 | 0 | NW. | 1 | Clear | 0 | July 17 | 0 | NW. | 1 | Clear | 0 | July 18 | 0 | SW. | 2 | C. | 2 |
| | 3 | NW. | 1 | Clear | 0 | | 3 | N. | 1 | Clear | 0 | | 3 | SW. | 1 | C. K. | 3 |
| | 6 | NE. | 1 | Clear | 0 | | 6 | NE. | 1 | Clear | 0 | | 6 | S. | 1 | C. K. | 7 |
| | 9 | NE. | 2 | Clear | 0 | | 9 | SW. | 1 | C. K. | 3 | | 9 | SW. | 1 | C. K. | 6 |
| Noon | | NE. | 1 | Clear | 0 | Noon | | S. SW. | 2 | C. | 1 | Noon | | SW. | 1 | C. K. S. | 8 |
| | 3 | E. SE. | 1 | C. K. | 4 | | 3 | S. | 1 | C. | 1 | | 3 | S. SW. | 2 | C. K. S. | 6 |
| | 6 | E. SE. | 1 | C. K. | 3 | | 6 | S. | 2 | Clear | 0 | | 6 | S. SW. | 1 | C. K. S. | 9 |
| | 9 | NE. | 1 | C. S. | 1 | | 9 | S. | 2 | Clear | 0 | | 9 | SW. | 1 | C. K. S. | 2 |
| July 19 | 0 | SW. | 1 | C. K. | 6 | July 20 | 0 | S. | 1 | C. K. | 2 | July 21 | 0 | S. | 1 | C. K. | 10 |
| | 3 | SW. | 1 | Clear | 0 | | 3 | SE. | 1 | Haze | | | 3 | S. | 1 | C. K. | 9 |
| | 6 | S. | 1 | C. K. | 4 | | 6 | S. | 1 | C. K. | 4 | | 6 | N. NW. | 2 | C. K. | 9 |
| | 9 | SE. | 1 | C. S. | 4 | | 9 | N. | 1 | C. | 3 | | 9 | NW. | 2 | C. S. | 4 |
| Noon | | SE. | 1 | C. K. | 6 | Noon | | NW. | 1 | C. K. | 6 | Noon | | NW. | 3 | C. K. S. | 6 |
| | 3 | SE. | 1 | C. K. | 9 | | 3 | S. | 1 | C. K. | 8 | | 3 | NW. | 3 | C. | 2 |
| | 6 | SE. | 2 | C. K. | 8 | | 6 | S. | 2 | C. K. | 8 | | 6 | N. | 1 | C. K. | 6 |
| | 9 | SW. | 1 | K. | 10 | | 9 | S. | 1 | C. K. S. | 4 | | 9 | N. NE. | 1 | C. S. | 1 |

REMARKS.

July 13. Rain at 10^h 12^m p. m. ; amount, 0.356 inch.

15. Light rain in the morning ; amount, 0.120 inch.

18. Lightning and thunder during the latter part of the evening.

21. Light rain at 1^h 30^m a. m.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. July 22 | 0 | N. | 1 | C. S. | 1 | 1876. July 23 | 0 | S. | 1 | C. | 2 | 1876. July 24 | 0 | NW. | 2 | Clear | 0 |
| | 3 | N. | 1 | Clear | 0 | | 3 | SW. | 1 | C. K. | 7 | | 3 | NW. | 1 | Clear | 0 |
| | 6 | N. NE. | 1 | C. K. | 2 | | 6 | SW. | 1 | C. K. | 9 | | 6 | NW. | 2 | C. K. | 3 |
| | 9 | E. | 1 | C. S. | 4 | | 9 | N. | 1 | C. K. | 9 | | 9 | NW. | 2 | C. K. | 9 |
| | Noon | S. SW. | 1 | C. K. | 5 | | Noon | NW. | 2 | C. K. | 8 | | Noon | N. | 1 | C. K. | 10 |
| | 3 | S. | 1 | C. K. | 4 | | 3 | NW. | 2 | C. K. | 4 | | 3 | W. | 1 | C. K. | 10 |
| | 6 | S. | 2 | C. | 1 | | 6 | NW. | 4 | Clear | 0 | | 6 | W. | 1 | C. K. | 8 |
| | 9 | S. | 1 | Clear | 0 | | 9 | NW. | 3 | Clear | 0 | | 9 | NW. | 1 | Clear | 0 |
| July 25 | 0 | NW. | 1 | Clear | 0 | July 26 | 0 | S. SE. | 1 | K. | 10 | July 27 | 0 | NW. | 1 | Clear | 0 |
| | 3 | NW. | 2 | Clear | 0 | | 3 | SW. | 1 | C. K. | 10 | | 3 | NW. | 1 | Clear | 0 |
| | 6 | W. NW. | 1 | C. S. | 1 | | 6 | N. NW. | 2 | Haze | | | 6 | NW. | 1 | C. | 7 |
| | 9 | NW. | 2 | Clear | 0 | | 9 | NW. | 3 | Haze | | | 9 | S. | 1 | Haze | |
| | Noon | NW. | 2 | C. K. | 4 | | Noon | NW. | 2 | Haze | | | Noon | SE. | 3 | C. K. | 7 |
| | 3 | W. | 1 | C. K. | 7 | | 3 | N. NW. | 2 | Haze | | | 3 | S. SE. | 3 | C. K. | 8 |
| | 6 | N. | 2 | N. | 10 | | 6 | NE. | 1 | C. S. | 4 | | 6 | S. | 3 | C. S. | 4 |
| | 9 | NE. | 1 | K. | 10 | | 9 | SE. | 1 | C. | 2 | | 9 | S. | 2 | C. | 2 |
| July 28 | 0 | S. | 2 | Clear | 0 | July 29 | 0 | SW. | 1 | C. K. | 9 | July 30 | 0 | SE. | 1 | N. | 10 |
| | 3 | S. | 1 | C. K. | 6 | | 3 | W. | 1 | C. K. | 4 | | 3 | W. | 2 | N. | 10 |
| | 6 | S. | 1 | C. K. | 2 | | 6 | NW. | 1 | C. K. | 6 | | 6 | NE. | 2 | N. | 10 |
| | 9 | S. | 2 | C. K. | 4 | | 9 | NW. | 1 | C. K. | 10 | | 9 | NE. | 2 | N. | 10 |
| | Noon | S. | 3 | C. K. | 8 | | Noon | NE. | 1 | C. K. | 7 | | Noon | NE. | 1 | N. | 10 |
| | 3 | S. | 3 | C. K. | 9 | | 3 | NE. | 1 | C. K. | 9 | | 3 | NW. | 1 | C. K. | 10 |
| | 6 | NW. | 1 | N. | 10 | | 6 | SE. | 1 | C. K. | 10 | | 6 | NW. | 3 | C. K. | 10 |
| | 9 | NW. | 1 | K. | 10 | | 9 | S. | 1 | C. K. | 10 | | 9 | NW. | 2 | C. K. | 10 |
| July 31 | 0 | W. | 1 | K. | 10 | | | | | | | | | | | | |
| | 3 | W. | 1 | K. | 10 | | | | | | | | | | | | |
| | 6 | NW. | 2 | K. | 10 | | | | | | | | | | | | |
| | 9 | N. | 1 | C. K. | 10 | | | | | | | | | | | | |
| | Noon | N. NW. | 1 | C. K. | 10 | | | | | | | | | | | | |
| | 3 | N. | 1 | C. K. | 10 | | | | | | | | | | | | |
| | 6 | N. | 2 | C. K. | 10 | | | | | | | | | | | | |
| | 9 | N. | 1 | C. K. | 10 | | | | | | | | | | | | |
| Aug. 1 | 0 | NE. | 2 | K. | 10 | Aug. 2 | 0 | NE. | 2 | N. | 10 | Aug. 3 | 0 | E. | 2 | K. | 10 |
| | 3 | NE. | 2 | K. | 10 | | 3 | NE. | 3 | K. | 10 | | 3 | NE. | 1 | K. | 10 |
| | 6 | NE. | 1 | K. | 10 | | 6 | NE. | 3 | K. | 10 | | 6 | NE. | 1 | K. | 10 |
| | 9 | N. NE. | 2 | K. | 10 | | 9 | NE. | 2 | N. | 10 | | 9 | N. NE. | 1 | K. | 10 |
| | Noon | NE. | 2 | C. K. | 10 | | Noon | N. NE. | 2 | N. | 10 | | Noon | E. | 1 | C. K. | 10 |
| | 3 | NE. | 2 | C. K. | 10 | | 3 | E. | 2 | N. | 10 | | 3 | NE. | 1 | C. K. | 10 |
| | 6 | NE. | 2 | K. | 10 | | 6 | E. | 2 | N. | 10 | | 6 | NE. | 1 | K. | 10 |
| | 9 | NE. | 2 | C. K. | 10 | | 9 | E. | 3 | K. | 10 | | 9 | NE. | 1 | K. | 10 |

REMARKS.

July 28. Light rain at 4^h p. m.; amount, 0.060 inch.29. Light rain at 10^h p. m.

30. Heavy rain during the day; amount, 4.004 inches.

August 2. Rain in the afternoon; amount, 0.564 inch.

METEOROLOGICAL OBSERVATIONS.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|-----------------|-------|------------|--------|----------|-----------------|-----------------|-------|------------|--------|----------|-----------------|------------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. Aug. 4 | 0 | NE. | 1 | K. | 10 | 1876. Aug. 5 | 0 | NE. | 1 | K. | 10 | 1876. A | 0 | S. | 1 | C. K. | 2 |
| | 3 | N. | 1 | Mist | 10 | | 3 | NE. | 1 | C. K. | 8 | | 3 | SW. | 1 | Clear | 0 |
| | 6 | N. | 1 | Fog | 10 | | 6 | NE. | 1 | C. K. | 9 | | 6 | S. | 1 | C. K. | 3 |
| | 9 | NE. | 1 | K. | 10 | | 9 | E. | 1 | C. K. | 7 | | 9 | SW. | 1 | C. K. | 6 |
| | Noon | E. | 1 | C. K. | 9 | | Noon | S. | 1 | C. K. | 5 | | Noon | SE. | 1 | C. K. | 6 |
| | 3 | E. | 1 | C. K. | 9 | | 3 | S. | 1 | C. K. | 4 | | 3 | SE. | 1 | C. K. | 4 |
| | 6 | E. | 1 | C. K. | 8 | | 6 | S. | 1 | C. K. | 7 | | 6 | S. | 1 | C. K. | 6 |
| | 9 | E. | 1 | C. K. | 3 | | 9 | SE. | 1 | C. K. | 2 | | 9 | W. | 1 | C. S. | 2 |
| Aug. 7 | 0 | NW. | 1 | C. K. | 2 | Aug. 8 | 0 | SW. | 1 | K. | 10 | Aug. 9 | 0 | NW. | 1 | C. K. | 7 |
| | 3 | NW. | 1 | Clear | 0 | | 3 | W. | 1 | C. K. | 9 | | 3 | N. | 1 | C. K. | 4 |
| | 6 | NW. | 1 | C. S. | 1 | | 6 | W. NW. | 1 | C. K. | 2 | | 6 | N. NE. | 1 | C. K. | 3 |
| | 9 | W. NW. | 1 | Clear | 0 | | 9 | NW. | 2 | C. K. | 4 | | 9 | NE. | 1 | Haze | |
| | Noon | NW. | 1 | K. | 4 | | Noon | NW. | 2 | C. K. | 6 | | Noon | NE. | 2 | Haze | |
| | 3 | SW. | 1 | C. K. | 6 | | 3 | NE. | 2 | C. K. | 9 | | 3 | E. | 2 | C. K. | 4 |
| | 6 | E. | 1 | C. K. | 9 | | 6 | S. | 1 | C. K. | 9 | | 6 | NE. | 1 | C. K. | 4 |
| | 9 | W. | 1 | C. K. | 10 | | 9 | S. | 1 | C. K. | 3 | | 9 | SE. | 1 | C. K. | 2 |
| Aug. 10 | 0 | NW. | 1 | C. S. | 1 | Aug. 11 | 0 | N. | 1 | C. K. | 6 | Aug. 12 | 0 | S. SE. | 1 | C. K. | 9 |
| | 3 | NW. | 1 | C. | 2 | | 3 | NE. | 1 | C. K. | 10 | | 3 | S. SW. | 1 | C. K. | 8 |
| | 6 | N. NW. | 1 | C. K. | 10 | | 6 | NE. | 1 | K. | 10 | | 6 | NE. | 1 | C. K. | 9 |
| | 9 | NE. | 1 | C. K. | 9 | | 9 | NE. | 1 | C. K. | 9 | | 9 | SE. | 1 | C. K. | 9 |
| | Noon | NE. | 2 | C. K. | 9 | | Noon | S. | 1 | N. | 10 | | Noon | SE. | 2 | N. | 10 |
| | 3 | E. | 3 | C. K. | 8 | | 3 | E. | 1 | C. K. | 9 | | 3 | S. SE. | 1 | N. | 10 |
| | 6 | S. SE. | 1 | C. K. | 9 | | 6 | E. SE. | 1 | C. K. | 9 | | 6 | NE. | 1 | C. K. | 10 |
| | 9 | E. | 1 | C. K. | 2 | | 9 | N. | 1 | C. K. | 1 | | 9 | N. | 1 | Haze | |
| Aug. 13 | 0 | SE. | 1 | C. K. S. | 9 | Aug. 14 | 0 | S. | 1 | S. | 1 | Aug. 15 | 0 | NW. | 1 | Clear | 0 |
| | 3 | SE. | 1 | C. K. | 4 | | 3 | SE. | 1 | K. S. | 1 | | 3 | NE. | 1 | C. K. | 2 |
| | 6 | NE. | 1 | C. K. | 10 | | 6 | N. NE. | 1 | C. K. | 10 | | 6 | N. NE. | 1 | Fog | |
| | 9 | NE. | 2 | C. K. | 8 | | 9 | NE. | 1 | C. K. | 9 | | 9 | NW. | 1 | C. K. | 2 |
| | Noon | E. | 2 | C. K. | 8 | | Noon | NE. | 1 | C. K. | 9 | | Noon | W. | 1 | C. K. | 7 |
| | 3 | SE. | 2 | C. K. | 9 | | 3 | SE. | 1 | C. K. | 9 | | 3 | SE. | 1 | C. K. | 4 |
| | 6 | E. SE. | 2 | C. K. | 3 | | 6 | SE. | 1 | C. K. | 7 | | 6 | W. | 1 | C. K. | 2 |
| | 9 | E. | 1 | Clear | 0 | | 9 | S. | 1 | S. | 1 | | 9 | W. SW. | 1 | S. | 1 |
| Aug. 16 | 0 | S. | 1 | Clear | 0 | Aug. 17 | 0 | S. | 1 | C. K. | 9 | Aug. 18 | 0 | W. | 1 | C. K. | 10 |
| | 3 | W. | 1 | S. | 1 | | 3 | SW. | 1 | C. K. | 5 | | 3 | NW. | 1 | C. K. | 4 |
| | 6 | NW. | 1 | C. K. | 2 | | 6 | W. | 1 | C. K. | 6 | | 6 | NE. | 1 | C. K. | 10 |
| | 9 | NE. | 1 | C. K. | 7 | | 9 | NW. | 1 | C. K. | 7 | | 9 | NE. | 1 | K. | 10 |
| | Noon | SE. | 1 | C. K. | 8 | | Noon | NW. | 1 | C. K. | 7 | | Noon | N. NE. | 1 | K. | 10 |
| | 3 | S. | 1 | C. K. | 4 | | 3 | NW. | 2 | C. K. | 8 | | 3 | NE. | 1 | C. K. | 10 |
| | 6 | S. | 1 | C. K. | 6 | | 6 | S. SE. | 1 | C. K. | 10 | | 6 | E. SE. | 1 | C. K. | 9 |
| | 9 | SW. | 1 | Clear | 0 | | 9 | S. | 1 | C. K. | 4 | | 9 | SE. | 1 | K. | 10 |

REMARKS.

- August 7. Heavy shower, with lightning and thunder, at 6^h 30^m p. m.; amount, 0.334 inch.
 8. Rain in the afternoon; amount, 0.380 inch.
 11. Heavy shower at 10^h 40^m a. m.; amount, 1.320 inch.
 12. Showers at 11^h 55^m a. m. and 10^h 30^m p. m.; amount, 0.436 inch.
 14. Heavy shower at 9^h 15^m a. m.; amount, 0.894 inch.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. Aug. 19 | 0 | NE. | 1 | K. | 10 | 1876. Aug. 20 | 0 | NW. | 1 | C. K. | 4 | 1876. Aug. 21 | 0 | NE. | 1 | Clear | 0 |
| | 3 | NE. | 1 | K. | 10 | | 3 | NW. | 1 | Haze | | | 3 | N. | 2 | Clear | 0 |
| | 6 | NE. | 1 | N. | 10 | | 6 | NW. | 2 | C. K. S. | 7 | | 6 | N. | 2 | Clear | 0 |
| | 9 | S. | 1 | N. | 10 | | 9 | NW. | 3 | C. K. | 7 | | 9 | NE. | 2 | C. K. | 2 |
| | Noon | E. | 1 | C. K. | 9 | | Noon | N. NW. | 2 | C. K. | 4 | | Noon | NE. | 1 | Clear | 0 |
| | 3 | E. | 1 | C. K. | 9 | | 3 | N. NW. | 2 | C. K. | 6 | | 3 | NW. | 1 | Clear | 0 |
| | 6 | N. NE. | 1 | C. K. | 4 | | 6 | N. | 1 | C. K. | 1 | | 6 | NW. | 1 | Clear | 0 |
| | 9 | NE. | 1 | C. K. | 3 | | 9 | NW. | 2 | Clear | 0 | | 9 | NW. | 1 | Clear | 0 |
| Aug. 22 | 0 | NW. | 1 | Clear | 0 | Aug. 23 | 0 | NW. | 1 | Clear | 0 | Aug. 24 | 0 | S. | 1 | C. K. | 6 |
| | 3 | NW. | 1 | Clear | 0 | | 3 | N. | 1 | C. K. | 8 | | 3 | W. | 1 | N. | 10 |
| | 6 | NW. | 1 | Clear | 0 | | 6 | NE. | 1 | K. | 10 | | 6 | N. | 1 | C. K. | 9 |
| | 9 | E. NE. | 1 | C. | 2 | | 9 | N. | 1 | C. K. | 10 | | 9 | NE. | 1 | C. K. | 5 |
| | Noon | E. | 1 | C. K. | 5 | | Noon | W. | 1 | C. K. | 10 | | Noon | E. | 1 | C. K. | 9 |
| | 3 | W. | 1 | C. K. | 3 | | 3 | E. | 1 | C. K. | 10 | | 3 | SE. | 1 | C. K. | 9 |
| | 6 | SW. | 1 | C. K. | 8 | | 6 | NW. | 2 | C. K. | 9 | | 6 | SE. | 1 | C. K. | 3 |
| | 9 | NW. | 1 | Clear | 0 | | 9 | NW. | 1 | C. K. | 10 | | 9 | S. | 1 | Clear | 0 |
| Aug. 25 | 0 | S. | 1 | C. S. | 2 | Aug. 26 | 0 | W. | 1 | C. K. | 10 | Aug. 27 | 0 | NW. | 1 | Clear | 0 |
| | 3 | SW. | 1 | C. K. | 4 | | 3 | W. | 1 | K. | 10 | | 3 | N. | 1 | C. | 2 |
| | 6 | S. | 1 | C. K. | 10 | | 6 | N. NW. | 1 | C. S. | 5 | | 6 | NW. | 1 | Clear | 0 |
| | 9 | S. | 1 | C. K. | 9 | | 9 | N. | 2 | C. K. | 3 | | 9 | N. NW. | 2 | Clear | 0 |
| | Noon | E. | 1 | C. K. | 9 | | Noon | N. NW. | 2 | C. K. | 3 | | Noon | NW. | 2 | Clear | 0 |
| | 3 | S. | 2 | C. K. | 8 | | 3 | NW. | 2 | C. K. | 2 | | 3 | NW. | 1 | Clear | 0 |
| | 6 | SW. | 1 | C. K. | 2 | | 6 | N. | 1 | Clear | 0 | | 6 | N. NW. | 1 | C. | 1 |
| | 9 | SW. | 1 | C. K. | 2 | | 9 | NW. | 1 | Clear | 0 | | 9 | SW. | 1 | Clear | 0 |
| Aug. 28 | 0 | NW. | 1 | Clear | 0 | Aug. 29 | 0 | NW. | 1 | Clear | 0 | Aug. 30 | 0 | NW. | 1 | C. K. | 8 |
| | 3 | NW. | 1 | C. K. | 2 | | 3 | NW. | 1 | Clear | 0 | | 3 | N. | 1 | C. K. | 8 |
| | 6 | NW. | 1 | C. K. | 9 | | 6 | NW. | 1 | C. S. | 1 | | 6 | S. | 1 | C. K. | 7 |
| | 9 | N. | 1 | C. S. | 4 | | 9 | W. | 1 | C. | 2 | | 9 | S. | 1 | C. K. S. | 7 |
| | Noon | W. | 1 | C. | 2 | | Noon | N. | 1 | C. K. S. | 6 | | Noon | NW. | 1 | C. K. | 6 |
| | 3 | NW. | 1 | C. K. S. | 7 | | 3 | SW. | 1 | C. K. S. | 8 | | 3 | NW. | 1 | C. K. | 6 |
| | 6 | SW. | 1 | C. K. | 2 | | 6 | S. | 1 | C. K. | 7 | | 6 | NW. | 1 | C. K. | 10 |
| | 9 | SW. | 1 | Clear | 0 | | 9 | SW. | 1 | C. K. | 7 | | 9 | NW. | 1 | C. K. | 10 |
| Aug. 31 | 0 | NW. | 1 | C. K. | 9 | | | | | | | | | | | | |
| | 3 | NW. | 1 | C. K. | 8 | | | | | | | | | | | | |
| | 6 | NW. | 1 | C. K. | 9 | | | | | | | | | | | | |
| | 9 | NW. | 1 | C. K. | 9 | | | | | | | | | | | | |
| | Noon | NW. | 1 | C. K. | 9 | | | | | | | | | | | | |
| | 3 | W. | 1 | C. K. | 5 | | | | | | | | | | | | |
| | 6 | S. | 1 | C. K. | 4 | | | | | | | | | | | | |
| | 9 | SW. | 1 | Clear | 0 | | | | | | | | | | | | |

REMARKS.

August 19. Heavy shower at 1^h 35^m p. m.; amount, 0.374 inch.

24. Light shower at 3h a. m.

25. Light rain in the morning; amount, 0.060 inch.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. Sept. 1 | 0 | SW. | 1 | C. K. | 9 | 1876. Sept. 2 | 0 | N. | 1 | C. K. | 9 | 1876. Sept. 3 | 0 | NW. | 1 | Clear | 0 |
| | 3 | SW. | 1 | C. S. | 2 | | 3 | N. | 1 | C. K. | 9 | | 3 | NW. | 1 | Clear | 0 |
| | 6 | NW. | 1 | C. K. | 6 | | 6 | NW. | 2 | C. K. S. | 5 | | 6 | NW. | 1 | Clear | 0 |
| | 9 | N. | 1 | C. K. | 10 | | 9 | NW. | 3 | C. S. | 2 | | 9 | NW. | 1 | Clear | 0 |
| | Noon | S. SE. | 1 | C. K. | 8 | | Noon | NW. | 3 | Clear | 0 | | Noon | E. | 1 | C. K. | 1 |
| | 3 | SE. | 1 | C. K. | 7 | | 3 | N. NW. | 3 | Clear | 0 | | 3 | W. | 1 | C. K. | 1 |
| | 6 | S. | 1 | C. K. | 6 | | 6 | NW. | 2 | Clear | 0 | | 6 | W. | 1 | C. | 1 |
| | 9 | S. | 1 | C. K. | 7 | | 9 | NW. | 2 | Clear | 0 | | 9 | W. | 1 | Clear | 0 |
| | | | | | | | | | | | | | | | | | |
| Sept. 4 | 0 | NW. | 1 | Clear | 0 | Sept. 5 | 0 | NW. | 2 | C. K. | 8 | Sept. 6 | 0 | NW. | 1 | C. K. | 9 |
| | 3 | NW. | 1 | Clear | 0 | | 3 | NW. | 3 | C. K. | 9 | | 3 | NW. | 1 | C. K. | 7 |
| | 6 | NW. | 1 | Haze | 0 | | 6 | NW. | 2 | C. K. | 6 | | 6 | NW. | 1 | C. K. | 7 |
| | 9 | N. | 1 | Clear | 0 | | 9 | N. | 2 | C. K. | 3 | | 9 | E. | 1 | C. K. | 10 |
| | Noon | NW. | 1 | C. K. S. | 1 | | Noon | N. NW. | 2 | C. K. | 7 | | Noon | SE. | 1 | C. K. | 10 |
| | 3 | W. | 1 | C. K. | 1 | | 3 | NW. | 2 | C. K. | 10 | | 3 | SW. | 1 | C. K. | 10 |
| | 6 | SW. | 1 | C. K. | 6 | | 6 | NW. | 1 | C. K. | 10 | | 6 | SW. | 1 | C. K. | 10 |
| | 9 | SW. | 1 | Clear | 0 | | 9 | N. | 1 | C. S. | 3 | | 9 | NE. | 1 | N. | 10 |
| | | | | | | | | | | | | | | | | | |
| Sept. 7 | 0 | NE. | 1 | N. | 10 | Sept. 8 | 0 | NE. | 1 | C. K. | 10 | Sept. 9 | 0 | SW. | 1 | C. K. | 9 |
| | 3 | SW. | 1 | N. | 10 | | 3 | NE. | 1 | C. K. | 10 | | 3 | NW. | 1 | C. K. | 3 |
| | 6 | N. | 1 | C. K. | 10 | | 6 | S. | 1 | K. | 10 | | 6 | NW. | 1 | C. K. | 3 |
| | 9 | NW. | 1 | C. K. | 9 | | 9 | SW. | 1 | C. K. | 8 | | 9 | NW. | 1 | C. K. | 2 |
| | Noon | NE. | 1 | C. K. | 4 | | Noon | NW. | 1 | C. K. | 9 | | Noon | NW. | 2 | C. K. | 6 |
| | 3 | E. SE. | 1 | C. K. | 9 | | 3 | NW. | 2 | C. K. | 10 | | 3 | S. SW. | 1 | C. K. | 8 |
| | 6 | NE. | 2 | C. K. | 8 | | 6 | NW. | 1 | C. K. | 9 | | 6 | NE. | 2 | C. K. | 10 |
| | 9 | NE. | 1 | C. K. | 7 | | 9 | NW. | 1 | C. K. | 5 | | 9 | NE. | 1 | C. K. | 7 |
| | | | | | | | | | | | | | | | | | |
| Sept. 10 | 0 | N. | 2 | Clear | 0 | Sept. 11 | 0 | SE. | 1 | N. | 10 | Sept. 12 | 0 | E. | 1 | N. | 10 |
| | 3 | NE. | 2 | K. | 10 | | 3 | NE. | 1 | N. | 10 | | 3 | E. | 1 | K. | 10 |
| | 6 | NE. | 2 | K. | 10 | | 6 | NE. | 2 | N. | 10 | | 6 | NE. | 1 | K. | 10 |
| | 9 | E. | 1 | K. | 10 | | 9 | E. | 2 | K. | 10 | | 9 | NE. | 1 | K. | 10 |
| | Noon | E. | 2 | K. | 10 | | Noon | NE. | 2 | C. K. | 10 | | Noon | NE. | 1 | K. | 10 |
| | 3 | E. | 2 | N. | 10 | | 3 | NE. | 2 | Mist | 10 | | 3 | NE. | 1 | K. | 10 |
| | 6 | E. SE. | 2 | K. | 10 | | 6 | NE. | 1 | K. | 10 | | 6 | N. | 1 | K. | 10 |
| | 9 | E. | 1 | N. | 10 | | 9 | E. | 1 | K. | 10 | | 9 | N. | 1 | Haze | |
| | | | | | | | | | | | | | | | | | |
| Sept. 13 | 0 | N. | 1 | C. K. | 6 | Sept. 14 | 0 | NW. | 1 | K. | 10 | Sept. 15 | 0 | SW. | 1 | N. | 10 |
| | 3 | N. | 1 | C. K. | 8 | | 3 | N. | 1 | C. K. | 4 | | 3 | W. | 1 | K. | 10 |
| | 6 | N. NW. | 1 | C. K. | 9 | | 6 | S. | 1 | C. K. | 8 | | 6 | NW. | 1 | C. K. | 8 |
| | 9 | NE. | 1 | C. K. | 10 | | 9 | SE. | 1 | C. K. | 10 | | 9 | NW. | 2 | C. K. | 2 |
| | Noon | SE. | 1 | C. K. | 10 | | Noon | S. SE. | 1 | C. K. | 8 | | Noon | NW. | 2 | C. K. | 3 |
| | 3 | SE. | 1 | C. K. | 10 | | 3 | SE. | 2 | C. K. | 7 | | 3 | NW. | 1 | C. K. | 2 |
| | 6 | SE. | 1 | C. K. | 7 | | 6 | SE. | 2 | C. K. | 6 | | 6 | NW. | 1 | C. S. | 4 |
| | 9 | N. | 1 | Clear | 0 | | 9 | S. | 1 | K. | 10 | | 9 | NW. | 2 | C. K. | 9 |

REMARKS.

September 5. Lunar halo at 11^h p. m.6. Rain at 6^h p. m.; amount, 0.572 inch.10. Rain from 1^h 40^m p. m. till 6^h a. m. on the 11th; amount, 1.600 inch.14. Rain at 10^h 30^m p. m.; amount, 1.540 inch.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|-------------------|-------|------------|--------|----------|-----------------|-------------------|-------|------------|--------|----------|-----------------|-------------------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. Sept. 16 | 0 | NW. | 1 | K. | 10 | 1876. Sept. 17 | 0 | NE. | 4 | N. | 10 | 1876. Sept. 18 | 0 | W. | 2 | Clear | 0 |
| | 3 | N. | 1 | K. | 10 | | 3 | NE. | 5 | N. | 10 | | 3 | SW. | 2 | C. | 2 |
| | 6 | N. | 1 | K. | 10 | | 6 | NE. | 4 | N. | 10 | | 6 | SW. | 2 | C. S. | 2 |
| | 9 | NE. | 1 | C. K. | 10 | | 9 | NE. | 2 | N. | 10 | | 9 | SW. | 2 | C. K. | 8 |
| | Noon | NE. | 2 | C. K. | 10 | | Noon | NE. | 2 | N. | 10 | | Noon | SW. | 2 | C. K. S. | 8 |
| | 3 | NE. | 2 | N. | 10 | | 3 | NE. | 3 | N. | 10 | | 3 | SW. | 1 | C. K. | 9 |
| | 6 | NE. | 3 | N. | 10 | | 6 | W. SW. | 5 | N. | 10 | | 6 | W. | 2 | K. | 10 |
| | 9 | NE. | 3 | N. | 10 | | 9 | W. | 2 | K. | 10 | | 9 | W. | 1 | K. | 10 |
| Sept. 19 | 0 | NW. | 1 | Clear | 0 | Sept. 20 | 0 | NW. | 1 | Clear | 0 | Sept. 21 | 0 | NE. | 1 | C. K. | 9 |
| | 3 | NW. | 1 | Clear | 0 | | 3 | NW. | 1 | Clear | 0 | | 3 | NE. | 1 | C. K. | 10 |
| | 6 | NW. | 1 | C. K. | 8 | | 6 | NW. | 1 | Clear | 0 | | 6 | NE. | 1 | C. K. | 10 |
| | 9 | NW. | 3 | C. K. | 2 | | 9 | N. | 1 | C. K. | 1 | | 9 | E. SE. | 1 | C. K. | 10 |
| | Noon | NW. | 2 | C. K. | 8 | | Noon | N. | 1 | C. K. | 4 | | Noon | E. | 1 | C. K. | 10 |
| | 3 | NW. | 2 | C. K. | 7 | | 3 | N. | 1 | C. K. | 4 | | 3 | E. SE. | 1 | C. K. | 10 |
| | 6 | NW. | 1 | C. K. | 10 | | 6 | E. | 1 | C. K. S. | 6 | | 6 | E. | 1 | C. K. | 10 |
| | 9 | NW. | 1 | C. K. | 3 | | 9 | N. | 1 | Clear | 0 | | 9 | NE. | 2 | K. | 10 |
| Sept. 22 | 0 | NE. | 1 | K. | 10 | Sept. 23 | 0 | NE. | 2 | N. | 10 | Sept. 24 | 0 | NE. | 2 | N. | 10 |
| | 3 | NE. | 1 | K. | 10 | | 3 | NE. | 3 | N. | 10 | | 3 | NE. | 2 | N. | 10 |
| | 6 | NE. | 1 | K. | 10 | | 6 | NE. | 3 | K. | 10 | | 6 | NE. | 1 | N. | 10 |
| | 9 | E. NE. | 1 | N. | 10 | | 9 | NE. | 1 | N. | 10 | | 9 | N. | 1 | N. | 10 |
| | Noon | E. | 2 | N. | 10 | | Noon | SE. | 2 | C. K. | 10 | | Noon | N. NW. | 1 | K. | 10 |
| | 3 | E. | 2 | N. | 10 | | 3 | E. | 1 | C. K. | 10 | | 3 | N. NW. | 1 | K. | 10 |
| | 6 | NE. | 2 | N. | 10 | | 6 | E. | 2 | K. | 10 | | 6 | N. NW. | 2 | N. | 10 |
| | 9 | NE. | 3 | N. | 10 | | 9 | E. | 2 | N. | 10 | | 9 | N. NW. | 1 | Mist | 10 |
| Sept. 25 | 0 | N. NW. | 1 | K. | 10 | Sept. 26 | 0 | N. | 1 | K. | 10 | Sept. 27 | 0 | NW. | 1 | Clear | 0 |
| | 3 | N. NW. | 1 | K. | 10 | | 3 | SE. | 1 | C. K. | 8 | | 3 | NW. | 2 | C. S. | 2 |
| | 6 | N. NW. | 1 | K. | 10 | | 6 | S. | 1 | C. K. S. | 5 | | 6 | W. | 2 | C. K. | 8 |
| | 9 | N. | 2 | C. K. | 10 | | 9 | W. | 1 | N. | 10 | | 9 | W. | 2 | C. K. | 4 |
| | Noon | N. | 2 | C. K. | 9 | | Noon | NW. | 3 | C. K. | 10 | | Noon | NW. | 3 | C. K. | 8 |
| | 3 | N. NW. | 1 | C. K. | 8 | | 3 | NW. | 3 | C. K. | 4 | | 3 | W. | 3 | C. K. | 3 |
| | 6 | N. | 1 | C. K. S. | 2 | | 6 | NW. | 2 | C. K. S. | 9 | | 6 | W. NW. | 2 | Clear | 0 |
| | 9 | N. | 1 | C. K. | 4 | | 9 | NW. | 1 | Clear | 0 | | 9 | NW. | 1 | Clear | 0 |
| Sept. 28 | 0 | NW. | 1 | Clear | 0 | Sept. 29 | 0 | NW. | 1 | Clear | 0 | Sept. 30 | 0 | NW. | 1 | C. K. S. | 4 |
| | 3 | NW. | 1 | Clear | 0 | | 3 | NE. | 1 | Clear | 0 | | 3 | SW. | 1 | C. K. | 10 |
| | 6 | W. | 1 | Clear | 0 | | 6 | SE. | 1 | C. S. | 2 | | 6 | N. | 1 | N. | 10 |
| | 9 | W. | 1 | Clear | 0 | | 9 | S. | 1 | C. | 4 | | 9 | N. | 1 | K. | 10 |
| | Noon | W. | 1 | C. | 1 | | Noon | S. | 1 | C. K. | 9 | | Noon | N. | 1 | N. | 10 |
| | 3 | SW. | 2 | Clear | 0 | | 3 | SE. | 1 | C. K. | 7 | | 3 | NW. | 1 | N. | 10 |
| | 6 | S. | 1 | Clear | 0 | | 6 | S. | 1 | C. K. S. | 1 | | 6 | N. NW. | 1 | N. | 10 |
| | 9 | W. | 1 | Clear | 0 | | 9 | SW. | 1 | C. K. S. | 3 | | 9 | N. | 1 | N. | 10 |

REMARKS.

September 16. Rain from 3^h p. m. till 3^h p. m. on the 17th; amount, 2.938 inches.
 23. Rain from 9^h a. m. till 9^h p. m. on the 24th; amount, 2.215 inches.
 30. Rain during the day; amount, 0.808 inch.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|-----------------|-------|------------|--------|----------|-----------------|-----------------|-------|------------|--------|----------|-----------------|-----------------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. Oct. 1 | 0 | W. | 2 | N. | 10 | 1876. Oct. 2 | 0 | NW. | 2 | C. K. | 2 | 1876. Oct. 3 | 0 | NW. | 1 | Fog | 0 |
| | 3 | NW. | 1 | K. | 10 | | 3 | NW. | 2 | C. | 1 | | 3 | NW. | 1 | Clear | 0 |
| | 6 | NW. | 1 | S. | 1 | | 6 | NW. | 2 | Clear | 0 | | 6 | NW. | 1 | Fog | 0 |
| | 9 | NW. | 3 | S. | 2 | | 9 | NW. | 2 | Clear | 0 | | 9 | W. | 1 | Clear | 0 |
| | Noon | NW. | 3 | C. K. | 4 | | Noon | NW. | 2 | C. K. | 4 | | Noon | SE. | 1 | Clear | 0 |
| | 3 | NW. | 2 | C. K. | 6 | | 3 | NW. | 2 | C. K. | 8 | | 3 | SW. | 2 | Clear | 0 |
| | 6 | W. | 1 | C. K. | 10 | | 6 | NW. | 1 | Haze | | | 6 | S. | 1 | Clear | 0 |
| | 9 | W. NW. | 1 | C. K. | 10 | | 9 | NW. | 1 | C. K. | 2 | | 9 | S. | 1 | Clear | 0 |
| Oct. 4 | 0 | S. | 1 | C. | 1 | Oct. 5 | 0 | NE. | 1 | C. K. | 10 | Oct. 6 | 0 | NE. | 1 | C. K. | 8 |
| | 3 | S. | 1 | C. K. | 9 | | 3 | NE. | 1 | C. K. | 10 | | 3 | NW. | 1 | C. K. | 10 |
| | 6 | W. SW. | 1 | C. K. S. | 6 | | 6 | N. | 1 | C. K. | 10 | | 6 | W. NW. | 1 | K. | 10 |
| | 9 | W. | 1 | C. K. | 10 | | 9 | N. | 1 | Mist | 10 | | 9 | S. SW. | 1 | Haze | |
| | Noon | NE. | 1 | C. K. | 10 | | Noon | N. NE. | 1 | C. K. | 10 | | Noon | SW. | 3 | C. K. | 3 |
| | 3 | SW. | 1 | C. K. | 10 | | 3 | NE. | 1 | C. K. | 6 | | 3 | SW. | 4 | C. K. | 3 |
| | 6 | N. NE. | 1 | N. | 10 | | 6 | NE. | 1 | C. K. | 10 | | 6 | N. NW. | 2 | C. K. | 10 |
| | 9 | N. NW. | 1 | C. K. | 10 | | 9 | NE. | 1 | C. K. | 10 | | 9 | SW. | 1 | C. K. | 10 |
| Oct. 7 | 0 | NW. | 2 | Clear | 0 | Oct. 8 | 0 | NW. | 1 | C. K. | 4 | Oct. 9 | 0 | N. NW. | 1 | C. K. | 9 |
| | 3 | NW. | 2 | Haze | | | 3 | NW. | 1 | C. K. | 9 | | 3 | N. | 1 | C. K. | 4 |
| | 6 | NW. | 3 | C. S. | 1 | | 6 | NW. | 1 | C. K. | 6 | | 6 | NW. | 1 | Haze | |
| | 9 | W. NW. | 4 | C. | 2 | | 9 | S. | 1 | C. K. | 8 | | 9 | NE. | 1 | C. K. | 2 |
| | Noon | W. | 3 | C. K. | 4 | | Noon | S. | 2 | C. K. | 10 | | Noon | S. | 1 | C. K. | 6 |
| | 3 | NW. | 3 | C. K. | 4 | | 3 | S. SW. | 1 | C. K. | 9 | | 3 | SE. | 1 | C. K. | 8 |
| | 6 | NW. | 2 | C. K. S. | 8 | | 6 | SW. | 1 | C. K. S. | 7 | | 6 | SE. | 1 | C. K. S. | 4 |
| | 9 | NW. | 1 | C. | 2 | | 9 | W. | 1 | C. K. | 6 | | 9 | SE. | 1 | C. K. | 4 |
| Oct. 10 | 0 | SE. | 1 | C. K. | 4 | Oct. 11 | 0 | SW. | 2 | C. K. | 2 | Oct. 12 | 0 | NW. | 1 | Clear | 0 |
| | 3 | NW. | 1 | C. K. | 4 | | 3 | NW. | 3 | C. K. | 2 | | 3 | NW. | 1 | Clear | 0 |
| | 6 | S. | 1 | C. K. | 8 | | 6 | NW. | 2 | Haze | | | 6 | NW. | 1 | Clear | 0 |
| | 9 | SW. | 1 | C. K. | 8 | | 9 | W. NW. | 2 | C. K. | 4 | | 9 | E. | 1 | Clear | 0 |
| | Noon | S. SE. | 1 | C. K. | 8 | | Noon | NW. | 3 | C. K. | 3 | | Noon | S. | 1 | C. | 1 |
| | 3 | S. | 1 | C. K. | 8 | | 3 | W. NW. | 3 | C. K. | 3 | | 3 | E. | 1 | C. K. | 2 |
| | 6 | S. | 1 | C. K. | 6 | | 6 | NW. | 1 | Clear | 0 | | 6 | SW. | 1 | C. S. | 3 |
| | 9 | S. | 1 | C. K. | 7 | | 9 | NW. | 1 | Clear | 0 | | 9 | W. | 1 | Clear | 0 |
| Oct. 13 | 0 | NW. | 1 | Clear | 0 | Oct. 14 | 0 | SW. | 1 | Clear | 0 | Oct. 15 | 0 | NW. | 3 | N. | 10 |
| | 3 | NW. | 1 | Clear | 0 | | 3 | SW. | 1 | Clear | 0 | | 3 | NW. | 2 | Snow | 10 |
| | 6 | NW. | 1 | Haze | | | 6 | S. | 1 | Haze | | | 6 | NW. | 2 | N. | 10 |
| | 9 | W. NW. | 1 | C. | 1 | | 9 | SE. | 1 | C. | 2 | | 9 | NW. | 3 | C. K. | 2 |
| | Noon | S. | 1 | Clear | 0 | | Noon | S. | 1 | C. K. | 7 | | Noon | NW. | 4 | C. K. | 7 |
| | 3 | S. SE. | 1 | Clear | 0 | | 3 | S. SW. | 1 | C. K. | 7 | | 3 | NW. | 4 | C. K. | 7 |
| | 6 | SW. | 1 | Clear | 0 | | 6 | S. | 1 | C. K. | 10 | | 6 | NW. | 2 | C. S. | 1 |
| | 9 | SW. | 1 | Clear | 0 | | 9 | NW. | 3 | C. K. | 10 | | 9 | NW. | 1 | Clear | 0 |

REMARKS.

October 4. Light rain at 5^h 40^m p. m.

6. Rain in the morning; amount, 0.212 inch.

8. First white frost this morning.

15. Snow at 3^h a. m., soon changed to rain; amount, 0.162 inch.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. Oct. 16 | 0 | NW. | 1 | Clear | 0 | 1876. Oct. 17 | 0 | SE. | 1 | Clear | 0 | 1876. Oct. 18 | 0 | SW. | 1 | Clear | 0 |
| | 3 | W. | 1 | Clear | 0 | | 3 | SW. | 1 | C. K. | 10 | | 3 | W. | 1 | Clear | 0 |
| | 6 | SW. | 1 | Clear | 0 | | 6 | W. | 1 | C. K. S. | 10 | | 6 | NW. | 1 | Fog | 0 |
| | 9 | NW. | 2 | Clear | 0 | | 9 | SW. | 1 | C. K. | 7 | | 9 | NW. | 1 | Clear | 0 |
| | Noon | W. | 2 | Clear | 0 | | Noon | W. | 2 | C. K. | 2 | | Noon | W. | 1 | Clear | 0 |
| | 3 | W. | 2 | Clear | 0 | | 3 | NW. | 3 | C. K. | 1 | | 3 | W. NW. | 1 | Clear | 0 |
| | 6 | S. SW. | 1 | Clear | 0 | | 6 | N. NW. | 1 | S. | 1 | | 6 | SW. | 1 | C. S. | 1 |
| | 9 | SW. | 1 | Clear | 0 | | 9 | NW. | 2 | Clear | 0 | | 9 | W. | 1 | Clear | 0 |
| Oct. 19 | 0 | NW. | 1 | Clear | 0 | Oct. 20 | 0 | SE. | 1 | N. | 10 | Oct. 21 | 0 | NE. | 1 | N. | 10 |
| | 3 | NW. | 1 | Clear | 0 | | 3 | NE. | 1 | K. | 10 | | 3 | N. | 1 | N. | 10 |
| | 6 | NW. | 1 | Fog | 0 | | 6 | N. | 1 | K. | 10 | | 6 | NW. | 1 | K. | 10 |
| | 9 | NE. | 1 | Haze | 0 | | 9 | E. | 1 | K. | 10 | | 9 | NW. | 1 | N. | 10 |
| | Noon | S. SE. | 1 | C. | 5 | | Noon | NE. | 1 | K. | 10 | | Noon | NE. | 1 | K. | 10 |
| | 3 | S. | 1 | C. K. | 8 | | 3 | E. | 1 | K. | 10 | | 3 | NW. | 1 | C. K. | 10 |
| | 6 | SE. | 1 | C. K. S. | 6 | | 6 | E. NE. | 1 | K. | 10 | | 6 | Calm | 0 | Clear | 0 |
| | 9 | SE. | 1 | Haze | 0 | | 9 | NE. | 1 | K. | 10 | | 9 | NW. | 1 | Fog | 0 |
| Oct. 22 | 0 | SW. | 1 | Mist | 10 | Oct. 23 | 0 | E. | 1 | Mist | 10 | Oct. 24 | 0 | W. | 1 | K. | 10 |
| | 3 | W. | 1 | K. | 10 | | 3 | NE. | 1 | Mist | 10 | | 3 | NW. | 1 | C. K. S. | 4 |
| | 6 | NW. | 1 | Fog | 10 | | 6 | S. | 1 | Fog | 10 | | 6 | NW. | 1 | C. S. | 1 |
| | 9 | NE. | 1 | Fog | 10 | | 9 | SE. | 1 | K. | 10 | | 9 | NW. | 2 | Clear | 0 |
| | Noon | NE. | 1 | Fog | 10 | | Noon | SE. | 1 | C. K. | 7 | | Noon | NW. | 2 | Clear | 0 |
| | 3 | SE. | 1 | C. K. | 8 | | 3 | S. | 2 | C. K. | 10 | | 3 | W. | 2 | Clear | 0 |
| | 6 | E. | 1 | C. K. | 10 | | 6 | E. | 2 | N. | 10 | | 6 | SW. | 1 | C. K. | 2 |
| | 9 | E. | 1 | K. | 10 | | 9 | NE. | 2 | N. | 10 | | 9 | SW. | 1 | C. K. | 10 |
| Oct. 25 | 0 | NW. | 3 | S. | 1 | Oct. 26 | 0 | S. | 1 | K. | 10 | Oct. 27 | 0 | SW. | 1 | K. | 10 |
| | 3 | NW. | 2 | Clear | 0 | | 3 | W. | 1 | C. K. S. | 2 | | 3 | SW. | 1 | K. | 10 |
| | 6 | NW. | 2 | C. S. | 1 | | 6 | W. | 2 | C. K. S. | 8 | | 6 | NW. | 1 | C. K. S. | 10 |
| | 9 | W. | 1 | C. K. | 4 | | 9 | W. | 2 | K. | 10 | | 9 | NW. | 2 | C. K. | 6 |
| | Noon | NW. | 1 | C. K. | 8 | | Noon | W. | 2 | K. | 10 | | Noon | NW. | 3 | C. S. | 4 |
| | 3 | NW. | 3 | C. K. | 8 | | 3 | W. NW. | 2 | K. | 10 | | 3 | NW. | 1 | C. | 1 |
| | 6 | W. | 2 | C. K. | 8 | | 6 | W. | 2 | C. K. | 10 | | 6 | NW. | 1 | Clear | 0 |
| | 9 | W. | 2 | C. K. | 10 | | 9 | W. | 2 | C. K. | 10 | | 9 | E. | 1 | Clear | 0 |
| Oct. 28 | 0 | W. | 1 | Clear | 0 | Oct. 29 | 0 | NE. | 1 | N. | 10 | Oct. 30 | 0 | NE. | 1 | K. | 10 |
| | 3 | NW. | 1 | Clear | 0 | | 3 | E. | 1 | K. | 10 | | 3 | NE. | 1 | C. K. | 10 |
| | 6 | SE. | 2 | C. K. | 10 | | 6 | NE. | 1 | N. | 10 | | 6 | NE. | 1 | K. | 10 |
| | 9 | S. | 2 | C. K. | 10 | | 9 | E. NE. | 1 | Mist | 10 | | 9 | E. | 1 | K. | 10 |
| | Noon | S. | 1 | C. K. | 9 | | Noon | NE. | 1 | N. | 10 | | Noon | SE. | 1 | C. K. | 10 |
| | 3 | NE. | 1 | C. K. | 9 | | 3 | NE. | 1 | K. | 10 | | 3 | S. | 1 | K. | 10 |
| | 6 | N. NE. | 1 | C. K. S. | 9 | | 6 | NE. | 1 | K. | 10 | | 6 | S. | 1 | K. | 10 |
| | 9 | NE. | 1 | N. | 10 | | 9 | NE. | 1 | K. | 10 | | 9 | S. | 1 | K. | 10 |

REMARKS.

October 20. Light showers.

21. Light showers; amount on both days, 0.030 inch.

23. Heavy rain at 3^h 45^m p. m.; amount, 2.170 inches.

29. Light rain during the day; amount, 0.120 inch.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|------------------|-------|------------|--------|----------|-----------------|---------|-------|------------|--------|----------|-----------------|---------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. Oct. 31 | 0 | S. | 1 | C. K. | 10 | 1876. | | | | | | 1876. | | | | | |
| | 3 | S. | 1 | C. K. | 10 | | | | | | | | | | | | |
| | 6 | E. | 1 | K. | 10 | | | | | | | | | | | | |
| | 9 | E. | 1 | K. | 10 | | | | | | | | | | | | |
| | Noon | S. | 1 | K. | 10 | | | | | | | | | | | | |
| | 3 | S. | 1 | C. K. | 6 | | | | | | | | | | | | |
| | 6 | S. | 1 | C. | 1 | | | | | | | | | | | | |
| | 9 | SW. | 1 | Clear | 0 | | | | | | | | | | | | |
| Nov. 1 | 0 | E. | 1 | Haze | | Nov. 2 | 0 | S. | 1 | Clear | 0 | Nov. 3 | 0 | SW. | 3 | C. K. | 10 |
| | 3 | E. | 1 | Fog | | | 3 | SE. | 1 | Clear | 0 | | 3 | SW. | 2 | N. | 10 |
| | 6 | NW. | 1 | Fog | | | 9 | SE. | 1 | Clear | 0 | | 6 | NW. | 1 | C. K. | 10 |
| | 9 | W. NW. | 1 | Haze | | | 9 | S. | 1 | C. K. | 5 | | 9 | N. NW. | 2 | C. K. | 10 |
| | Noon | SE. | 1 | Haze | | | Noon | S. | 3 | C. K. | 4 | | Noon | NW. | 2 | C. K. | 9 |
| | 3 | S. | 1 | C. | 4 | | 3 | S. | 2 | C. K. | 9 | | 3 | N. | 2 | C. K. | 6 |
| | 6 | SW. | 1 | C. S. | 2 | | 6 | S. | 2 | C. K. | 9 | | 6 | NW. | 1 | S. | 1 |
| | 9 | S. | 1 | Clear | 0 | | 9 | S. | 3 | K. | 10 | | 9 | NW. | 1 | C. K. S. | 10 |
| Nov. 4 | 0 | NW. | 1 | C. K. | 10 | Nov. 5 | 0 | NW. | 1 | C. K. | 10 | Nov. 6 | 0 | NW. | 1 | Clear | 0 |
| | 3 | NW. | 1 | Clear | 0 | | 3 | NW. | 1 | K. | 10 | | 3 | NW. | 1 | C. S. | 4 |
| | 6 | NW. | 1 | Clear | 0 | | 6 | NW. | 1 | K. | 10 | | 6 | N. | 1 | C. K. S. | 6 |
| | 9 | N. NW. | 2 | Clear | 0 | | 9 | N. | 1 | C. K. | 9 | | 9 | E. | 1 | C. K. | 10 |
| | Noon | NW. | 1 | C. K. | 6 | | Noon | SE. | 1 | C. K. | 2 | | Noon | SE. | 2 | C. K. | 10 |
| | 3 | NW. | 1 | C. K. | 3 | | 3 | SE. | 1 | C. | 2 | | 3 | SE. | 2 | C. K. | 10 |
| | 6 | NW. | 1 | C. K. | 4 | | 6 | E. SE. | 1 | C. S. | 1 | | 6 | E. | 1 | N. | 10 |
| | 9 | N. | 1 | C. K. | 9 | | 9 | NW. | 1 | C. K. | 6 | | 9 | E. | 1 | K. | 10 |
| Nov. 7 | 0 | SE. | 1 | N. | 10 | Nov. 8 | 0 | NW. | 1 | C. K. S. | 4 | Nov. 9 | 0 | NW. | 1 | C. K. | 4 |
| | 3 | SW. | 1 | N. | 10 | | 3 | NW. | 1 | Clear | 0 | | 3 | NW. | 3 | C. K. | 5 |
| | 6 | NW. | 1 | K. | 10 | | 6 | NW. | 1 | Clear | 0 | | 6 | NW. | 2 | C. K. | 8 |
| | 9 | W. NW. | 2 | C. K. | 10 | | 9 | NW. | 2 | C. K. | 2 | | 9 | NW. | 2 | C. K. | 7 |
| | Noon | N. | 1 | C. K. | 10 | | Noon | NW. | 2 | C. K. | 3 | | Noon | NW. | 1 | C. K. | 8 |
| | 3 | N. | 2 | C. K. | 9 | | 3 | NW. | 2 | C. K. | 8 | | 3 | W. NW. | 1 | C. K. | 7 |
| | 6 | NW. | 1 | C. K. S. | 2 | | 6 | NW. | 2 | C. S. | 1 | | 6 | W. | 1 | C. K. S. | 6 |
| | 9 | NW. | 1 | C. S. | 1 | | 9 | NW. | 2 | C. K. | 9 | | 9 | W. NW. | 2 | C. K. | 6 |
| Nov. 10 | 0 | NW. | 3 | C. K. | 10 | Nov. 11 | 0 | NW. | 1 | C. K. | 10 | Nov. 12 | 0 | NW. | 1 | S. | 1 |
| | 3 | NW. | 2 | C. K. | 7 | | 3 | NW. | 1 | C. K. | 6 | | 3 | NW. | 1 | C. S. | 1 |
| | 6 | NW. | 2 | C. K. | 8 | | 6 | NW. | 1 | K. | 10 | | 6 | NW. | 1 | S. | 1 |
| | 9 | NW. | 1 | C. K. | 7 | | 9 | NW. | 1 | K. | 10 | | 9 | NW. | 2 | Clear | 0 |
| | Noon | N. | 2 | C. K. | 4 | | Noon | NW. | 1 | C. K. | 9 | | Noon | NW. | 1 | Clear | 0 |
| | 3 | NW. | 1 | C. K. | 7 | | 3 | NW. | 1 | C. K. | 10 | | 3 | NW. | 1 | C. S. | 2 |
| | 6 | NW. | 1 | K. S. | 1 | | 6 | NW. | 1 | C. K. | 6 | | 6 | NW. | 1 | C. | 1 |
| | 9 | NW. | 1 | K. S. | 2 | | 9 | NW. | 1 | C. K. | 9 | | 9 | NW. | 1 | C. K. | 2 |

REMARKS.

October 31. Light shower at 0^h 55^m a. m.; amount, 0.050 inch.
 November 3. Rain at 1^h 25^m a. m.; amount, 0.104 inch.
 7. Rain at 7^h a. m.; amount, 0.188 inch.
 11. Light shower at 8^h p. m.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. Nov. 13 | 0 | W. | 1 | Clear | 0 | 1876. Nov. 14 | 0 | NW. | 1 | K. | 10 | 1876. Nov. 15 | 0 | E. | 1 | N. | 10 |
| | 3 | W. | 1 | Clear | 0 | | 3 | NW. | 1 | C. | 2 | | 3 | E. | 1 | K. | 10 |
| | 6 | NW. | 1 | C. K. S. | 6 | | 6 | NW. | 1 | C. S. | 1 | | 6 | NE. | 1 | Mist | 10 |
| | 9 | W. | 1 | C. K. S. | 4 | | 9 | N. | 1 | C. K. | 7 | | 9 | N. | 1 | Mist | 10 |
| | Noon | E. | 1 | C. K. | 6 | | Noon | E. | 1 | C. K. | 6 | | Noon | N. | 1 | K. | 10 |
| | 3 | W. | 1 | C. K. | 9 | | 3 | NE. | 1 | N. | 10 | | 3 | N. NW. | 1 | K. | 10 |
| | 6 | NW. | 1 | C. K. | 10 | | 6 | NE. | 1 | K. | 10 | | 6 | W. | 1 | K. | 10 |
| | 9 | NW. | 1 | K. | 10 | | 9 | NE. | 1 | N. | 10 | | 9 | NW. | 1 | K. | 10 |
| Nov. 16 | 0 | NW. | 1 | K. | 10 | Nov. 17 | 0 | E. | 1 | K. | 10 | Nov. 18 | 0 | NE. | 1 | N. | 10 |
| | 3 | NW. | 1 | K. | 10 | | 3 | E. | 1 | K. | 10 | | 3 | NE. | 1 | N. | 10 |
| | 6 | NE. | 2 | K. | 10 | | 6 | NE. | 1 | K. | 10 | | 6 | NE. | 1 | Mist | 10 |
| | 9 | NE. | 1 | Mist | 10 | | 9 | E. | 1 | K. | 10 | | 9 | NE. | 1 | N. | 10 |
| | Noon | N. | 1 | K. | 10 | | Noon | NE. | 1 | K. | 10 | | Noon | NE. | 1 | N. | 10 |
| | 3 | N. | 1 | K. | 10 | | 3 | NE. | 1 | N. | 10 | | 3 | E. | 1 | K. | 10 |
| | 6 | N. | 1 | K. | 10 | | 6 | N. | 1 | N. | 10 | | 6 | NE. | 2 | N. | 10 |
| | 9 | NE. | 1 | K. | 10 | | 9 | N. | 1 | K. | 10 | | 9 | NE. | 2 | N. | 10 |
| Nov. 19 | 0 | NE. | 2 | N. | 10 | Nov. 20 | 0 | E. | 2 | N. | 10 | Nov. 21 | 0 | N. | 2 | K. | 10 |
| | 3 | E. NE. | 2 | Mist | 10 | | 3 | E. | 4 | N. | 10 | | 3 | NW. | 2 | C. K. | 3 |
| | 6 | E. NE. | 2 | N. | 10 | | 6 | E. NE. | 1 | K. | 10 | | 6 | N. | 2 | C. K. | 9 |
| | 9 | NE. | 3 | N. | 10 | | 9 | N. NE. | 3 | N. | 10 | | 9 | N. | 1 | C. K. | 10 |
| | Noon | NE. | 2 | N. | 10 | | Noon | NE. | 2 | N. | 10 | | Noon | N. | 2 | C. K. | 9 |
| | 3 | NE. | 2 | N. | 10 | | 3 | N. NE. | 2 | K. | 10 | | 3 | NW. | 1 | C. K. | 10 |
| | 6 | N. | 1 | N. | 10 | | 6 | N. NW. | 2 | N. | 10 | | 6 | NW. | 1 | K. | 10 |
| | 9 | E. | 1 | N. | 10 | | 9 | NW. | 3 | K. | 10 | | 9 | W. | 1 | K. | 10 |
| Nov. 22 | 0 | W. | 1 | C. K. | 8 | Nov. 23 | 0 | N. | 1 | Clear | 0 | Nov. 24 | 0 | NW. | 1 | K. | 10 |
| | 3 | W. | 1 | C. K. | 10 | | 3 | NW. | 1 | Clear | 0 | | 3 | NW. | 2 | C. K. | 4 |
| | 6 | NE. | 1 | C. K. | 10 | | 6 | NW. | 1 | C. K. | 4 | | 6 | NW. | 2 | Clear | 0 |
| | 9 | S. | 1 | C. K. | 7 | | 9 | NW. | 1 | C. K. | 10 | | 9 | NW. | 2 | Clear | 0 |
| | Noon | S. | 1 | C. K. | 4 | | Noon | N. | 1 | C. K. | 10 | | Noon | NW. | 3 | C. K. | 3 |
| | 3 | S. | 1 | C. K. | 3 | | 3 | N. NW. | 1 | C. K. | 10 | | 3 | W. NW. | 2 | Clear | 0 |
| | 6 | S. | 1 | Clear | 0 | | 6 | NW. | 1 | C. K. | 10 | | 6 | NW. | 1 | Clear | 0 |
| | 9 | W. | 1 | C. K. | 4 | | 9 | NW. | 1 | K. | 10 | | 9 | NW. | 1 | C. K. | 8 |
| Nov. 25 | 0 | NW. | 1 | C. K. | 3 | Nov. 26 | 0 | SE. | 1 | N. | 10 | Nov. 27 | 0 | W. | 1 | C. | 2 |
| | 3 | NW. | 1 | C. K. | 10 | | 3 | S. | 1 | N. | 10 | | 3 | SW. | 1 | C. K. | 4 |
| | 6 | NW. | 1 | C. K. | 10 | | 6 | S. | 1 | N. | 10 | | 6 | S. | 1 | K. | 10 |
| | 9 | NW. | 1 | C. S. | 1 | | 9 | W. | 1 | N. | 10 | | 9 | S. | 1 | K. | 10 |
| | Noon | SE. | 1 | C. K. | 10 | | Noon | NW. | 1 | C. K. | 10 | | Noon | S. SE. | 1 | Snow | 10 |
| | 3 | E. | 1 | C. K. | 10 | | 3 | NW. | 3 | C. K. | 8 | | 3 | SW. | 1 | C. K. | 10 |
| | 6 | S. SE. | 1 | C. K. | 10 | | 6 | NW. | 3 | C. K. | 3 | | 6 | NW. | 1 | C. K. | 2 |
| | 9 | W. | 1 | C. K. | 10 | | 9 | NW. | 2 | Clear | 0 | | 9 | W. NW. | 1 | C. K. | 2 |

REMARKS.

November 14. Rain at 3^h p. m. ; amount, 0.228 inch.17. Rain from 3^h p. m. till 9^h p. m. on the 20th; amount, 2.036 inches.25. Rain at 11^h 30^m p. m. ; amount, 0.086 inch.27. Light snow at 3^h p. m. ; amount of melted snow, 0.040 inch.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. Nov. 28 | 0 | W. | 2 | C. K. | 4 | 1876. Nov. 29 | 0 | NW. | 1 | C. K. | 4 | 1876. Nov. 30 | 0 | NW. | 1 | C. K. | 10 |
| | 3 | W. | 1 | C. K. | 10 | | 3 | NW. | 1 | C. K. | 6 | | 3 | NE. | 1 | K. | 10 |
| | 6 | W. NW. | 1 | K. | 10 | | 6 | NW. | 1 | C. K. | 8 | | 6 | NE. | 1 | Snow | 10 |
| | 9 | W. | 1 | C. K. | 10 | | 9 | NW. | 1 | C. K. | 10 | | 9 | N. NE. | 1 | Snow | 10 |
| | Noon | W. | 1 | C. K. | 9 | | Noon | NW. | 1 | C. K. S. | 3 | | Noon | NW. | 1 | Snow | 10 |
| | 3 | W. | 1 | C. K. | 6 | | 3 | N. | 1 | C. K. S. | 2 | | 3 | N. NW. | 2 | C. K. | 10 |
| | 6 | SW. | 1 | C. K. | 6 | | 6 | NW. | 2 | C. | 1 | | 6 | NW. | 3 | C. K. | 10 |
| | 9 | SE. | 1 | C. K. | 9 | | 9 | NE. | 1 | C. K. | 9 | | 9 | NW. | 3 | C. K. | 10 |
| Dec. 1 | 0 | NW. | 2 | C. K. | 9 | Dec. 2 | 0 | W. | 2 | K. | 10 | Dec. 3 | 0 | NW. | 2 | C. K. | 3 |
| | 3 | N. NW. | 2 | C. K. | 8 | | 3 | W. | 3 | K. | 10 | | 3 | NW. | 2 | C. | 1 |
| | 6 | NW. | 1 | K. | 10 | | 6 | W. | 3 | K. | 10 | | 6 | NW. | 2 | C. K. | 1 |
| | 9 | W. | 3 | C. K. | 10 | | 9 | W. NW. | 3 | C. K. | 10 | | 9 | W. | 2 | C. | 1 |
| | Noon | W. | 3 | C. K. | 9 | | Noon | W. NW. | 3 | C. K. | 10 | | Noon | NW. | 3 | C. K. S. | 10 |
| | 3 | W. | 3 | C. K. | 8 | | 3 | W. NW. | 3 | C. K. | 10 | | 3 | NW. | 3 | C. K. | 8 |
| | 6 | NW. | 2 | Clear | 0 | | 6 | W. NW. | 3 | K. | 10 | | 6 | NW. | 2 | C. K. | 10 |
| | 9 | W. | 2 | C. K. | 9 | | 9 | NW. | 3 | C. K. | 4 | | 9 | NW. | 2 | C. K. | 4 |
| Dec. 4 | 0 | W. NW. | 1 | Clear | 0 | Dec. 5 | 0 | NW. | 1 | C. K. | 10 | Dec. 6 | 0 | NW. | 1 | Clear | 0 |
| | 3 | NW. | 2 | Clear | 0 | | 3 | NW. | 1 | C. K. | 9 | | 3 | NW. | 1 | Clear | 0 |
| | 6 | NW. | 1 | C. K. | 2 | | 6 | N. NW. | 1 | C. S. | 1 | | 6 | NW. | 1 | Clear | 0 |
| | 9 | NW. | 1 | C. K. | 6 | | 9 | N. | 2 | C. K. | 6 | | 9 | NW. | 1 | Clear | 0 |
| | Noon | NW. | 1 | C. K. | 5 | | Noon | N. NW. | 3 | C. K. | 10 | | Noon | SE. | 1 | Clear | 0 |
| | 3 | NW. | 3 | C. K. | 8 | | 3 | N. NW. | 3 | C. K. | 10 | | 3 | S. | 1 | S. | 1 |
| | 6 | NW. | 2 | C. K. | 5 | | 6 | NW. | 2 | Clear | 0 | | 6 | SE. | 1 | C. K. | 9 |
| | 9 | NW. | 2 | C. K. | 8 | | 9 | NW. | 2 | Clear | 0 | | 9 | SW. | 1 | Clear | 0 |
| Dec. 7 | 0 | NW. | 1 | C. S. | 1 | Dec. 8 | 0 | SW. | 2 | C. S. | 1 | Dec. 9 | 0 | SW. | 2 | Haze | |
| | 3 | NW. | 1 | C. K. | 10 | | 3 | W. | 1 | C. K. | 8 | | 3 | NW. | 4 | C. K. | 5 |
| | 6 | W. | 1 | C. K. | 1 | | 6 | E. | 1 | C. K. | 10 | | 6 | NW. | 5 | S. | 1 |
| | 9 | NW. | 1 | C. K. S. | 10 | | 9 | S. SE. | 1 | C. K. | 10 | | 9 | NW. | 5 | Clear | 0 |
| | Noon | E. | 1 | C. K. S. | 6 | | Noon | SE. | 1 | K. | 10 | | Noon | W. NW. | 5 | C. | 1 |
| | 3 | W. SW. | 1 | C. K. | 3 | | 3 | S. | 2 | K. | 10 | | 3 | W. NW. | 5 | C. | 1 |
| | 6 | SW. | 1 | Clear | 0 | | 6 | SW. | 1 | K. | 10 | | 6 | NW. | 4 | Clear | 0 |
| | 9 | NW. | 1 | Clear | 0 | | 9 | W. | 1 | C. K. | 3 | | 9 | NW. | 4 | Clear | 0 |
| Dec. 10 | 0 | NW. | 3 | Clear | 0 | Dec. 11 | 0 | S. | 2 | C. K. | 10 | Dec. 12 | 0 | NE. | 2 | Snow | 10 |
| | 3 | NW. | 3 | Clear | 0 | | 3 | S. | 1 | C. K. | 10 | | 3 | NE. | 1 | Snow | 10 |
| | 6 | W. NW. | 3 | Haze | | | 6 | S. | 1 | C. K. | 10 | | 6 | W. | 1 | K. | 10 |
| | 9 | W. | 2 | C. K. | 10 | | 9 | E. NE. | 1 | C. K. S. | 8 | | 9 | W. | 1 | K. | 10 |
| | Noon | W. | 1 | C. K. | 9 | | Noon | E. | 1 | C. K. | 9 | | Noon | W. | 1 | C. K. | 7 |
| | 3 | S. | 2 | C. K. | 10 | | 3 | E. | 2 | C. K. | 10 | | 3 | W. | 1 | C. K. | 2 |
| | 6 | S. | 1 | K. | 10 | | 6 | E. | 1 | K. | 10 | | 6 | W. | 1 | C. | 1 |
| | 9 | S. | 1 | K. | 10 | | 9 | NE. | 1 | K. | 10 | | 9 | E. | 1 | C. K. | 10 |

REMARKS.

November 30. Snow at 5^h 30^m a. m. Depth of snow, 0.50 inch.; when melted, 0.056 inch.
 December 12. Snowing at 11^h 45^m p. m. Depth, about 0.5 inch; when melted, 0.056 inch.

| Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. | Day. | Hour. | WIND. | | Weather. | Portion cloudy. |
|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. Dec. 13 | 0 | NW. | 1 | Clear | 0 | 1876. Dec. 14 | 0 | S. | 1 | Haze | | 1876. Dec. 15 | 0 | NW. | 1 | C. K. | 9 |
| | 3 | NW. | 1 | Clear | 0 | | 3 | S. | 1 | C. K. | 9 | | 3 | NW. | 3 | C. K. | 10 |
| | 6 | S. | 1 | Clear | 0 | | 6 | S. | 1 | C. K. | 4 | | 6 | NW. | 3 | C. K. | 10 |
| | 9 | SW. | 1 | Clear | 0 | | 9 | S. | 1 | C. K. | 10 | | 9 | NW. | 3 | C. K. | 5 |
| | Noon | SW. | 2 | C. K. | 8 | | Noon | SE. | 1 | C. K. | 10 | | Noon | NW. | 2 | Clear | 0 |
| | 3 | S. SW. | 2 | C. | 4 | | 3 | W. | 1 | C. K. | 10 | | 3 | W. | 1 | Clear | 0 |
| | 6 | SW. | 1 | C. S. | 4 | | 6 | NW. | 1 | K. | 10 | | 6 | SE. | 1 | Clear | 0 |
| | 9 | S. | 1 | Haze | 0 | | 9 | NW. | 1 | K. | 10 | | 9 | SE. | 1 | Clear | 0 |
| Dec. 16 | 0 | S. | 3 | Clear | 0 | Dec. 17 | 0 | NW. | 2 | Clear | 0 | Dec. 18 | 0 | NE. | 1 | Snow | 10 |
| | 3 | S. | 2 | C. K. | 4 | | 3 | N. | 1 | Clear | 0 | | 3 | E. | 1 | Sleet | 10 |
| | 6 | S. | 2 | C. K. S. | 2 | | 6 | NE. | 1 | C. S. | 4 | | 6 | SE. | 1 | Sleet | 10 |
| | 9 | W. | 3 | Clear | 0 | | 9 | E. | 1 | C. K. | 3 | | 9 | SE. | 1 | K. | 10 |
| | Noon | NW. | 4 | Clear | 0 | | Noon | SE. | 1 | C. K. | 9 | | Noon | W. | 1 | N. | 10 |
| | 3 | N. NW. | 3 | Clear | 0 | | 3 | E. | 2 | C. K. | 8 | | 3 | NW. | 1 | Snow | 10 |
| | 6 | NW. | 3 | Clear | 0 | | 6 | SE. | 1 | C. S. | 1 | | 6 | NW. | 2 | Haze | |
| | 9 | NW. | 4 | Clear | 0 | | 9 | NE. | 2 | Haze | | | 9 | NW. | 3 | Clear | 0 |
| Dec. 19 | 0 | NW. | 1 | Clear | 0 | Dec. 20 | 0 | N. | 1 | Clear | 0 | Dec. 21 | 0 | SE. | 1 | Haze | |
| | 3 | NW. | 1 | Clear | 0 | | 3 | N. | 1 | Clear | 0 | | 3 | NE. | 1 | C. K. | 6 |
| | 6 | NW. | 1 | Clear | 0 | | 6 | N. | 1 | Clear | 0 | | 6 | SE. | 1 | K. | 10 |
| | 9 | SW. | 1 | C. K. | 9 | | 9 | N. NW. | 1 | Haze | | | 9 | NE. | 1 | K. | 10 |
| | Noon | S. | 1 | C. K. S. | 3 | | Noon | S. | 1 | C. K. | 3 | | Noon | E. | 1 | C. K. | 8 |
| | 3 | S. | 1 | Clear | 0 | | 3 | SE. | 1 | C. K. | 9 | | 3 | E. | 1 | Haze | |
| | 6 | W. | 1 | Clear | 0 | | 6 | SW. | 1 | Clear | 0 | | 6 | SE. | 1 | Clear | 0 |
| | 9 | SW. | 2 | Clear | 0 | | 9 | E. | 1 | Haze | | | 9 | SW. | 1 | Clear | 0 |
| Dec. 22 | 0 | NW. | 1 | C. K. | 6 | Dec. 23 | 0 | NW. | 1 | K. | 10 | Dec. 24 | 0 | NW. | 2 | K. | 10 |
| | 3 | SE. | 1 | K. | 10 | | 3 | NW. | 2 | C. K. | 6 | | 3 | NW. | 1 | K. | 10 |
| | 6 | NE. | 1 | K. | 10 | | 6 | NW. | 1 | C. K. | 4 | | 6 | NW. | 1 | K. | 10 |
| | 9 | NE. | 1 | Hail | 10 | | 9 | NW. | 1 | C. K. | 9 | | 9 | N. NW. | 1 | K. | 10 |
| | Noon | E. NE. | 1 | Sleet | 10 | | Noon | NW. | 1 | C. K. | 9 | | Noon | NE. | 1 | K. | 10 |
| | 3 | NE. | 1 | N. | 10 | | 3 | NW. | 1 | C. K. | 4 | | 3 | NE. | 1 | K. | 10 |
| | 6 | NW. | 1 | K. | 10 | | 6 | NW. | 1 | C. K. | 6 | | 6 | NE. | 2 | K. | 10 |
| | 9 | NW. | 1 | K. | 10 | | 9 | NW. | 2 | K. | 10 | | 9 | NE. | 1 | K. | 10 |
| Dec. 25 | 0 | NE. | 1 | K. | 10 | Dec. 26 | 0 | N. | 1 | Mist | 10 | Dec. 27 | 0 | NW. | 1 | C. K. | 9 |
| | 3 | NE. | 1 | K. | 10 | | 3 | N. | 1 | Mist | 10 | | 3 | NW. | 1 | C. S. | 2 |
| | 6 | N. | 1 | K. | 10 | | 6 | NW. | 2 | Mist | 10 | | 6 | NW. | 1 | S. | 1 |
| | 9 | NE. | 1 | K. | 10 | | 9 | N. NW. | 1 | Snow | 10 | | 9 | NW. | 1 | C. S. | 4 |
| | Noon | N. | 1 | Snow | 10 | | Noon | NW. | 2 | C. S. | 6 | | Noon | NW. | 1 | C. | 2 |
| | 3 | N. | 1 | Snow | 10 | | 3 | NW. | 2 | C. K. S. | 8 | | 3 | NW. | 1 | C. S. | 3 |
| | 6 | NE. | 1 | Snow | 10 | | 6 | NW. | 1 | C. K. | 7 | | 6 | NW. | 1 | C. K. | 4 |
| | 9 | N. | 1 | Sleet | 10 | | 9 | NW. | 1 | C. K. | 10 | | 9 | NW. | 1 | C. | 8 |

REMARKS.

December 21. Light snow at 10^h 15^m a. m.

26. Light snow at noon. Depth, about 0.5 inch; when melted, 0.056 inch.

METEOROLOGICAL OBSERVATIONS.

| Date. | Hour. | WIND. | | Weather. | Portion cloudy. | Date. | Hour. | WIND. | | Weather. | Portion cloudy. | Date. | Hour. | WIND. | | Weather. | Portion cloudy. |
|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|------------------|-------|------------|--------|----------|-----------------|
| | | Direction. | Force. | | | | | Direction. | Force. | | | | | Direction. | Force. | | |
| 1876. Dec. 28 | 0 | NW. | 1 | Haze | | 1876. Dec. 29 | 0 | N. | 1 | Snow | 10 | 1876. Dec. 30 | 0 | SW. | 1 | C. K. | 9 |
| | 3 | NW. | 1 | C. K. | 10 | | 3 | N. NE. | 1 | K. | 10 | | 3 | W. | 3 | C. K. | 3 |
| | 6 | NW. | 1 | C. K. | 10 | | 6 | NE. | 1 | Snow | 10 | | 6 | W. | 2 | C. K. | 3 |
| | 9 | NE. | 1 | K. | 10 | | 9 | NE. | 2 | Sleet | 10 | | 9 | W. | 2 | C. | 1 |
| | Noon | NE. | 1 | K. | 10 | | Noon | N. | 1 | N. | 10 | | Noon | NW. | 5 | C. K. | 7 |
| | 3 | NE. | 1 | K. | 10 | | 3 | NW. | 1 | Mist | 10 | | 3 | W. NW. | 3 | C. K. | 10 |
| | 6 | N. NE. | 1 | K. | 10 | | 6 | W. | 2 | K. | 10 | | 6 | NW. | 2 | C. S. | 1 |
| | 9 | E. NE. | 1 | K. | 10 | | 9 | SW. | 2 | C. K. | 10 | | 9 | NW. | 2 | Clear | 0 |
| Dec. 31 | 0 | W. NW. | 1 | Clear | 0 | | | | | | | | | | | | |
| | 3 | W. | 1 | Clear | 0 | | | | | | | | | | | | |
| | 6 | W. | 2 | Clear | 0 | | | | | | | | | | | | |
| | 9 | NW. | 2 | C. | 1 | | | | | | | | | | | | |
| | Noon | NW. | 3 | Clear | 0 | | | | | | | | | | | | |
| | 3 | NW. | 2 | C. K. | 2 | | | | | | | | | | | | |
| | 6 | NW. | 1 | Clear | 0 | | | | | | | | | | | | |
| | 9 | NW. | 1 | Clear | 0 | | | | | | | | | | | | |

REMARKS.

December 29. Snow, sleet, and rain during the day. Depth of snow and sleet, 2.0 inches, amount when melted and measured with the rain, 1.342 inch.

METEOROLOGICAL OBSERVATIONS.

MEAN MONTHLY AND ANNUAL RESULTS.

1876.

TABLE I.

Monthly Means of Barometric Pressure.

| Date. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|-------------|------------------|------------------|------------------|------------------|--------|------------------|------------------|------------------|
| 1876. | in. | in. | in. | in. | in. | in. | in. | in. |
| January . | 30.069 | 30.077 | 30.086 | 30.127 | 30.078 | 30.044 | 30.068 | 30.092 |
| February . | 30.023 | 30.016 | 30.043 | 30.091 | 30.064 | 30.028 | 30.034 | 30.039 |
| March . | 29.953 | 29.945 | 29.968 | 29.994 | 29.977 | 29.926 | 29.922 | 29.949 |
| April . | 29.935 | 29.938 | 29.958 | 29.974 | 29.931 | 29.880 | 29.886 | 29.923 |
| May . | 29.964 | 29.964 | 29.966 | 29.998 | 29.972 | 29.934 | 29.930 | 29.964 |
| June . | 29.908 | 29.906 | 29.930 | 29.942 | 29.926 | 29.885 | 29.879 | 29.904 |
| July . | 29.924 | 29.918 | 29.935 | 29.951 | 29.934 | 29.895 | 29.888 | 29.914 |
| August . | 29.973 | 29.964 | 29.942 | 30.003 | 29.986 | 29.951 | 29.941 | 29.969 |
| September. | 29.890 | 29.884 | 29.898 | 29.919 | 29.895 | 29.859 | 29.861 | 29.892 |
| October . | 29.946 | 29.940 | 29.962 | 29.987 | 29.948 | 29.907 | 29.923 | 29.948 |
| November. | 29.905 | 29.898 | 29.911 | 29.929 | 29.892 | 29.853 | 29.879 | 29.890 |
| December . | 29.951 | 29.951 | 29.961 | 30.001 | 29.962 | 29.928 | 29.964 | 29.971 |
| Ann'l means | 29.953 | 29.950 | 29.967 | 29.993 | 29.964 | 29.924 | 29.931 | 29.956 |

TABLE II.

Monthly Means of Dry Thermometer.

| Date. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|-------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | ° | ° | ° | ° | ° | ° | ° | ° |
| January . | 37.3 | 36.1 | 35.3 | 36.7 | 41.6 | 46.2 | 41.1 | 38.0 |
| February . | 33.2 | 32.1 | 30.3 | 32.3 | 40.9 | 43.7 | 39.3 | 35.4 |
| March . | 35.6 | 33.9 | 33.1 | 36.9 | 42.7 | 45.6 | 41.8 | 38.0 |
| April . | 45.6 | 42.7 | 41.7 | 50.6 | 57.1 | 59.8 | 55.6 | 49.1 |
| May . | 57.6 | 54.9 | 54.7 | 61.6 | 70.7 | 71.4 | 67.1 | 61.1 |
| June . | 68.2 | 65.9 | 66.3 | 76.6 | 82.4 | 84.4 | 78.5 | 71.9 |
| July . | 73.7 | 72.4 | 71.4 | 82.6 | 88.1 | 90.0 | 84.0 | 76.9 |
| August . | 70.3 | 68.4 | 68.3 | 76.4 | 81.3 | 83.2 | 78.1 | 72.8 |
| September. | 61.5 | 60.1 | 59.4 | 66.0 | 71.7 | 72.7 | 66.6 | 62.6 |
| October . | 46.2 | 44.1 | 43.1 | 50.6 | 59.4 | 60.6 | 52.8 | 48.7 |
| November. | 42.9 | 41.1 | 40.2 | 43.1 | 50.4 | 50.8 | 45.9 | 43.4 |
| December . | 23.8 | 22.8 | 21.8 | 24.0 | 30.7 | 31.5 | 27.2 | 24.9 |
| Ann'l means | 49.7 | 47.9 | 47.1 | 53.3 | 60.0 | 61.7 | 56.5 | 51.9 |

TABLE III.

Monthly Means of Wet Thermometer.

| Date. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|-------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | ° | ° | ° | ° | ° | ° | ° | ° |
| January . | 36.1 | 35.9 | 35.9 | 35.6 | 40.9 | 42.0 | 38.8 | 36.5 |
| February . | 33.6 | 32.7 | 31.5 | 31.6 | 37.9 | 39.8 | 37.2 | 34.7 |
| March . | 34.8 | 33.6 | 32.8 | 35.5 | 39.4 | 41.2 | 38.9 | 36.6 |
| April . | 43.3 | 41.4 | 40.6 | 46.3 | 50.4 | 51.6 | 49.1 | 45.6 |
| May . | 56.2 | 54.1 | 54.0 | 59.9 | 63.7 | 64.2 | 61.7 | 58.6 |
| June . | 67.3 | 65.6 | 65.8 | 71.9 | 74.8 | 75.3 | 72.7 | 69.3 |
| July . | 72.1 | 70.6 | 70.2 | 75.5 | 78.4 | 79.2 | 76.7 | 73.7 |
| August . | 69.8 | 68.3 | 68.3 | 72.8 | 75.6 | 77.1 | 74.7 | 71.7 |
| September. | 60.8 | 59.4 | 59.0 | 63.1 | 65.9 | 66.7 | 63.7 | 61.3 |
| October . | 46.0 | 44.0 | 43.1 | 47.9 | 54.5 | 54.6 | 50.4 | 47.9 |
| November. | 42.3 | 40.9 | 40.2 | 42.0 | 46.9 | 47.0 | 44.3 | 42.5 |
| December . | 24.0 | 23.4 | 22.5 | 24.2 | 29.4 | 30.0 | 26.0 | 24.9 |
| Ann'l means | 48.9 | 47.5 | 47.0 | 50.5 | 54.8 | 55.7 | 52.9 | 50.3 |

TABLE IV.

Monthly Means of Sun Thermometer.

| Date. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|-------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | ° | ° | ° | ° | ° | ° | ° | ° |
| January . | 34.7 | 33.2 | 32.1 | 48.8 | 71.6 | 54.2 | 37.3 | 34.4 |
| February . | 30.5 | 29.7 | 27.7 | 39.1 | 84.4 | 60.7 | 36.4 | 32.7 |
| March . | 32.7 | 31.2 | 30.9 | 66.8 | 84.7 | 83.2 | 43.7 | 35.2 |
| April . | 41.0 | 38.5 | 39.2 | 92.7 | 106.5 | 98.2 | 62.9 | 45.1 |
| May . | 53.5 | 51.4 | 57.3 | 108.7 | 120.6 | 106.6 | 72.2 | 56.9 |
| June . | 65.0 | 62.5 | 73.9 | 123.2 | 137.7 | 126.3 | 83.4 | 68.2 |
| July . | 70.7 | 68.7 | 75.0 | 126.2 | 139.1 | 133.1 | 94.7 | 73.8 |
| August . | 67.6 | 65.7 | 68.8 | 110.5 | 123.8 | 120.6 | 78.5 | 69.5 |
| September. | 59.1 | 57.7 | 57.7 | 95.4 | 107.2 | 96.9 | 64.4 | 59.9 |
| October . | 43.1 | 41.2 | 40.2 | 86.6 | 103.5 | 79.9 | 47.8 | 44.7 |
| November. | 39.8 | 38.3 | 37.4 | 64.6 | 78.3 | 55.8 | 41.6 | 40.3 |
| December . | 21.2 | 20.6 | 19.0 | 45.6 | 63.8 | 38.9 | 24.5 | 21.9 |
| Ann'l means | 46.6 | 44.9 | 46.6 | 84.0 | 101.8 | 87.9 | 57.3 | 48.5 |

TABLE V.

Amount of Rain and Snow in 1876.

| Month. | Rain and Melted Snow. | Snow. |
|------------|-----------------------|-------|
| | in. | in. |
| January . | 1.352 | . |
| February . | 2.998 | . |
| March . | 4.780 | 1.50 |
| April . | 2.274 | . |
| May . | 2.962 | . |
| June . | 4.002 | . |
| July . | 4.864 | . |
| August . | 4.362 | . |
| September | 9.666 | . |
| October . | 2.752 | . |
| November | 2.738 | 0.50 |
| December | 1.454 | 3.00 |
| Total . | 44.204 | 5.00 |

TABLE VI.

Showing the number of times that the wind blew from the NORTH at the hours of observation.

| Month. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|-----------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | | | | | | | | |
| January . . . | 0 | 0 | 1 | 3 | 2 | 2 | 2 | 2 |
| February . . . | 1 | 2 | 4 | 2 | 2 | 1 | 3 | 5 |
| March | 2 | 3 | 4 | 2 | 1 | 1 | 2 | 2 |
| April | 1 | 3 | 4 | 3 | 3 | 1 | 4 | 4 |
| May | 3 | 3 | 2 | 3 | 2 | 1 | 2 | 2 |
| June | 0 | 2 | 4 | 4 | 0 | 3 | 2 | 0 |
| July | 3 | 4 | 5 | 5 | 3 | 3 | 6 | 3 |
| August | 1 | 6 | 8 | 6 | 5 | 2 | 3 | 2 |
| September . . | 5 | 5 | 5 | 7 | 5 | 4 | 4 | 7 |
| October | 1 | 2 | 2 | 1 | 1 | 0 | 4 | 1 |
| November . . . | 2 | 0 | 2 | 8 | 6 | 8 | 4 | 2 |
| December . . . | 3 | 5 | 4 | 4 | 3 | 3 | 1 | 1 |
| Total | 22 | 35 | 45 | 48 | 33 | 29 | 37 | 31 |

Showing the number of times that the wind blew from the NORTHEAST at the hours of observation.

| Month. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | | | | | | | | |
| January | 1 | 4 | 2 | 1 | 1 | 4 | 2 | 2 |
| February | 6 | 5 | 2 | 2 | 1 | 3 | 3 | 4 |
| March | 2 | 4 | 4 | 3 | 1 | 1 | 0 | 0 |
| April | 1 | 2 | 4 | 3 | 2 | 3 | 2 | 4 |
| May | 3 | 3 | 6 | 3 | 4 | 4 | 1 | 2 |
| June | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| July | 0 | 1 | 4 | 2 | 4 | 2 | 1 | 2 |
| August | 5 | 7 | 10 | 1 | 5 | 4 | 4 | 3 |
| September . . . | 7 | 9 | 8 | 5 | 5 | 4 | 5 | 6 |
| October | 5 | 4 | 2 | 3 | 5 | 3 | 2 | 5 |
| November | 2 | 2 | 6 | 3 | 4 | 3 | 2 | 4 |
| December | 3 | 3 | 3 | 5 | 2 | 3 | 2 | 4 |
| Total | 36 | 44 | 52 | 41 | 34 | 34 | 24 | 36 |

Showing the number of times that the wind blew from the EAST at the hours of observation.

| Month. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | | | | | | | | |
| January | 2 | 2 | 0 | 1 | 1 | 2 | 2 | 2 |
| February | 1 | 1 | 5 | 4 | 5 | 2 | 4 | 4 |
| March | 4 | 3 | 3 | 6 | 7 | 5 | 5 | 4 |
| April | 1 | 0 | 0 | 3 | 3 | 1 | 2 | 0 |
| May | 2 | 2 | 2 | 4 | 5 | 5 | 2 | 3 |
| June | 2 | 1 | 1 | 1 | 6 | 2 | 1 | 2 |
| July | 0 | 0 | 0 | 1 | 1 | 2 | 2 | 2 |
| August | 1 | 0 | 0 | 2 | 7 | 7 | 7 | 4 |
| September . . . | 1 | 1 | 0 | 5 | 4 | 5 | 4 | 3 |
| October | 1 | 1 | 1 | 5 | 0 | 2 | 3 | 2 |
| November | 4 | 5 | 2 | 2 | 2 | 2 | 2 | 2 |
| December | 0 | 1 | 1 | 2 | 4 | 3 | 1 | 2 |
| Total | 19 | 17 | 15 | 36 | 45 | 38 | 35 | 30 |

Showing the number of times that the wind blew from the SOUTHEAST at the hours of observation.

| Month. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | | | | | | | | |
| January | 4 | 5 | 4 | 1 | 3 | 1 | 4 | 3 |
| February | 5 | 3 | 3 | 4 | 3 | 4 | 4 | 4 |
| March | 3 | 2 | 0 | 1 | 3 | 3 | 3 | 3 |
| April | 5 | 3 | 1 | 2 | 4 | 5 | 3 | 3 |
| May | 2 | 1 | 0 | 2 | 2 | 5 | 5 | 2 |
| June | 7 | 4 | 0 | 4 | 3 | 2 | 2 | 2 |
| July | 1 | 1 | 0 | 3 | 4 | 2 | 2 | 1 |
| August | 1 | 2 | 0 | 1 | 3 | 5 | 2 | 3 |
| September . . . | 1 | 1 | 1 | 1 | 3 | 4 | 2 | 0 |
| October | 3 | 0 | 1 | 2 | 3 | 2 | 2 | 2 |
| November | 2 | 1 | 1 | 0 | 4 | 2 | 0 | 1 |
| December | 1 | 1 | 2 | 1 | 4 | 1 | 4 | 1 |
| Total | 35 | 24 | 13 | 22 | 39 | 36 | 33 | 25 |

Showing the number of times that the wind blew from the SOUTH at the hours of observation.

| Month. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | | | | | | | | |
| January | 8 | 4 | 5 | 7 | 8 | 9 | 9 | 8 |
| February | 1 | 2 | 1 | 0 | 4 | 5 | 3 | 4 |
| March | 2 | 3 | 3 | 5 | 2 | 4 | 4 | 5 |
| April | 2 | 2 | 4 | 5 | 4 | 3 | 6 | 4 |
| May | 5 | 7 | 8 | 11 | 8 | 8 | 10 | 10 |
| June | 6 | 7 | 8 | 8 | 7 | 11 | 13 | 11 |
| July | 8 | 2 | 7 | 5 | 4 | 11 | 9 | 8 |
| August | 7 | 1 | 3 | 3 | 2 | 4 | 8 | 4 |
| September . . . | 0 | 0 | 3 | 1 | 3 | 1 | 3 | 2 |
| October | 3 | 2 | 3 | 3 | 9 | 8 | 6 | 3 |
| November | 1 | 1 | 2 | 3 | 3 | 3 | 3 | 2 |
| December | 3 | 3 | 4 | 3 | 2 | 5 | 1 | 2 |
| Total | 46 | 34 | 51 | 54 | 56 | 72 | 75 | 63 |

Showing the number of times that the wind blew from the SOUTHWEST at the hours of observation.

| Month. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | | | | | | | | |
| January | 4 | 6 | 2 | 3 | 5 | 2 | 2 | 3 |
| February | 1 | 2 | 0 | 0 | 2 | 1 | 2 | 1 |
| March | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| April | 4 | 4 | 3 | 1 | 1 | 2 | 3 | 4 |
| May | 5 | 6 | 1 | 0 | 4 | 0 | 3 | 5 |
| June | 3 | 1 | 5 | 4 | 2 | 4 | 0 | 3 |
| July | 4 | 8 | 2 | 3 | 2 | 1 | 2 | 3 |
| August | 1 | 3 | 0 | 1 | 0 | 2 | 3 | 6 |
| September . . . | 3 | 4 | 1 | 2 | 1 | 3 | 2 | 2 |
| October | 5 | 3 | 1 | 2 | 1 | 3 | 5 | 5 |
| November | 1 | 3 | 0 | 0 | 0 | 1 | 2 | 0 |
| December | 3 | 0 | 0 | 2 | 1 | 0 | 4 | 4 |
| Total | 36 | 40 | 16 | 18 | 19 | 19 | 28 | 36 |

TABLE VI—Continued.

Showing the number of times that the wind blew from the WEST at the hours of observation.

| Month. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 | 6 ^h . | 9 ^h . |
|-----------------|------------------|------------------|------------------|------------------|-------|----|------------------|------------------|
| 1876. | | | | | | | | |
| January . . . | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 1 |
| February . . . | 3 | 1 | 2 | 3 | 3 | 3 | 2 | 1 |
| March | 1 | 1 | 1 | 2 | 5 | 4 | 0 | 1 |
| April | 2 | 1 | 2 | 5 | 3 | 3 | 0 | 1 |
| May | 5 | 1 | 2 | 1 | 1 | 4 | 3 | 1 |
| June | 6 | 5 | 4 | 4 | 8 | 5 | 7 | 5 |
| July | 4 | 6 | 3 | 2 | 2 | 4 | 4 | 2 |
| August | 2 | 4 | 2 | 2 | 3 | 2 | 1 | 3 |
| September . . | 1 | 1 | 2 | 3 | 1 | 3 | 4 | 4 |
| October | 3 | 4 | 4 | 7 | 5 | 5 | 3 | 6 |
| November . . . | 4 | 3 | 1 | 5 | 1 | 4 | 2 | 5 |
| December . . . | 3 | 4 | 5 | 6 | 5 | 7 | 3 | 2 |
| Total | 36 | 34 | 31 | 43 | 39 | 47 | 31 | 32 |

Showing the number of times that the wind blew from the NORTHWEST at the hours of observation.

| Month. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | | | | | | | | |
| January | 8 | 5 | 12 | 10 | 7 | 6 | 6 | 8 |
| February | 10 | 12 | 11 | 14 | 8 | 9 | 7 | 5 |
| March | 15 | 15 | 15 | 12 | 12 | 13 | 17 | 16 |
| April | 15 | 14 | 12 | 8 | 10 | 12 | 11 | 10 |
| May | 6 | 8 | 10 | 7 | 5 | 4 | 5 | 6 |
| June | 5 | 10 | 7 | 5 | 4 | 3 | 5 | 7 |
| July | 12 | 10 | 12 | 11 | 12 | 7 | 6 | 10 |
| August | 12 | 8 | 8 | 5 | 6 | 5 | 3 | 6 |
| September . . . | 12 | 9 | 10 | 6 | 8 | 6 | 6 | 6 |
| October | 10 | 15 | 17 | 8 | 7 | 8 | 5 | 7 |
| November | 14 | 15 | 16 | 9 | 10 | 7 | 15 | 14 |
| December | 15 | 14 | 12 | 8 | 10 | 9 | 15 | 15 |
| Total | 134 | 135 | 142 | 103 | 99 | 89 | 101 | 110 |

Showing the number of times that it was CALM at the hours of observation.

| Month. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | | | | | | | | |
| January | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| February | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| March | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| April | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| May | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| June | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| July | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| August | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| September . . . | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| October | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| November | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| December | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |

TABLE VII.

Showing the number of times that it was CLEAR at the hours of observation.

| Month. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | | | | | | | | |
| January | 8 | 10 | 7 | 5 | 3 | 4 | 3 | 12 |
| February | 7 | 8 | 4 | 3 | 3 | 4 | 4 | 7 |
| March | 6 | 6 | 3 | 4 | 0 | 0 | 2 | 6 |
| April | 10 | 9 | 7 | 4 | 3 | 2 | 2 | 9 |
| May | 7 | 8 | 3 | 3 | 1 | 1 | 5 | 9 |
| June | 10 | 6 | 6 | 3 | 2 | 1 | 2 | 3 |
| July | 8 | 9 | 2 | 2 | 1 | 0 | 2 | 4 |
| August | 8 | 5 | 3 | 2 | 2 | 2 | 2 | 10 |
| September . . . | 9 | 6 | 3 | 3 | 1 | 2 | 3 | 8 |
| October | 9 | 9 | 3 | 6 | 5 | 5 | 6 | 10 |
| November | 4 | 5 | 4 | 3 | 1 | 1 | 2 | 2 |
| December | 9 | 8 | 5 | 4 | 4 | 3 | 9 | 11 |
| Total | 95 | 89 | 50 | 42 | 26 | 25 | 42 | 91 |

Showing the number of times that CIRRUS clouds prevailed at the hours of observation.

| Month. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | | | | | | | | |
| January | 0 | 2 | 0 | 2 | 1 | 2 | 0 | 1 |
| February | 0 | 0 | 1 | 2 | 4 | 3 | 0 | 0 |
| March | 2 | 0 | 0 | 1 | 4 | 2 | 0 | 1 |
| April | 3 | 1 | 0 | 4 | 2 | 0 | 3 | 0 |
| May | 1 | 1 | 0 | 0 | 2 | 1 | 3 | 1 |
| June | 0 | 2 | 1 | 2 | 0 | 1 | 0 | 3 |
| July | 4 | 0 | 2 | 2 | 1 | 2 | 3 | 3 |
| August | 0 | 2 | 0 | 2 | 1 | 0 | 1 | 0 |
| September . . . | 0 | 1 | 0 | 1 | 1 | 0 | 1 | 0 |
| October | 1 | 1 | 0 | 3 | 2 | 1 | 1 | 1 |
| November | 1 | 1 | 0 | 0 | 0 | 2 | 2 | 0 |
| December | 0 | 1 | 0 | 3 | 2 | 2 | 1 | 1 |
| Total | 12 | 12 | 4 | 22 | 20 | 16 | 15 | 11 |

Showing the number of times that CIRRO-CUMULUS clouds prevailed at the hours of observation.

| Month. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | | | | | | | | |
| January | 15 | 11 | 11 | 17 | 21 | 18 | 14 | 6 |
| February | 12 | 11 | 11 | 8 | 11 | 12 | 5 | 5 |
| March | 9 | 8 | 14 | 18 | 20 | 20 | 13 | 14 |
| April | 7 | 9 | 13 | 15 | 20 | 21 | 17 | 10 |
| May | 5 | 8 | 21 | 22 | 25 | 21 | 15 | 13 |
| June | 16 | 15 | 17 | 22 | 25 | 24 | 24 | 15 |
| July | 14 | 17 | 20 | 20 | 26 | 28 | 21 | 15 |
| August | 13 | 14 | 17 | 19 | 21 | 27 | 15 | 14 |
| September . . . | 9 | 10 | 12 | 16 | 22 | 20 | 14 | 8 |
| October | 8 | 10 | 6 | 10 | 17 | 21 | 13 | 12 |
| November | 11 | 10 | 9 | 14 | 20 | 19 | 12 | 14 |
| December | 8 | 13 | 10 | 12 | 16 | 15 | 6 | 8 |
| Total | 127 | 136 | 161 | 193 | 244 | 246 | 169 | 134 |

TABLE VII—Continued.

Showing the number of times that CIRRO-STRATUS clouds prevailed at the hours of observation.

| Month. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|-----------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | | | | | | | | |
| January . . . | 0 | 1 | 4 | 2 | 0 | 0 | 3 | 0 |
| February . . . | 0 | 1 | 2 | 4 | 0 | 1 | 5 | 1 |
| March | 1 | 5 | 1 | 1 | 1 | 0 | 5 | 1 |
| April | 2 | 3 | 5 | 0 | 0 | 0 | 1 | 1 |
| May | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| June | 0 | 5 | 3 | 0 | 2 | 2 | 1 | 1 |
| July | 1 | 0 | 3 | 3 | 0 | 0 | 2 | 6 |
| August | 2 | 0 | 3 | 1 | 1 | 0 | 0 | 1 |
| September . . | 0 | 2 | 3 | 1 | 0 | 0 | 2 | 1 |
| October | 0 | 0 | 3 | 0 | 1 | 0 | 3 | 0 |
| November . . . | 1 | 2 | 1 | 1 | 0 | 1 | 2 | 1 |
| December . . . | 2 | 1 | 3 | 2 | 2 | 2 | 3 | 0 |
| Total | 12 | 21 | 31 | 15 | 7 | 6 | 27 | 13 |

Showing the number of times that CUMULUS clouds prevailed at the hours of observation.

| Month. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | | | | | | | | |
| January | 4 | 2 | 3 | 0 | 0 | 1 | 4 | 7 |
| February | 7 | 3 | 3 | 5 | 7 | 4 | 7 | 7 |
| March | 3 | 7 | 4 | 1 | 4 | 6 | 3 | 6 |
| April | 4 | 5 | 1 | 1 | 0 | 2 | 2 | 3 |
| May | 9 | 8 | 3 | 3 | 3 | 3 | 6 | 4 |
| June | 3 | 1 | 0 | 0 | 0 | 0 | 2 | 1 |
| July | 2 | 2 | 2 | 0 | 0 | 0 | 0 | 3 |
| August | 6 | 5 | 5 | 4 | 2 | 0 | 2 | 3 |
| September . . . | 5 | 6 | 7 | 4 | 3 | 2 | 5 | 4 |
| October | 4 | 5 | 5 | 5 | 4 | 4 | 3 | 4 |
| November | 5 | 5 | 8 | 3 | 3 | 4 | 4 | 9 |
| December | 4 | 5 | 7 | 6 | 3 | 3 | 9 | 7 |
| Total | 56 | 54 | 48 | 32 | 29 | 29 | 47 | 58 |

Showing the number of times that CUMULO-STRATUS clouds prevailed at the hours of observation.

| Month. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | | | | | | | | |
| January | 0 | 0 | 0 | 1 | 3 | 5 | 4 | 0 |
| February | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 1 |
| March | 2 | 0 | 1 | 0 | 0 | 0 | 3 | 0 |
| April | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| May | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| June | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 |
| July | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| August | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| September . . . | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| October | 0 | 2 | 2 | 0 | 0 | 0 | 1 | 0 |
| November | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 1 |
| December | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 2 | 4 | 6 | 4 | 4 | 5 | 14 | 4 |

Showing the number of times that STRATUS clouds prevailed at the hours of observation.

| Month. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | | | | | | | | |
| January | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 4 |
| February | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 |
| March | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |
| April | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| May | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| June | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| July | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| August | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| September . . . | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| October | 1 | 0 | 1 | 1 | 0 | 0 | 1 | 0 |
| November | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| December | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 |
| Total | 4 | 3 | 8 | 1 | 0 | 1 | 5 | 7 |

Showing the number of times that NIMBUS clouds prevailed at the hours of observation.

| Month. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | | | | | | | | |
| January | 3 | 5 | 5 | 2 | 1 | 1 | 1 | 3 |
| February | 2 | 4 | 4 | 3 | 1 | 2 | 4 | 5 |
| March | 5 | 3 | 4 | 6 | 2 | 3 | 5 | 3 |
| April | 2 | 1 | 3 | 4 | 2 | 3 | 3 | 3 |
| May | 3 | 2 | 2 | 1 | 0 | 5 | 1 | 2 |
| June | 0 | 0 | 2 | 1 | 0 | 2 | 1 | 3 |
| July | 2 | 2 | 1 | 2 | 1 | 0 | 3 | 0 |
| August | 1 | 2 | 1 | 2 | 3 | 2 | 1 | 0 |
| September . . . | 7 | 5 | 4 | 5 | 3 | 6 | 5 | 7 |
| October | 7 | 3 | 2 | 3 | 1 | 0 | 2 | 2 |
| November | 6 | 6 | 5 | 7 | 5 | 3 | 5 | 3 |
| December | 4 | 3 | 3 | 3 | 4 | 4 | 1 | 1 |
| Total | 42 | 36 | 36 | 39 | 23 | 31 | 32 | 32 |

Showing the number of times that HAZE prevailed at the hours of observation.

| Month. | 0 ^h . | 3 ^h . | 6 ^h . | 9 ^h . | Noon. | 3 ^h . | 6 ^h . | 9 ^h . |
|------------------|------------------|------------------|------------------|------------------|-------|------------------|------------------|------------------|
| 1876. | | | | | | | | |
| January | 1 | 0 | 1 | 2 | 2 | 0 | 0 | 1 |
| February | 1 | 1 | 2 | 3 | 3 | 3 | 0 | 2 |
| March | 2 | 2 | 1 | 0 | 0 | 0 | 0 | 0 |
| April | 2 | 1 | 1 | 2 | 3 | 2 | 0 | 4 |
| May | 3 | 3 | 2 | 2 | 0 | 0 | 1 | 1 |
| June | 1 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| July | 0 | 1 | 1 | 2 | 1 | 1 | 0 | 0 |
| August | 0 | 1 | 2 | 1 | 1 | 0 | 0 | 1 |
| September . . . | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| October | 1 | 1 | 9 | 3 | 1 | 0 | 1 | 2 |
| November | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 |
| December | 4 | 0 | 1 | 1 | 0 | 1 | 2 | 3 |
| Total | 16 | 11 | 22 | 18 | 13 | 7 | 4 | 16 |

METEORS.

1876.

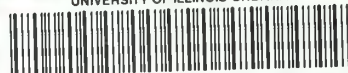
METEORS IN 1876.

No systematic observations were made during the year. Clouds prevented any satisfactory observations of the August and November showers but the following record was made of sporadic meteors:

| Day. | Wash. Mean Time. | Observer. | Magnitude. | Color. | Duration. | Appearance and Duration of Train. | Length of Path. | Course of meteors among the stars. |
|----------|---------------------|-----------|-------------------------------|-------------------|-------------------|--|--------------------|---|
| Jan. 26 | h. m. s. 9 31 17 | Todd. | 2 | White. | 0 ^s .7 | Faint train. | 8° | From γ Canis Majoris to α^1 Canis Majoris. |
| April 19 | 10 15 | Horigan. | 3 | Orange and red. | 1 ^s . | Train short, green. | 15° | From Jupiter westward. |
| Aug. 9 | 8 33 | Horigan. | 2 | White and green. | 2 ^s . | Long train. | 20° | SW. from ϵ Ursæ Majoris toward Arcturus. |
| 9 | 11 34 | Horigan. | 2 | White and green. | 3 ^s . | Train lasted 13 ^s . | 30° | SW. from midway between Polaris and Cassiopeæ. |
| 13 | 11 58 | Horigan. | 3 | White. | 1 ^s . | Long train, lasting 2 ^s . | 15° | From about 8° below Polaris in a westerly direction. |
| 14 | 9 5 | Anderson. | 3 | White. | 1 ^s . | Left a train. | 20° | South from α Andromedæ. |
| 15 | 9 8 | Horigan. | 3 | White. | 1 ^s . | Short train. | 15° | "Southwest from the Dipper." |
| 15 | 9 9 | Horigan. | 3 | White. | 1 ^s . | Short train. | 15° | Eastward from about 5° below α Cassiopeæ. |
| 15 | 12 5 | Horigan. | 3 | White. | 1 ^s . | Long train. | 20° | Westward across Polaris. |
| 21 | 8 30 | Horigan. | 4 | White. | 1 ^s . | Left a train. | 15° | Northeast from β Pegasi. |
| 22 | 9 40 | Horigan. | 4 | White. | 0 ^s .5 | Short train. | 12° | Southwest from Polaris. |
| 27 | 11 25 | Horigan. | 3 | White. | 1 ^s . | Short train. | 10° | E. SE. from Saturn. |
| 28 | 13 31 | Horigan. | 3 | White. | 0 ^s .5 | Short train. | 10° | Westward from Polaris. |
| Oct. 31 | 10 30 | Holden. | . | Green. | 5 ^s . | Train of short duration. | 10°-15° | From an altitude of 20° to disappearance at an altitude of 10°. Direction from N. toward NE. Bright moonlight, but the nucleus was brighter than Venus. |
| Nov. 5 | 11 33 | Horigan. | 3 | Orange and white. | 1 ^s . | | 8° | "Dropped almost perpendicularly from the Triangle." |
| 5 | 11 34 | Horigan. | 3 | Orange and white. | 1 ^s . | | 8° | Like the preceding, but 2° further north. |
| 29 | 5 13 | Todd. | Four times the mag. of Venus. | White and green. | 5 ^s . | Train 1 ^s .5 long, lasting 1 ^s . | 15° | First seen 10° above and 5° south of the moon. Moved downward and north, passing within 30' of the moon's south limb. Moon nearly full. |

- August 10. From 8^h 35^m to 10^h 0^m Mr. Horigan counted 15 meteors, mostly small and radiating from the vicinity of Cassiopeæ.
 11. From 8^h 15^m to 10^h 0^m Mr. Horigan counted 18 meteors, mostly small and radiating from between Polaris and Cassiopeæ. Some had trains.
 16. During the night Mr. Horigan counted 14 small meteors in the northern sky. No definite radiant.
 27. From 12^h 0^m to 13^h 30^m Mr. Horigan counted 11 small meteors radiating principally from the "square of Pegasus."
 October 24. From 11^h 30^m to 15^h 30^m Mr. Horigan counted 58 meteors radiating from the space between Orion and the Pleiades. A few left long trains. The largest were about the third magnitude. The color of the faint ones was white, of the larger ones white and orange.

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